# LyondellBasell Industries N.V.

# Financial Report

## For the Year Ended 31 December 2020

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## 1. About LyondellBasell

LyondellBasell Industries N.V. is a global, independent chemical company and was incorporated, as a *Naamloze Vennootschap*, under Dutch law on 15 October 2009. Unless otherwise indicated, the "Company," "we," "our," "us" and "LyondellBasell" are used in this report to refer to the businesses of LyondellBasell Industries N.V. and its consolidated subsidiaries. We are one of the world's top independent chemical companies based on revenues.

We participate globally across the petrochemical value chain and are an industry leader in many of our product lines. Our chemicals businesses consist primarily of large processing plants that convert large volumes of liquid and gaseous hydrocarbon feedstocks into plastic resins and other chemicals. Our chemical products tend to be basic building blocks for other chemicals and plastics, while our plastic products are used in large volumes as well as smaller specialty applications. Our customers use our plastics and chemicals to manufacture a wide range of products that people use in their everyday lives including food packaging, home furnishings, automotive components, paints and coatings. Our refining business consists of our Houston refinery, which processes crude oil into refined products such as gasoline, diesel and jet fuel. We also develop and license chemical and polyolefin process technologies and manufacture and sell polyolefin catalysts.

Our financial performance is influenced by the supply and demand for our products, the cost and availability of feedstocks and commodity products, global and regional production capacity, our operational efficiency and our ability to control costs. We have a strong operational focus and, as a producer of large volume commodities, continuously strive to differentiate ourselves through safe, reliable and low-cost operations in all our businesses. We purchase large quantities of natural gas, electricity and steam which we use as energy to fuel our facilities. We also purchase large quantities of natural gas liquids and crude oil derivatives which we use as feedstocks. The relatively low cost of natural gas-derived raw materials in the U.S. versus the global cost of crude oil-derived raw materials has had a significant positive influence on the profitability of our North American operations.

We manage our operations through six operating segments. Our reportable segments are:

- *Olefins and Polyolefins-Americas* ("O&P—Americas"). Our O&P—Americas segment produces and markets olefins and co-products, polyethylene and polypropylene.
- *Olefins and Polyolefins-Europe, Asia, International* ("O&P—EAI"). Our O&P—EAI segment produces and markets olefins and co-products, polyethylene and polypropylene.
- *Intermediates and Derivatives* ("I&D"). Our I&D segment produces and markets propylene oxide and its derivatives, oxyfuels and related products, and intermediate chemicals; such as, styrene monomer, acetyls, ethylene oxide and ethylene glycol.
- *Advanced Polymer Solutions* ("APS"). Our APS segment produces and markets compounding and solutions, such as polypropylene compounds, engineered plastics, masterbatches, colors and powders, engineered composites and advanced polymers, which includes *Catalloy* and polybutene-1.
- *Refining*. Our Refining segment refines heavy, high-sulfur crude oil and other crude oils of varied types and sources available on the U.S. Gulf Coast into fuel products including gasoline and distillates.
- *Technology*. Our Technology segment develops and licenses chemical and polyolefin process technologies and manufactures and sells polyolefin catalysts.

## 2. Report of the Board of Directors

### 2.1 Operational and Financial Overview

This discussion should be read in conjunction with the information contained in our Consolidated Financial Statements and the accompanying notes elsewhere in this report.

During 2020, we demonstrated financial and operational resilience against the challenging backdrop of a global pandemic, the associated recession, volatile oil prices and significant capacity additions in our industry.

Early in 2020, as the virus became more widespread, our leadership team established three principles to guide our actions in the short term. These were to (i) protect our employees, both from the virus in the workplace and also from widespread layoffs; (ii) prioritize cash flow and keep our commitments to our shareholders; and (iii) take action to strengthen the company for the future.

Our manufacturing operations have been designated as an essential industry to support society’s needs during the pandemic in the majority of the regions in which we operate. Our performance was supported by consumer-driven demand for many of our products and the recovery in demand for durable goods during the second half of the year. Our Refining and Oxyfuels & Related Products businesses suffered from the unprecedented decline in demand for transportation fuels that began during March 2020 due to the pandemic. During the year, we advanced our growth agenda through the formation of joint ventures in China and on the U.S. Gulf Coast.

Our strengths in operational excellence, cost management and capital discipline served us well as we quickly adapted to dynamic conditions by minimizing working capital and bolstering liquidity by rapidly accessing capital markets and efficiently generating cash. We honored commitments to maintain an investment grade credit rating and continued to fund dividends and capital investments with cash from operations.

Significant items that affected results in 2020 relative to 2019 include:

- Olefins and Polyolefins—Americas (“O&P—Americas”) and Olefins and Polyolefins—Europe, Asia, International (“O&P—EAI”) results declined primarily due to a decline in olefin and polyolefins margins;
- Intermediates and Derivatives (“I&D”) segment results declined due to margin decreases primarily driven by our intermediate chemicals and oxyfuels and related products businesses; and
- Refining segment results declined due to lower refining margins and a $582 million non-cash impairment charge which was recognized during the third quarter of 2020.

Other noteworthy items include the following:

- Launched production at our U.S. Gulf Coast high-density polyethylene plant using LyondellBasell's next-generation *Hyperzone* technology during the first quarter of 2020;
- In April 2020, issued $2,000 million of guaranteed senior notes to bolster liquidity. Net proceeds from the sale of the notes totaled $1,974 million;
- In April 2020, repaid $500 million outstanding under our Senior Revolving Credit Facility and $500 million outstanding under our U.S. Receivables Facility, which were borrowed in March 2020;
- In August 2020, invested $472 million in our new 50 percent owned joint venture polyolefin complex in China with Liaoning Bora Enterprise Group using our polyolefin technologies;
- In October 2020, issued $3,900 million of Guaranteed Notes to be used to repay certain outstanding borrowings and fund a portion of the Louisiana Integrated PolyEthylene JV LLC (“Louisiana Joint Venture”) purchase. Net proceeds from the sale of the notes totaled $3,848 million;
- In the fourth quarter of 2020, repaid $500 million outstanding under our Term Loan due 2022 and all amounts outstanding on our Senior Notes due 2021 and Guaranteed Notes due 2022;
- In December 2020, invested approximately $2 billion to purchase a 50 percent interest in the newly formed Louisiana Joint Venture with Sasol Chemicals (USA) LLC;
- In January 2021, signed an agreement to form a 50 percent owned joint venture with the China Petroleum & Chemical Corporation (“Sinopec”) which will construct a new PO and SM unit in China; and
- In January 2021, repaid an additional $500 million outstanding under our Term Loan due 2022 .

The following selected financial data of the Company should be read in conjunction with the Consolidated Financial Statements and related notes thereto and the discussion and analysis of our results of operations below. The selected financial data of the Company is derived from its audited Consolidated Financial Statements.

| Millions of U.S. Dollars (except for earnings per share amounts) | Year Ended 31 December 2020 | 2019 |
|---|---|---|
| **Results of Operations Data** | | |
| Revenue | $ 28,165 | $ 34,911 |
| Cost of Sales | 24,820 | 29,711 |
| Operating profit | 1,456 | 3,962 |
| Finance costs | 410 | 360 |
| Depreciation and amortization | 1,792 | 1,685 |
| Impairment of Long lived asset | 582 | — |
| Share of profit of investments accounted for using the equity method | 141 | 142 |
| Income tax (benefit)/expense | (151) | 663 |
| Profit for the year | 1,350 | 3,102 |
| Earnings per share: | | |
| Basic | $ 4.02 | $ 8.75 |
| Diluted | 4.02 | 8.75 |
| **Balance Sheet Data** | | |
| Total equity | $ 7,241 | $ 7,466 |
| Borrowings | 16,779 | 12,212 |
| Lease Liabilities | 1,579 | 1,507 |
| Cash and cash equivalents | (1,933) | (939) |
| Net debt | 16,425 | 12,780 |
| Trade and other receivables | 4,162 | 3,694 |
| Inventories | 3,878 | 4,278 |
| Trade and other payables | (4,421) | (4,109) |
| Net working capital | $ 3,619 | $ 3,863 |

**Revenues**—Revenues decreased $6,746 million, or 19%, in 2020 compared to 2019. Average sales prices in 2020 were lower for most of our products as sales prices generally correlate with crude oil prices, which decreased relative to 2019. These lower prices led to a revenue decrease of 18% in 2020. Lower sales volumes resulted in a revenue decrease of 2% relative to 2019. Favorable foreign exchange impacts resulted in a revenue increase of 1% during 2020.

**Cost of Sales**—Cost of sales decreased $4,891 million, or 16%, in 2020 compared to 2019. This decrease primarily related to lower feedstock and energy costs. Costs for crude oil, heavy liquid feedstocks and natural gas liquids (“NGLs”) and other feedstocks were lower in 2020 relative to 2019. This decrease corresponds with the decrease in revenues as discussed above.

Fluctuations in our cost of sales are generally driven by changes in feedstock and energy costs. Feedstock and energy related costs generally represent approximately 70% to 80% of cost of sales, other variable costs account for approximately 10% of cost of sales on an annual basis and fixed operating costs, consisting primarily of expenses associated with employee compensation, depreciation and amortization, and maintenance, range from approximately 10% to 20% in each annual period.

**Impairment of Long-Lived Assets**—In the third quarter of 2020 our Refining segment recognized a non-cash impairment charge of $582 million related to our Houston refinery driven by the expectation of a prolonged reduction of travel and associated transportation fuels consumption resulting from the pandemic which created length in global fuel markets that will pressure refining profitability for an extended period of time.

**Operating Profit**—Operating profit decreased $2,506 million in 2020 compared to 2019. Operating profit for our O&P—Americas, I&D, Refining, APS, Technology and O&P—EAI segments declined by $387 million, $690 million, $945 million, $30 million, $79 million and $344 million, respectively, relative to 2019. Operating results for each of our business segments are reviewed further in the "Segment Analysis" section.

**Finance Costs**—Finance costs increased $50 million in 2020 compared to 2019. The $50 million increase in Finance Costs was primarily due to $162 million higher interest expense on borrowings, partially offset by higher foreign exchange gains on intercompany loans amounting $119 million.

**Income Taxes**—Our effective income tax rates of (12.6%) in 2020 and 17.6% in 2019 resulted in tax provisions of ($151) million and $663 million, respectively.

Our effective income tax rate fluctuates based on, among other factors, changes in pre-tax income in countries with varying statutory tax rates, changes in unrecognized deferred tax assets, changes in foreign exchange gains/losses, the amount of exempt income, changes in unrecognized tax benefits associated with uncertain tax positions and changes in tax laws. We continue to maintain unrecognized deferred tax assets in various jurisdictions totaling to $132 million as of 2020, which could impact our effective income tax rate in the future.

On March 27, 2020, the U.S. enacted the Coronavirus Aid, Relief, and Economic Security Act, also known as the "CARES Act," which contains numerous income tax provisions and other stimulus measures. In 2020 we recorded an overall tax benefit in relation to the CARES Act of approximately $300 million which reflects the impact of our expected 2020 U.S. tax losses which we intend to carryback to tax years with a higher tax rate and a cash refund of approximately $900 million. For additional information, see Note 12 to our Consolidated Financial Statements.

The weighted average applicable tax rates for 2020 and 2019 were 21.1% and 23.8%, respectively. The decrease was primarily attributable to a change in the geographical mixture of the profit before tax. Our effective income tax rate of (12.6%) in 2020 and 17.6% in 2019 resulted in tax provisions of ($151) million and $663 million, respectively. Compared to 2019, the 2020 effective income tax rate decreased primarily due to a favorable impact in relation to the US Coronavirus Aid, Relief, and Economic Security Act, also known as the "CARES Act", coupled with lower earnings increasing the relative impact of our tax rate drivers, primarily exempt income.

### 2.1.1 Segment Analysis

Our continuing operations are managed through six reportable segments: O&P—Americas, O&P—EAI, I&D, APS, Refining and Technology. Each of the operating segments is managed by a senior executive reporting directly to our Chief Executive Officer ("CEO"), the chief operating decision maker. Discrete financial information is available for each of the segments, and our CEO uses the operating results of each of the operating segments for performance evaluation and resource allocation.

Accounting policies for internal reporting, which are based on accounting principles generally accepted in the United States of America ("U.S. GAAP"), are materially similar to those described in Summary of Significant Accounting Policies (see Note 2 of the Consolidated Financial Statements), except for:

- *Inventories*—The Company measures its inventories in accordance with the Last In, First Out ("LIFO") method, which is permitted under U.S. GAAP. According to International Accounting Standards ("IAS") 2, *Inventories,* the LIFO method is prohibited under IFRS. Therefore, inventories are measured using the First In, First Out ("FIFO") method for the Consolidated Financial Statements. This inventory measurement difference between the reportable segments and the consolidated information results in different cost of sales and net profit for the period.
- *Employee Benefits*—Under U.S. GAAP, ASC Topic 715, Compensation — Retirement Benefits ("ASC 715") requires the interest expense component of pension expense to be calculated as the product of the defined benefit liability and the discount rate. Such interest expense is netted against interest income resulting from the expected rate of return on plan assets applied to the market value of assets. The expected rate of return on plan assets is a longer term rate, and is expected to change less frequently than the discount rate, reflecting long-term market expectations, rather than current fluctuations in market conditions. Under IFRS, in accordance with IAS 19, *Employee Benefits*, the Company recognizes a net interest expense (income), which is the product of the net defined benefit liability (asset) and the discount rates, as a component of its pension expense on defined benefit plans. Under ASC 715, past service cost and actual return on plan assets in excess of expected return are initially recorded in other comprehensive income and subsequently recognized in earnings over the average remaining service period of the participants to the extent it exceeds the "corridor." The corridor is defined as the greater of 10 percent of the accumulated projected benefit obligation or the fair value of the plan assets as of the beginning of the year. Under IFRS, the Company immediately recognizes past service cost and net interest expense (income) as discussed above in the Consolidated Statement of Income. Actual return of plan assets in excess of recognized interest income is permanently recorded in other comprehensive income.
- *Other*—Amongst others, there are minor differences between IFRS and U.S. GAAP with respect to IFRS 11, *Joint Arrangements* as well as, leases, discontinued operations, the subsequent measurement of asset retirement obligations, cross-currency swaps, capitalization of development costs related to research and development and amortization of debt issuance costs. If material, these differences are separately disclosed in the Consolidated Financial Statements reconciliation.

We use earnings before interest, income taxes and depreciation and amortization ("EBITDA") as our measure of profitability for segment reporting purposes. This measure of segment operating results is used by our chief operating decision maker to assess the performance of and allocate resources to our operating segments. Intersegment eliminations and items that are not directly related or allocated to business operations, such as foreign exchange gains (losses) and components of pension and other postretirement benefit costs other than service cost, are included in "Other." For additional information related to our operating segments, as well as a reconciliation of EBITDA to its nearest U.S. GAAP measure and to IFRS Operating profit, see Note 33 of the Consolidated Financial Statements.

The following tables reflect selected financial information for our reportable segments.

| Millions of U.S. Dollars | Year Ended 31 December 2020 | 2019 |
|---|---|---|
| **Sales and other operating revenues:** | | |
| O&P—Americas | $ 7,275 | $ 8,435 |
| O&P—EAI | 8,367 | 9,504 |
| I&D | 6,269 | 7,834 |
| APS | 3,913 | 4,850 |
| Refining | 4,727 | 8,251 |
| Technology | 659 | 663 |
| Other, including intersegment eliminations | (3,457) | (4,810) |
| Total | $ 27,753 | $ 34,727 |
| | | |
| **Share of profit of associates and joint ventures:** | | |
| O&P—Americas | $ 45 | $ 46 |
| O&P—EAI | 186 | 172 |
| I&D | 26 | 7 |
| APS | (1) | — |
| Total | $ 256 | $ 225 |
| | | |
| **EBITDA:** | | |
| O&P—Americas | $ 1,810 | $ 2,302 |
| O&P—EAI | 826 | 1,062 |
| I&D | 833 | 1,557 |
| APS | 378 | 424 |
| Refining | (871) | (65) |
| Technology | 324 | 411 |
| Other, including intersegment eliminations | (15) | 1 |
| Total | $ 3,285 | $ 5,692 |

***Olefins and Polyolefins—Americas Segment***

**Overview**—EBITDA declined in 2020 relative to 2019 primarily due to lower margins in challenging market conditions arising from a low oil price environment and the impact of COVID-19.

In calculating the impact of margin and volume on EBITDA, consistent with industry practice, management offsets revenues and volumes related to ethylene co-products against the cost to produce ethylene. Volume and price impacts of ethylene co-products are reported in margin.

*Ethylene Raw Materials*—Ethylene and its co-products are produced from two major raw material groups:

- NGLs, principally ethane and propane, the prices of which are generally affected by natural gas prices; and
- crude oil-based liquids ("liquids" or "heavy liquids"), including naphtha, condensates, and gas oils, the prices of which are generally related to crude oil prices.

We have flexibility to vary the raw material mix and process conditions in our U.S. olefins plants in order to maximize profitability as market prices fluctuate for both feedstocks and products. Although prices of crude-based liquids and natural gas liquids are generally related to crude oil and natural gas prices, during specific periods the relationships among these materials and benchmarks may vary significantly. In 2020 and 2019, approximately 55-60% of the raw materials used in our North American crackers was ethane.

The following table sets forth selected financial information for the O&P—Americas segment including Income from equity investments, which is a component of EBITDA.

| Millions of U.S. Dollars | Year Ended 31 December 2020 | 2019 |
|---|---|---|
| Sales and other operating revenues | $ 7,275 | $ 8,435 |
| Share of profit of associates and joint ventures | 45 | 46 |
| EBITDA | 1,810 | 2,302 |

**Revenues**—Revenues decreased by $1,160 million, or 14%, in 2020 compared to 2019. Average sales prices were lower in 2020 compared to 2019 due to the lower oil price environment and other impacts of COVID-19. These lower sales prices were responsible for a revenue decrease of 18% in 2020. Volume increases resulted in a revenue increase of 4% in 2020, primarily due to high demand for polyethylene.

**EBITDA**—EBITDA decreased by $492 million, or 21%, in 2020 compared to 2019. Lower olefin results led to a 10% decline in EBITDA in 2020, primarily due to lower co-product prices outpacing reduced feedstock costs. Polyethylene results declined resulting in a 5% decrease in EBITDA in 2020. This decrease was driven by a $77 per ton reduction in price spreads over ethylene in 2020. Polypropylene results led to a 4% decrease in EBITDA in 2020, largely due to a decline in margins attributed to lower price spreads over propylene of $84 per ton in 2020.

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

**Overview**—EBITDA decreased in 2020 compared to 2019 mainly as a result of lower olefin and polypropylene margins.

In calculating the impact of margin and volume on EBITDA, consistent with industry practice, management offsets revenues and volumes related to ethylene co-products against the cost to produce ethylene. Volume and price impacts of ethylene co-products are reported in margin.

*Ethylene Raw Materials*—In Europe, heavy liquids are the primary raw materials for our ethylene production. In 2020 and 2019, we continued to benefit by sourcing advantaged NGLs as market opportunities arose.

The following table sets forth selected financial information for the O&P—EAI segment including Share of profit of associates and joint ventures, which is a component of EBITDA.

| Millions of U.S. Dollars | Year Ended 31 December 2020 | 2019 |
|---|---|---|
| Sales and other operating revenues | $ 8,367 | $ 9,504 |
| Share of profit of associates and joint ventures | 186 | 172 |
| EBITDA | 826 | 1,062 |

**Revenues**—Revenues in 2020 decreased by $1,137 million, or 12%, compared to 2019. Average sales prices in 2020 were lower across most products as sales prices generally correlate with crude oil prices, which on average, decreased compared to 2019. These lower average sales prices were responsible for revenue decreases of 19% in 2020. Volume improvements resulted in revenue increases of 6% in 2020 driven by strong polymer demand in Europe and Asia. Foreign exchange impacts, which on average, were favorable resulted in a revenue increase of 1% in 2020.

**EBITDA**—EBITDA decreased by $236 million, or 22%, in 2020 compared to 2019. Lower olefins results led to a 13% decrease in EBITDA in 2020, primarily driven by lower margins driven by declining ethylene prices outpacing lower feedstock costs. Polypropylene results led to a 10% decrease in EBITDA in 2020, largely due to a decline in margins attributed to a reduction in price spreads over propylene by $29 per ton in 2020. Favorable foreign exchange impacts resulted in an EBITDA benefit of 2%. Planned maintenance in 2021 is expected to reduce EBITDA by approximately $25 million.

***Intermediates and Derivatives Segment***

**Overview**—EBITDA for our I&D segment was lower in 2020 compared to 2019, largely driven by margin erosion due to the impacts of COVID-19.

The following table sets forth selected financial information for the I&D segment including Share of profit of associates and joint ventures, which is a component of EBITDA.

| Millions of U.S. Dollars | Year Ended 31 December 2020 | 2019 |
|---|---|---|
| Sales and other operating revenues | $ 6,269 | $ 7,834 |
| Share of profit of associates and joint ventures | 26 | 7 |
| EBITDA | 833 | 1,557 |

**Revenues**—Revenues decreased by $1,565 million, or 20%, in 2020 compared to 2019. Lower average sales prices in 2020 for most products, which reflect the impacts of lower feedstock and energy costs, were responsible for a revenue decrease of 21%. Favorable foreign exchange impacts increased revenue by 1% in 2020.

**EBITDA**—EBITDA decreased $724 million, or 46%, in 2020 compared to 2019 primarily driven by lower margins across most businesses. Oxyfuels and related products results declined, resulting in a 30% decrease in EBITDA in 2020. The decline was a result of a significant decrease in margins driven by lower gasoline prices and octane premiums. Declines in intermediate chemicals results led to an EBITDA decrease of 11% in 2020. This decrease was a result of lower margins as demand weakened due to the impacts of COVID-19 and additional market supply derived from competitors in 2020. Planned maintenance in 2021 is expected to reduce EBITDA by approximately $145 million.

### *Advanced Polymer Solutions Segment*

**Overview**—EBITDA for our APS segment decreased in 2020 compared to 2019, primarily due to lower compounding and solutions volumes.

The following table sets forth selected financial information for the APS segment.

| Millions of U.S. Dollars | Year Ended 31 December 2020 | 2019 |
|---|---|---|
| Sales and other operating revenues | $ 3,913 | $ 4,850 |
| Share of profit of associates and joint ventures | $ (1) | $ — |
| EBITDA | 378 | 424 |

**Revenues**—Revenues decreased in 2020 by $937 million, or 19%, compared to 2019. Sales volumes declined in 2020 stemming from lower market demand for compounding and solutions, including lower automotive and appliance demand, which led to a 15% decrease in revenue in 2020. Lower average sales prices resulted in a 6% decrease in revenue. Favorable foreign exchange impacts increased revenue by 2% in 2020.

**EBITDA**—EBITDA decreased in 2020 by $46 million, or 11%, compared to 2019. Compounding and solutions results declined resulting in a 18% decrease of EBITDA. This decrease was attributable to lower volumes driven by reduced demand for our products utilized in the automotive and appliance sectors which were impacted by COVID-19. Advanced Polymers results reduced EBITDA by 8% largely due to lower margins driven by reduced construction market demand. This decrease was offset by an increase in EBITDA of approximately $80 million, or 19%, in 2020 due to lower integration costs related to the acquisition of A. Schulman. Integration activities related to our 2018 acquisition of A. Schulman Inc. were substantially completed by the third quarter of 2020.

### *Refining Segment*

**Overview**—EBITDA for our Refining segment decreased in 2020 relative to 2019 primarily due to lower margins and a non-cash impairment charge of $582 million recognized during the third quarter of 2020.

The following table sets forth selected financial information and heavy crude oil processing rates for the Refining segment and the U.S. refining market margins for the applicable periods. "Brent" is a light sweet crude oil and is one of the main benchmark prices for purchases of oil worldwide. "Maya" is a heavy sour crude oil grade produced in Mexico that is a relevant benchmark for heavy sour crude oils in the U.S. Gulf Coast market. References to industry benchmarks for refining market margins are to industry prices reported by Platts, a division of S&P Global.

| Millions of U.S. Dollars | Year Ended 31 December 2020 | 2019 |
|---|---|---|
| Sales and other operating revenues | $ 4,727 | $ 8,251 |
| EBITDA | (871) | (65) |
| **Thousands of barrels per day** | | |
| Heavy crude oil processing rates | 223 | 263 |
| **Market margins, dollars per barrel** | | |
| Brent - 2-1-1 | $ 5.74 | $ 10.94 |
| Brent - Maya differential | 6.89 | 6.58 |
| Total Maya 2-1-1 | $ 12.63 | $ 17.52 |

**Revenues**—Revenues decreased by $3,524 million, or 43%, in 2020 compared to 2019. Lower product prices led to a revenue decrease of 34% relative to 2019 due to an average crude oil price decrease of approximately $21 per barrel in 2020. Heavy crude oil processing rates decreased during 2020 due to reduced demand for refined products as a result of COVID-19, leading to a decrease in overall sales volumes of 9%. Rates on conversion units were lower due to an unplanned outage at our fluid catalytic cracking unit during the first two quarters of 2020, as well as crude selection and the optimization of refinery operations.

**EBITDA**—EBITDA decreased by $806 million in 2020 compared to 2019. During the third quarter of 2020, we recognized a non-cash impairment charge of $582 million relating to our Houston refinery's asset group as a result of an expected prolonged period of reduced demand and compressed margins that will decrease profitability for transportation fuels produced by our Houston refinery. The lower profitability is primarily a result of the impacts of COVID-19 and associated reductions in mobility affecting the global economy. In addition, the refinery is expected to continue to be adversely affected by lower discounts for the heavy crude oil feedstocks that we utilize. Of the remaining decrease, approximately two-thirds relates to a decline in margins, which reflect a 28% decrease in the Maya 2-1-1 market margin in 2020 relative to 2019, driven primarily by lower refined product cracks, and one-third relates to lower heavy crude oil processing rates driven by lower demand for refined products.

In efforts to manage costs within the segment we deferred non-safety related discretionary activities and reduced the employee workforce by approximately 10% through early retirements and worker re-deployments to our other facilities. We plan to continue to operate the refinery at approximately 80% of nameplate capacity during the first quarter of 2021 and continue to evaluate options with regard to procuring crude oil and optimizing production from the asset.

### *Technology Segment*

**Overview**—The Technology segment recognizes revenues related to the sale of polyolefin catalysts and the licensing of chemical and polyolefin process technologies. These revenues are offset in part by the costs incurred in the production of catalysts, licensing and services activities and research and development ("R&D") activities. In 2020 and 2019, our Technology segment incurred approximately half of all R&D costs. EBITDA for our Technology segment decreased in 2020 compared to 2019 largely due to lower licensing revenues.

The following table sets forth selected financial information for the Technology segment.

| Millions of U.S. Dollars | Year Ended 31 December 2020 | 2019 |
|---|---|---|
| Sales and other operating revenues | $ 659 | $ 663 |
| EBITDA | 324 | 411 |

**Revenues**—Revenues decreased by $4 million, or 1%, in 2020 compared to 2019. Lower licensing revenues resulted in a revenue decrease of 9% in 2020 compared to 2019. Higher catalyst volumes resulted in a 2% increase in revenue in 2020 driven by increased orders as customers were likely securing inventory during the pandemic. Increases in average catalyst sales prices resulted in revenue increases of 4% in 2020 driven by the growth of high yield catalyst. Foreign exchange impacts, which on average, were favorable led to a revenue increase of 2% in 2020.

**EBITDA**—EBITDA in 2020 decreased by $87 million, or 21%, compared to 2019. This decrease was primarily driven by lower licensing revenues due to lower average contract values in 2020 compared to 2019.

### 2.1.2 Financial Condition

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

| Millions of U.S. Dollars | Year Ended 31 December 2020 | 2019 |
|---|---|---|
| Source (use) of cash: | | |
| Operating activities | $ 3,692 | $ 5,186 |
| Investing activities | (4,786) | (1,496) |
| Financing activities | 1,980 | (3,163) |

**Operating Activities**—Cash of $3,692 million generated by operating activities in 2020 reflected earnings adjusted for non-cash items, payments for employee related expenses, income taxes, and cash provided by the main components of working capital–Accounts receivable, Inventories and Accounts payable.

In 2020, the main components of working capital provided $332 million of cash driven by a decrease in Inventories and an increase in Accounts payable, partially offset by an increase in Accounts receivable. The decrease in Inventory was primarily driven by company-wide inventory reduction initiatives to maximize liquidity. The increase in Accounts payable was primarily driven by increased raw material purchases during the fourth quarter of 2020. The increase in Accounts receivable was driven by higher sales in the fourth quarter 2020 for our O&P—Americas, O&P—EAI, and I&D segments resulting from demand recovery.

Cash of $5,186 million generated by operating activities in 2019 reflected earnings adjusted for noncash items, payments for employee bonuses, income taxes, and cash consumed by the main components of working capital accounts receivable, inventories and accounts payable.

In 2019, the main components of working capital provided $310 million of cash driven by a decrease in accounts receivable and a decrease in inventory, partially offset by a decrease in accounts payable. The decrease in accounts payable was primarily driven by weaker demand in our APS segment and a decrease in certain raw material costs in our I&D segment. The decrease in inventory was a result of a decrease in the cost of finished goods, primarily due to lower feedstock and energy costs. The decrease in accounts receivable was driven by decreases in our APS, I&D and O&P-Americas segments as a result of unfavorable market conditions.

**Investing Activities**—Net cash flows used in investing activities were $4,786 million in 2020 and $1,496 million in 2019.

We invest cash in investment-grade and other high-quality instruments that provide adequate flexibility to redeploy funds as needed to meet our cash flow requirements while maximizing yield.

We received proceeds of $114 million and $511 million in 2020 and 2019, respectively, upon the sale and maturity of certain of our available-for-sale debt securities. Additionally, in 2020 and 2019, we received proceeds of $313 million and $332 million, respectively, on the sale of our investments in equity securities. In 2019, we received proceeds of $527 million upon the maturity of certain of our repurchase agreements.

In 2020 and 2019 we invested $270 million and $108 million, respectively, in debt securities that are deemed available-for-sale. We also invested $608 million and $33 million in equity securities in 2020 and 2019, respectively. Our investments in available-for-sale debt securities and equity securities are classified as Short-term investments.

In 2020, we invested $2,418 million in cash for 50% equity interests in the Bora LyondellBasell Petrochemical Co. Ltd joint venture and the Louisiana Joint Venture. For additional information, see Note 17 to the Consolidated Financial Statements.

*Capital Expenditures*—The following table summarizes capital expenditures for the periods presented:

| | Year Ended 31 December | |
|---|---|---|
| **Millions of U.S. Dollars** | **2020** | **2019** |
| **Capital expenditures by segment:** | | |
| O&P-Americas | $ 543 | $ 1,099 |
| O&P-EAI | 204 | 235 |
| I&D | 880 | 1,064 |
| APS | 63 | 59 |
| Refining | 63 | 149 |
| Technology | 111 | 94 |
| Other | 121 | 16 |
| Consolidated capital expenditures of continuing operations | $ 1,985 | $ 2,716 |

As a result of COVID-19 and current market conditions, during 2020 the Company postponed select growth projects and planned maintenance, including slowing certain construction activities, allowing us to prevent the spread of the virus at the construction site and conserve capital as we prepared for an uncertain economic environment caused by the pandemic. These actions resulted in a $500 million, or 20% reduction in our 2020 capital expenditures compared to what was forecasted at the beginning of year.

Capital expenditures decreased by $731 million, or 27%, in 2020 compared to 2019. The decrease was primarily due to lower spending within our O&P—Americas segment which resulted in a decline of 21% primarily due to the completed construction of our *Hyperzone* polyethylene plant in La Porte, Texas and postponement of maintenance projects. Additionally, lower spending within our I&D segment resulted in a 7% decline primarily as a result of the slowed construction activities at our PO/TBA plant at our Houston, Texas facility.

**Financing Activities**—Cash flow from Financing activities in 2020 was $1,980 million (2019: ($3,163 million)).

In 2020 and 2019, we made payments of $4 million and $3,752 million to acquire approximately 0.1 million and 42.7 million, respectively, of our outstanding ordinary shares. We also made dividend payments totaling $1,405 million and $1,462 million in 2020 and 2019, respectively. For additional information related to our share repurchases and dividend payments, see Note 24 to the Consolidated Financial Statements.

In January 2020, we amended the terms of certain forward-starting interest rate swaps to extend their maturities. Concurrently with the amendment of the swaps, we posted collateral of $238 million related to the liability position held with our counterparties as of the amendment date.

In May 2020, we terminated and cash settled $2,000 million in notional value of our cross-currency interest rate swaps, designated as cash flows hedges, maturing in 2021 and 2024. Upon termination of the swaps, we received $346 million from our counterparties.

In November 2020, we paid $882 million to our counterparties and received €750 million ($887 million at the expiry spot rate) from our counterparties upon expiration and settlement of the foreign currency contracts entered to economically hedge the redemption of €750 million aggregate principal amount of our 1.875% guaranteed notes originally due in 2022.

For additional information related to our swaps and currency contracts, see Note 4 to the Consolidated Financial Statements.

During 2019 and 2020 we entered into various financing transactions. See Note 26 to the Consolidated Financial Statements.

In 2020, we made payments of $333 million related to principal elements of leases, see Note 16 to the Consolidated Financial Statements.

In 2020 and 2019, we made payments of $30 million and $63 million to acquire additional non-controlling interests in our POSM II Limited Partnership joint venture and our subsidiary that holds our La Porte, Texas methanol facility, respectively.

## Liquidity and Capital Resources

*Overview*

As a result of COVID-19, we continue to take actions to manage our financial risk. In 2020, we increased our liquidity through the issuance of guaranteed senior notes and we continue to focus on cost savings while minimizing working capital. In April 2020, we announced that we reduced our budgeted 2020 capital expenditures by $500 million, to improve liquidity. We intend to continue to declare and pay quarterly dividends, with the goal of increasing the dividend over time, after giving consideration to our cash balances and expected results from operations. We remain committed to funding our dividends while maintaining a strong investment grade balance sheet.

We plan to fund our ongoing working capital, capital expenditures, debt service and other funding requirements with cash from operations, which could be affected by general economic, financial, competitive, legislative, regulatory, business and other factors, many of which are beyond our control. We believe that our current liquidity availability and cash from operating activities provide us with sufficient financial resources to meet our anticipated capital requirements and obligations as they come due. Further, we believe the current economic environment will not have an adverse effect on our ability to be in compliance with our debt covenants.

*Cash and Liquid Investments*

As of 31 December 2020, we had Cash and cash equivalents and marketable securities classified as Short-term investments totaling $2,635 million, included in this balance was $1,329 million of cash in jurisdictions outside of the U.S., principally in the United Kingdom. There are currently no legal or economic restrictions that would materially impede our transfers of cash.

*Credit Arrangements*

At 31 December 2020, we had total debt, including current maturities, of $16,779 million, and $205 million of outstanding letters of credit, bank guarantees and surety bonds issued under uncommitted credit facilities.

We had total unused availability under our credit facilities of $2,777 million at 31 December 2020, which included the following:

- $2,020 million under our $2,500 million Senior Revolving Credit Facility, which backs our $2,500 million commercial paper program. Availability under this facility is net of outstanding borrowings, outstanding letters of credit provided under the facility and notes issued under our commercial paper program. A small portion of our availability under this facility is impacted by changes in the euro/U.S. dollar exchange rate. At 31 December 2020, we had $500 million of outstanding commercial paper, net of discount, no borrowings or letters of credit outstanding under this facility; and

- $757 million under our $900 million U.S. Receivables Facility. Availability under this facility is subject to a borrowing base of eligible receivables, which is reduced by outstanding borrowings and letters of credit, if any. At 31 December 2020 we had no borrowings or letters of credit outstanding under this facility.

During 2020, we amended some of our credit agreements. See Note 26 to the Consolidated Financial Statements.

In January 2021, we repaid $500 million outstanding under our Term Loan due 2022.

We may repay or redeem our debt, including purchases of our outstanding bonds in the open market, using cash and cash equivalents, cash from our short-term investments, cash from operating activities, proceeds from the issuance of debt, proceeds from asset divestitures, or a combination thereof. In connection with any repayment or redemption of our debt, we may incur cash and non-cash charges, which could be material in the period in which they are incurred.

In accordance with our current interest rate risk management strategy and subject to management's evaluation of market conditions and the availability of favorable interest rates among other factors, we may from time to time enter into interest rate swap agreements to economically convert a portion of our fixed rate debt to variable rate debt or convert a portion of our variable rate debt to fixed rate debt.

For additional information, see Note 26 to the Consolidated Financial Statements.

*Share Repurchases*

In May 2020, our shareholders approved a proposal to authorize us to repurchase up to 34.0 million of our ordinary shares through November 29, 2021, which superseded our prior repurchase authorization. Our share repurchase authorization does not have a stated dollar amount, and purchases may be made through open market purchases, private market transactions or other structured transactions. Repurchased shares could be retired or used for general corporate purposes, including for various employee benefit and compensation plans. The maximum number of shares that may yet be purchased is not necessarily an indication of the number of shares that will ultimately be purchased. In 2020, we purchased approximately 0.1 million shares under our share repurchase authorizations for approximately $4 million.

As of February 23, 2021, we had approximately 34.0 million shares remaining under the current authorization. The timing and amounts of additional shares repurchased, if any, will be determined based on our evaluation of market conditions and other factors, including any additional authorizations approved by our shareholders. In addition, cash and cash equivalents, cash from our short-term investments, cash from operating activities, proceeds from the issuance of debt, or a combination thereof, may be used to fund the purchase of shares under our share repurchase authorization. In the near term, we are prioritizing debt reduction over share repurchases. For additional information related to our share repurchase authorization, see Note 24 to the Consolidated Financial Statements.

*Capital Budget*

In 2021, we expect our capital budget spend to remain flat at approximately $2 billion, which includes approximately $63 million for investments in our U.S. and European PO joint ventures. Approximately half of the 2021 budget is planned for profit-generating growth projects, primarily our PO/TBA plant, with the remaining budget supporting sustaining maintenance. We expect a similar level of capital expenditures for 2022 followed by a modest reduction in 2023, after completion of the PO/TBA facility.

Once completed, our world-scale PO/TBA plant in Houston, Texas will have the capacity to produce 470 thousand tons of PO and 1.0 million tons of tertiary butyl alcohol. Earlier in 2020, we slowed construction activities on our PO/TBA plant to ensure worksite safety and preserve liquidity during the pandemic. During the fourth quarter we resumed activity. The project is approximately 50% complete and expected to be completed in the fourth quarter of 2022, approximately one year later than originally estimated. The delayed timing of the startup should provide benefits from a more fully recovered global economy as well as another year of global demand growth for the products. Higher costs arising from the delayed project execution due to COVID-19, more extensive civil construction and unexpected tariffs on materials are expected to add approximately 40 to 50% to our original cost estimate of $2.4 billion.

*Equity Investment*

On 25 January 2021 we signed an agreement with China Petroleum & Chemical Corporation to form Ningbo ZRCC LyondellBasell New Material Company Limited, a 50/50 joint venture. The joint venture will construct a new PO/SM unit in Zhenhai Ningbo, China. The unit will use LyondellBasell's leading PO/SM technology and will have the capacity to produce 275 thousand tons of PO and 600 thousand tons of SM per year. Products produced by the joint venture will be marketed equally by both partners, expanding our respective participation in the Chinese market. The formation of the joint venture is subject to approvals by relevant government authorities, including antitrust review by the State Administration for Market Regulation. We expect to make an equity contribution of approximately $100 million to the joint venture during the first half of 2021 and startup is expected at the end of 2021. The joint venture will be included within our I&D segment.

**Contractual and Other Obligations**—The following table summarizes, as of 31 December 2020, our future minimum payments for long-term debt, including current maturities, short-term debt, and contractual and other obligations:

| | | Payments Due By Period | | | |
|---|---|---|---|---|---|
| Millions of U.S. Dollars | Total | Less than 1 Year | 1-3 Years | 3-5 Years | More than 5 Years |
| Total debt, nominal value | $ 16,892 | $ 739 | $ 2,861 | $ 2,009 | $ 11,283 |
| Interest payment on total debt | 10,280 | 576 | 1,134 | 1,024 | 7,546 |
| Contract liabilities | 194 | 157 | 37 | — | — |
| Other | 2,177 | 1,153 | 74 | 59 | 891 |
| Deferred income taxes | 2,220 | 356 | 417 | 377 | 1,070 |
| Purchase obligations: | | | | | |
| Take-or-pay contracts | 14,649 | 1,784 | 2,043 | 3,497 | 7,325 |
| Other contracts | 15,319 | 5,171 | 3,215 | 1,308 | 5,625 |
| Lease liabilities | 2,506 | 534 | 599 | 429 | 944 |
| Total | $ 64,237 | $ 10,470 | $ 10,380 | $ 8,703 | $ 34,684 |

*Total Debt*—Our debt includes unsecured senior notes, guaranteed notes and various other U.S. and non-U.S. loans. See Note 26 to the Consolidated Financial Statements for a discussion of covenant requirements under our credit facilities and indentures and additional information regarding our debt facilities.

*Interest on Total Debt*—Our debt and related party debt agreements contain provisions for the payment of monthly, quarterly or semi-annual interest at a stated or variable rate of interest over the term of the debt. Interest on variable rate debt is calculated based on the rate in effect as of 31 December 2020.

*Pension and other Postretirement Benefits*—We maintain several defined benefit pension plans, as described in Note 28 to the Consolidated Financial Statements. Many of our U.S. and non-U.S. plans are subject to minimum funding requirements; however, the amounts of required future contributions for all our plans are not fixed and can vary significantly due to changes in economic assumptions, liability experience and investment return on plan assets. As a result, we have excluded pension and other postretirement benefit obligations from the Contractual and Other Obligations table above. Our annual contributions may include amounts in excess of minimum required funding levels. Contributions to our non-U.S. plans in years beyond 2021 are not expected to be materially different than the expected 2021 contributions disclosed in Note 28 to the Consolidated Financial Statements. At 31 December 2020, the projected benefit obligation for our pension plans exceeded the fair value of plan assets by $1,321 million. Subject to future actuarial gains and losses, as well as future asset earnings, we, together with our consolidated subsidiaries, will be required to fund the discounted obligation of $1,540 million, in future years. We contributed $73 million and $97 million to our pension plans in 2020 and 2019, respectively. We provide other post-retirement benefits, primarily medical benefits to eligible participants, as described in Note 28 to the Consolidated Financial Statements. We pay other unfunded postretirement benefits as incurred.

*Contract Liabilities*—We are obligated to deliver products or services in connection with sales agreements under which customer payments were received before transfer of control to the customers occurs. These contract liabilities will be recognized in earnings when control of the product or service is transferred to the customer. The long-term portion of such advances totaled $37 million as of 31 December 2020.

*Other*—Other primarily consists of accruals for taxes and employee-related expenses.

*Deferred Income Taxes*—The scheduled settlement of the deferred tax liabilities shown in the table is based on the scheduled reversal of the underlying temporary differences. Actual cash tax payments will vary depending upon future taxable income. See Note 27 to the Consolidated Financial Statements for additional information related to our deferred tax liabilities.

*Purchase Obligations*—We are party to various obligations to purchase products and services, principally for raw materials, utilities and industrial gases. These commitments are designed to ensure sources of supply and are not expected to be in excess of normal requirements. The commitments are segregated into take-or-pay contracts and other contracts. Under the take-or-pay contracts, we are obligated to make minimum payments whether or not we take the product or service. Other contracts include contracts that specify minimum quantities; however, in the event that we do not take the contractual minimum, we are only obligated for any resulting economic loss suffered by the vendor. The payments shown for the other contracts assume that minimum quantities are purchased. For contracts with variable pricing terms, the minimum payments reflect the contract price at 31 December 2020.

*Lease liabilities*—We lease various facilities and equipment under non-cancelable lease arrangements for various periods. See Note 16 to the Consolidated Financial Statements for related lease disclosures.

### 2.1.3 Outlook

During 2020, we demonstrated financial and operational resilience against an extremely challenging backdrop of a global pandemic, the associated recession, volatile oil prices and significant capacity additions in our industry. We moved swiftly to create a safe work environment for our employees and continuously supply customers with essential products throughout the pandemic. Our strengths in operational excellence, cost management and capital discipline served us well as we quickly adapted to dynamic conditions by aggressively managing inventories, minimizing working capital and bolstering liquidity by rapidly accessing capital markets and efficiently generating cash. We honored commitments to investors by both maintaining an investment grade credit rating and continuing to fund dividends and capital investments with cash from operations. Taken together, these actions enabled us to successfully navigate a challenging year and remain focused on our strategy to build a stronger company for our stakeholders.

Improving trends seen towards the end of the fourth quarter of 2020 are continuing into the first quarter of 2021, providing a bridge to the seasonal upticks typically seen in our businesses during the second and third quarters. Elevated export demand to China and Latin America combined with tight markets are supporting strong margins for our Olefins and Polyolefins businesses. Increased demand from automotive and construction markets are expected to have a positive impact on our Advanced Polymer Solutions segment in 2021. With wider deployment of coronavirus vaccines, we also anticipate that increasing mobility and transportation fuel demand could provide significant upside for our oxyfuels and refining businesses during the latter half of 2021. In February 2021, unusually cold temperatures and associated electrical power outages led to shutdowns of the majority of the petrochemical and refining capacity in Texas, including LyondellBasell’s facilities in the state. Most of our capacity in Texas was down for at least one week. At this time, the majority of our affected facilities have resumed operations and we are continuing to assess the impact of the weather event. While the outages constrained our production and sales volumes during and immediately following the cold weather events, we anticipate that outages across Texas capacity for our industry will result in tight markets and elevated margins for several months, which will likely have a positive impact on our earnings during 2021.

We continue to advance our strategy of investing in high-quality assets in growing markets or feedstock advantaged regions. In January 2021, we entered into an agreement with China Petroleum & Chemical Corporation (Sinopec) to form a 50/50 joint venture which will produce propylene oxide (PO) and styrene monomer (SM) in China’s domestic market. Our 2021 financial results will include the full year returns of our 50/50 joint ventures with Liaoning Bora Enterprise Group and Sasol.

We believe that our foundations of safety leadership, operational excellence and cost discipline will continue to contribute to the resilience of our business portfolio. While it is too early to predict the path of economic recovery, we believe we are well-positioned to harvest profitability from our disciplined growth initiatives and to build a stronger company for our stakeholders.

## 2.2 Risk Factors

The factors described below represent the principal risks to an investment in LyondellBasell. Any of these factors, taken alone or in combination, could adversely affect our business, operating results and financial condition, as well as the value of an investment in our securities and our ability to execute our strategy.

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

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

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

New capacity additions in Asia, the Middle East and North America may lead to periods of oversupply and lower profitability. The timing and extent of any changes to currently prevailing market conditions are uncertain and supply and demand may be unbalanced at any time. As a consequence, we are unable to accurately predict the extent or duration of future industry cycles or their effect on our business, financial condition or results of operations.

***A sustained decrease in the price of crude oil may adversely impact the results of our operations, primarily in North America.***

Energy costs generally follow price trends of crude oil and natural gas. These price trends may be highly volatile and cyclical. In the past, raw material and energy costs have experienced significant fluctuations that adversely affected our business segments' results of operations. For example, we have benefited from the favorable ratio of U.S. crude oil prices to natural gas prices in the past. If the price of crude oil remains lower relative to U.S. natural gas prices or if the demand for natural gas and NGLs increases, this may have a negative impact on our results of operations.

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

The costs of raw materials and energy represent a substantial portion of our operating expenses. Due to the significant competition we face and the commodity nature of many of our products we are not always able to pass on raw material and energy cost increases to our customers. When we do have the ability to pass on the cost increases, we are not always able to do so quickly enough to avoid adverse impacts on our results of operations.

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

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

Additionally, there is growing concern over the reliability of water sources, including around the U.S. Gulf Coast where several of our facilities are located. The decreased availability or less favorable pricing for water as a result of population growth, drought or regulation could negatively impact our operations, including by impacting our ability to produce or transport our products.

If our raw material or utility supplies were disrupted, our businesses may incur increased costs to procure alternative supplies or incur excessive downtime, which would have a negative impact on plant operations. Disruptions of supplies may occur as a result of transportation issues resulting from natural disasters, water levels, and interruptions in marine water routes, among other causes, that can affect the operations of vessels, barges, rails, trucks and pipeline traffic. These risks are particularly prevalent in the U.S. Gulf Coast area. Additionally, increasing exports of NGLs and crude oil from the U.S. or greater restrictions on hydraulic fracturing could restrict the availability of our raw materials, thereby increasing our costs.

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

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

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

Incidents of civil unrest, including terrorist attacks and demonstrations that have been marked by violence, have occurred in a number of countries in the Middle East and South America. Some political regimes in these countries are threatened or have changed as a result of such unrest. Political instability and civil unrest could continue to spread in the region and involve other areas. Such unrest, if it continues to spread or grow in intensity, could lead to civil wars, regional conflicts or regime changes resulting in governments that are hostile to countries in which we conduct substantial business, such as in the U.S., Europe or their respective trading partners.

***Our business is capital intensive and we rely on cash generated from operations and external financing to fund our growth and ongoing capital needs. Limitations on access to external financing could adversely affect our operating results.***

We require significant capital to operate our current business and fund our growth strategy. Moreover, interest payments, dividends and the expansion of our current business or other business opportunities may require significant amounts of capital. We believe that our cash from operations currently will be sufficient to meet these needs. However, if we need external financing, our access to credit markets and pricing of our capital is dependent upon maintaining sufficient credit ratings from credit rating agencies and the state of the capital markets generally. There can be no assurances that we would be able to incur indebtedness on terms we deem acceptable, and it is possible that the cost of any financings could increase significantly, thereby increasing our expenses and decreasing our net income. If we are unable to generate sufficient cash flow or raise adequate external financing, including as a result of significant disruptions in the global credit markets, we could be forced to restrict our operations and growth opportunities, which could adversely affect our operating results.

We may use our $2.5 billion revolving credit facility, which backs our commercial paper program, to meet our cash needs, to the extent available. As of 31 December 2020, we had no borrowings or letters of credit outstanding under the facility and $500 million, net of discount, outstanding under our commercial paper program, leaving an unused and available credit capacity of $2,020 million. We may also meet our cash needs by selling receivables under our $900 million U.S. Receivables Facility. As of 31 December 2020, subject to a borrowing base of eligible receivables, we had availability of $757 million under this facility. In the event of a default under our credit facility or any of our senior notes, we could be required to immediately repay all outstanding borrowings and make cash deposits as collateral for all obligations the facility supports, which we may not be able to do. Any default under any of our credit arrangements could cause a default under many of our other credit agreements and debt instruments. Without waivers from lenders party to those agreements, any such default could have a material adverse effect on our ability to continue to operate.

***Risks Related to our Operations***

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

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

***Our business, including our results of operations and reputation, could be adversely affected by safety or product liability issues.***

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

Further, because a part of our business involves licensing polyolefin process technology, our licensees are exposed to similar risks involved in the manufacture and marketing of polyolefins. Hazardous incidents involving our licensees, if they do result or are perceived to result from use of our technologies, may harm our reputation, threaten our relationships with other licensees and/or lead to customer attrition and financial losses. Our policy of covering these risks through contractual limitations of liability and indemnities and through insurance may not always be effective. As a result, our financial condition and results of operation would be adversely affected, and other companies with competing technologies may have the opportunity to secure a competitive advantage.

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

We own and operate large-scale facilities. Our operating results are dependent on the continued operation of our various production facilities and the ability to complete construction and maintenance projects on schedule. Interruptions at our facilities may materially reduce the productivity and profitability of a particular manufacturing facility, or our business as a whole, during and after the period of such operational difficulties. In recent years, we have had to shut down plants on the U.S. Gulf Coast, including the temporary shutdown of a portion of our Houston refinery, as a result of various hurricanes striking Texas and Louisiana. In addition, because the Houston refinery is our only refining operation, an outage at the refinery could have a particularly negative impact on our operating results as we do not have the ability to increase refining production elsewhere.

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

- pipeline leaks and ruptures;
- explosions;
- fires;
- severe weather and natural disasters;
- mechanical failure;
- unscheduled downtimes;
- supplier disruptions;
- labor shortages or other labor difficulties;
- transportation interruptions;
- remediation complications;
- increased restrictions on, or the unavailability of, water for use at our manufacturing sites or for the transport of our products or raw materials;
- chemical and oil spills;
- discharges or releases of toxic or hazardous substances or gases;
- shipment of incorrect or off-specification product to customers;
- storage tank leaks;
- other environmental risks; and
- terrorist acts.

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

***Large capital projects can take many years to complete, and market conditions could deteriorate significantly between the project approval date and the project startup date, negatively impacting project returns. If we are unable to complete capital projects at their expected costs and in a timely manner, or if the market conditions assumed in our project economics deteriorate, our business, financial condition, results of operations and cash flows could be materially and adversely affected.***

Delays or cost increases related to capital spending programs involving engineering, procurement and construction of facilities could materially adversely affect our ability to achieve forecasted internal rates of return and operating results. For example, higher costs arising from the delayed construction of our world-scale PO/TBA plant in Houston, due to COVID-19, more extensive civil construction, and unexpected tariffs on materials are expected to add approximately 40 to 50% to our original cost estimate for the project, impacting our projected rate of return on the project. Delays in making required changes or upgrades to our facilities could subject us to fines or penalties as well as affect our ability to contract with our customers and supply certain products we produce. Such delays or cost increases may arise as a result of unpredictable factors, many of which are beyond our control, including:

- denial of or delay in receiving requisite regulatory approvals and/or permits; unplanned increases in the cost of construction materials or labor;
- disruptions in transportation of components or construction materials;
- adverse weather conditions, natural disasters or other events (such as equipment malfunctions, explosions, fires or spills) affecting our facilities, or those of vendors or suppliers;
- shortages of sufficiently skilled labor, or labor disagreements resulting in unplanned work stoppages; and
- nonperformance by, or disputes with, vendors, suppliers, contractors or subcontractors.

Any one or more of these factors could have a significant impact on our ongoing capital projects. If we were unable to make up the delays associated with such factors or to recover the related costs, or if market conditions change, it could materially and adversely affect our business, financial condition, results of operations and cash flows.

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

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

Our joint venture partners may have different interests or goals than we do and may take actions contrary to our requests, policies or objectives. Differences in views among the joint venture participants also may result in delayed decisions or in failures to agree on major matters, potentially adversely affecting the business and operations of the joint ventures and in turn our business and operations. We may develop a dispute with any of our partners over decisions affecting the venture that may result in litigation, arbitration or some other form of dispute resolution. If a joint venture participant acts contrary to our interest, it could harm our brand, business, results of operations and financial condition.

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

We may be required to reduce production or idle facilities for extended periods of time or exit certain businesses as a result of the cyclical nature of our industry. Specifically, oversupplies of or lack of demand for particular products or high raw material prices may cause us to reduce production. We may choose to reduce production at certain facilities because we have off-take arrangements at other facilities, which make any reductions or idling unavailable at those facilities. Any decision to permanently close facilities or exit a business would likely result in impairment and other charges to earnings. For example, in the third quarter of 2020, our Refining segment recognized a non-cash impairment charge of $582 million related to our Houston refinery driven by the expectation of a prolonged reduction in travel and associated transportation fuels consumption resulting from the pandemic which created an oversupply in global fuel markets that will pressure refining profitability for an extended period of time.

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

***Integration of acquisitions could disrupt our business and harm our financial condition and stock price.***

We have made and may continue to make acquisitions in order to enhance our business. Acquisitions involve numerous risks, including meeting our standards for compliance, problems combining the purchased operations, technologies or products, unanticipated costs and liabilities, diversion of management's attention from our core businesses, and potential loss of key employees.

There can be no assurance that we will be able to integrate successfully any businesses, products, technologies, or personnel that we might acquire. The integration of businesses that we may acquire is likely to be a complex, time-consuming, and expensive process and we may not realize the anticipated revenues, synergies, or other benefits associated with our acquisitions if we do not manage and operate the acquired business up to our expectations. If we are unable to efficiently operate as a combined organization utilizing common information and communication systems, operating procedures, financial controls, and human resources practices, our business, financial condition, and results of operations may be adversely affected.

***Risks related to the Global Economy and Multinational Operations***

***Economic disruptions and downturns in general, and particularly continued global economic uncertainty or economic turmoil in emerging markets, could have a material adverse effect on our business, prospects, operating results, financial condition and cash flows.***

Our results of operations can be materially affected by adverse conditions in the financial markets and depressed economic conditions generally. Economic downturns in the businesses and geographic areas in which we sell our products could substantially reduce demand for our products and result in decreased sales volumes and increased credit risk. Recessionary environments adversely affect our business because demand for our products is reduced, particularly from our customers in industrial markets generally and the automotive and housing industries specifically, and may result in higher costs of capital. A significant portion of our revenues and earnings are derived from our business in Europe. In addition, most of our European transactions and assets, including cash reserves and receivables, are denominated in euros.

We also derive significant revenues from our business in emerging markets, particularly the emerging markets in Asia and South America. Any broad-based downturn in these emerging markets, or in a key market such as China, could require us to reduce export volumes into these markets and could also require us to divert product sales to less profitable markets. Any of these conditions could ultimately harm our overall business, prospects, operating results, financial condition and cash flows.

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

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

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

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

We operate internationally and are subject to the risks of doing business on a global level. These risks include fluctuations in currency exchange rates, economic instability and disruptions, restrictions on the transfer of funds and the imposition of trade restrictions or duties and tariffs, and complex regulations concerning privacy and data security. Additional risks from our multinational business include transportation delays and interruptions, war, terrorist activities, epidemics, pandemics, political instability, import and export controls, sanctions, changes in governmental policies, labor unrest and current and changing regulatory environments.

We generate revenues from export sales and operations that may be denominated in currencies other than the relevant functional currency. Exchange rates between these currencies and functional currencies in recent years have fluctuated significantly and may do so in the future. It is possible that fluctuations in exchange rates will result in reduced operating results. Additionally, we operate with the objective of having our worldwide cash available in the locations where it is needed, including the United Kingdom for our parent company's significant cash obligations as a result of dividend payments. It is possible that we may not always be able to provide cash to other jurisdictions when needed or that such transfers of cash could be subject to additional taxes, including withholding taxes.

Our operating results could be negatively affected by the laws, rules and regulations, as well as political environments, in the jurisdictions in which we operate. There could be reduced demand for our products, decreases in the prices at which we can sell our products and disruptions of production or other operations. Trade protection measures such as quotas, duties, tariffs, safeguard measures or anti-dumping duties imposed in the countries in which we operate could negatively impact our business. Additionally, there may be substantial capital and other costs to comply with regulations and/or increased security costs or insurance premiums, any of which could reduce our operating results.

We obtain a portion of our principal raw materials from international sources that are subject to these same risks. Our compliance with applicable customs, currency exchange control regulations, transfer pricing regulations or any other laws or regulations to which we may be subject could be challenged. Furthermore, these laws may be modified, the result of which may be to prevent or limit subsidiaries from transferring cash to us.

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

***Changes in tax laws and regulations could affect our tax rate and our results of operations.***

We are a tax resident in the United Kingdom and are subject to the United Kingdom corporate income tax system. LyondellBasell Industries N.V. has little or no taxable income of its own because, as a holding company, it does not conduct any operations. Through our subsidiaries, we have substantial operations world-wide. Taxes are primarily paid on the earnings generated in various jurisdictions where our subsidiaries operate, including the U.S., The Netherlands, Germany, France and Italy.

There continues to be increased attention to the tax practices of multinational companies, including the European Union's state aid investigations, proposals by the Organization for Economic Cooperation and Development with respect to base erosion and profit shifting, and European Union tax directives and their implementation. Management does not believe that recent changes in income tax laws will have a material impact on our business, financial condition, or results of operations, although new or proposed changes to tax laws could affect our tax liabilities in the future.

***Risks Related to Health, Safety, and the Environment***

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

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

We are subject to extensive national, regional, state and local environmental laws, regulations, directives, rules and ordinances concerning:

- emissions to the air;
- discharges onto land or surface waters or into groundwater; and
- the generation, handling, storage, transportation, treatment, disposal and remediation of hazardous substances and waste materials.

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

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

Our industry is subject to extensive government regulation, and existing, or future regulations may restrict our operations, increase our costs of operations or require us to make additional capital expenditures.

Compliance with regulatory requirements will result in higher operating costs, such as regulatory requirements relating to emissions, the security of our facilities, and the transportation, export or registration of our products. We generally expect that regulatory controls worldwide will become increasingly more demanding, but cannot accurately predict future developments.

Increasingly strict environmental laws and inspection and enforcement policies, could affect the handling, manufacture, use, emission or disposal of products, other materials or hazardous and non-hazardous waste. Stricter environmental, safety and health laws, regulations and enforcement policies could result in increased operating costs or capital expenditures to comply with such laws and regulations. Additionally, we are required to have permits for our businesses and are subject to licensing regulations. These permits and licenses are subject to renewal, modification and in some circumstances, revocation. Further, the permits and licenses are often difficult, time consuming and costly to obtain and could contain conditions that limit our operations.

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

There has been a broad range of proposed or promulgated international, national and state laws focusing on greenhouse gas (“GHG”) reduction. These proposed or promulgated laws apply or could apply in countries where we have interests or may have interests in the future. Laws and regulations in this field continue to evolve and, while they are likely to be increasingly widespread and stringent, at this stage it is not possible to accurately estimate either a timetable for implementation or our future compliance costs relating to implementation. Under the 2015 Paris Agreement, parties to the United Nations Framework Convention on Climate Change agreed to undertake ambitious efforts to reduce GHG emissions and strengthen adaptation to the effects of climate change. In February 2021, the U.S. recommitted to the Agreement after having withdrawn in August 2017. Other regions in which we operate, including, in particular, the European Union, are preparing national legislation and protection plans to implement their emission reduction commitments under the Agreement. In December 2020, European Union leadership agreed to cut GHG emissions by at least 55 percent by 2030, a step toward achieving the European Union’s goal of carbon neutrality by 2050. These actions could result in increased cost of purchased energy and increased costs of compliance for impacted locations.

Our operations in Europe participate in the European Union Emissions Trading System (“ETS”) and we purchase annual emission allowances to meet our obligations. In light of changes resulting from the commencement of ETS Phase IV in 2021, we expect to incur additional costs in relation to future carbon or GHG emission trading schemes.

In the U.S., the EPA promulgated federal GHG regulations under the Clean Air Act affecting certain sources. The EPA issued mandatory GHG reporting requirements, requirements to obtain GHG permits for certain industrial plants and GHG performance standards for some facilities. Although the EPA recently scaled back certain GHG requirements, addressing climate change is a stated priority of President Biden and as such additional regulations and legislation are likely to be forthcoming at the U.S. federal or state level that could result in increased operating costs for compliance, , or required acquisition or trading of emission allowances. Additionally, demand for the products we produce may be reduced.

Compliance with these regulations may result in increased permitting necessary for the operation of our business or for any of our growth plans. Difficulties in obtaining such permits could have an adverse effect on our future growth. Therefore, any future potential regulations and legislation could result in additional operating restrictions or delays in implementing growth projects or other capital investments, and could have a material adverse effect on our business and results of operations.

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

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

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

***The physical impacts of climate change can negatively impact our facilities and operations.***

Potential physical impacts of climate change include increased frequency and severity of hurricanes and floods as well as drought conditions, and global sea level rise. Although we have preparedness plans in place designed to minimize impacts and enhance safety, should an event occur, it could have the potential to disrupt our supply chain and operations. A number of our facilities are located on the Gulf Coast, which has been impacted by hurricanes that have required us to temporarily shut down operations at those sites. In addition, our sites rely on rivers for transportation that may experience restrictions in times of drought or other unseasonal weather variation.

***Increased regulation or deselection of plastic could lead to a decrease in demand growth for some of our products.***

There is a growing concern with the accumulation of plastic, including microplastics, and other packaging waste in the environment. Additionally, plastics have recently faced increased public backlash and scrutiny. Policy measures to address this concern are being discussed or implemented by governments at all levels. In 2019, the international treaty governing transboundary shipments of waste, the Basel Convention, was amended to clarify its applicability to plastic waste. The European Commission has been undertaking a series of actions under its Strategy for Plastics in a Circular Economy, including adoption of the Single Use Plastics Directive in 2019, which introduced policy measures for single use plastics including bans, product design requirements, extended producer responsibility obligations, and labeling requirements. Member states are required to transpose these measures into national law by July 2021. In addition, a host of single-use plastic bans and taxes have been passed by countries around the world and counties and municipalities throughout the U.S. Increased regulation of, or prohibition on, the use of certain plastic products could increase the costs incurred by our customers to use such products or otherwise limit the use of these products, and could lead to a decrease in demand for PE, PP, and other products we make. Such a decrease in demand could adversely affect our business, operating results, and financial condition.

***General Risk Factors***

***The coronavirus (COVID-19) pandemic could continue to materially adversely affect our financial condition and results of operations.***

In early 2020, the COVID-19 pandemic spread to countries worldwide and resulted in governments and other authorities implementing numerous measures to try to contain the disease, such as travel bans and restrictions, social distancing, quarantines, shelter-in-place orders and business shutdowns, among others. These measures caused significant economic disruption and adversely impacted the global economy, leading to reduced consumer spending and volatility in the global financial and commodities markets. Many of our facilities and employees are located in areas impacted by the virus. As a result of these measures and the general economic disruption, we experienced a decline in our financial results primarily in the second and third quarters of 2020, particularly in our Advanced Polymer Solutions and Refining segments. A return to more ordinary course of economic activity is dependent on the duration and severity of the COVID-19 pandemic, including the severity and transmission rate of the virus, the extent and effectiveness of containment efforts, including the spread of virus variants, the availability of vaccines, and future policy decisions made by governments across the globe as they react to evolving local and global conditions.

We continue to work with our stakeholders (including customers, employees, suppliers, business partners, and local communities) to attempt to mitigate the impact of the global pandemic on our business, including by implementing policies and procedures to promote the safety of our employees, proactively reducing costs intended to allow us to protect against further risk, and investing in initiatives to support our long-term growth, while also focusing on maintaining liquidity. However, we cannot assure that these mitigation efforts will continue to be effective or successful. An extended period of global supply chain and economic disruption as a result of the COVID-19 pandemic could have a material negative impact on our business, results of operations, access to sources of liquidity and financial condition. To the extent that the COVID-19 pandemic adversely impacts our business, results of operations, liquidity or financial condition, it may also have the effect of increasing many of the other risks described in "Risk Factors" set forth in this Annual Report.

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

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

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

We have a significant worldwide patent portfolio of issued and pending patents. These patents and patent applications, together with proprietary technical know-how, are significant to our competitive position, particularly with regard to PO, intermediate chemicals, polyolefins, licensing and catalysts. We rely on the patent, copyright and trade secret laws of the countries in which we operate to protect our investment in research and development, manufacturing and marketing. We operate plants, sell catalysts and products, participate in joint ventures, and license our process technology in many foreign jurisdictions, including those having heightened risks for intellectual property. In some of these instances, we must disclose at least a portion of our technology to third parties or regulatory bodies. In these cases, we rely primarily on contracts and trade secret laws to protect the associated trade secrets. However, we may be unable to prevent third parties from using our intellectual property without authorization. Proceedings to protect these rights could be costly, and we may not prevail.

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

***Adverse results of legal proceedings could materially adversely affect us.***

We are subject to and may in the future be subject to a variety of legal proceedings and claims that arise out of the ordinary conduct of our business. Results of legal proceedings cannot be predicted with certainty. Irrespective of its merits, litigation may be both lengthy and disruptive to our operations and may cause significant expenditure and diversion of management attention. We may be faced with significant monetary damages or injunctive relief against us that could have an adverse impact on our business and results of operations should we fail to prevail in certain matters.

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

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

Nearly all of our current pension plans have projected benefit obligations that exceed the fair value of the plan assets. As of 31 December 2020, the aggregate deficit was $1,482 million. Any declines in the fair values of the pension plans' assets could require additional payments by us in order to maintain specified funding levels.

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

See Note 28 to the Consolidated Financial Statements for additional information regarding pensions and other postretirement benefits.

## 2.3 Our Strategy

We work every day to be the best operated, most respected company in our industry. We strive to consistently outperform the competition by safely and reliably delivering high quality products to customers; being the company of choice for employees and shareholders; and being a responsible, good neighbor in the communities where we operate.

We are progressing this vision based on a foundation of operational excellence, cost discipline, and prudent financial stewardship. We intend to extend our reach and apply these foundational strengths across a larger set of assets.

- **Operational excellence of existing assets:** The Company continues to benefit from strong operational reliability and efficiency in its existing asset base, grounded in differential industrial and process safety performance, environmental stewardship, and disciplined investments to maintain and improve these operations. We continue to realize volume improvements from several recent olefins and polyolefin capacity expansions in the U.S. driven by the ongoing feedstock advantage from shale gas and oil production.

- **Advancing organic projects with increased capabilities:** During the first quarter of 2020 we launched production at our U.S. Gulf Coast high-density polyethylene plant using LyondellBasell's next-generation *Hyperzone* technology. In September 2020, we established a 50/50 joint venture with China's Liaoning Bora Enterprise Group to start up and operate a new, large petrochemical complex in northeast China. In December 2020, we established a 50/50 joint venture with Sasol through which we will further expand our U.S. Gulf Coast footprint in olefins and polyolefins. The formation of this joint venture with Sasol aligns with our strategy of investing in high-quality assets in growing markets or feedstock advantaged regions. Taken together, the Bora and Sasol joint ventures are equivalent to the full capacity and immediate financial benefits of a new and operational world-scale integrated cracker complex. Our current project pipeline includes one world-scale PO/TBA plant in the Houston, Texas area. Earlier in 2020, we slowed construction activities on our PO/TBA plant to ensure worksite safety and preserve liquidity during the pandemic. During the fourth quarter we resumed activity. The project is approximately 50% complete and expected to be completed in the fourth quarter of 2022, approximately one year later than originally estimated. The delayed timing of the startup should provide benefits from a more fully recovered global economy as well as another year of global demand growth for the products. In January 2021, we entered into an agreement to form a 50/50 joint venture with China Petroleum & Chemical Corporation (Sinopec) which will produce propylene oxide (PO) and styrene monomer (SM) in China's domestic market. We continue to evaluate potential new projects to support further organic growth.

- **Enhanced abilities to evaluate and execute inorganic growth opportunities:** LyondellBasell's free cash flow and balance sheet provide a strong basis to generate additional value through acquisition. We will focus on where we can extend our strengths and skills to other assets and businesses, both in our current business lines and in areas that overlap, extend, or sit adjacent to our existing petrochemical and polymer footprint. We continue to actively manage our business portfolio while we evaluate new opportunities.

- **Sustainability:** Our company is focused on the substantive and ambitious goals outlined in our most recent Sustainability Report to develop circular and sustainable business models for our products. In 2020, we took action to advance our goals of annually producing and marketing two million tons of recycled and renewable-based polymers, including the start-up of our MoReTec molecular recycling pilot plant in Ferrara, Italy and the expansion of our mechanical recycling capacity in Europe through our Quality Circular Polymers joint venture with SUEZ.

We understand what drives our core advantages and will continue the benchmarking and continuous improvement that extends these leading positions. Our Company has a resilient portfolio of businesses that can leverage geographic, feedstock and market diversity to achieve superior results. Our continued focus on value generating growth will be guided by advantaged positions and where LyondellBasell's strengths create tangible value.

Our Board is responsible for overseeing the overall course of our business and achievement of our strategy. Each year, the Company's management develops both an annual financial operating plan and a multi-year strategic business plan, each of which are reviewed by the Board. Members of the Board are updated regularly by our management regarding the Company's progress in achieving its financial and strategic goals.

## 2.4 Sustainability

LyondellBasell is committed to sustainable development and releases an annual corporate Sustainability Report that sets forth our approach to sustainability, and shares our ambitions and progress in managing environmental, social and governance factors.

As one of the world's largest producers of plastics and chemicals, our products are used by millions of people around the world, every day. We have the potential — and responsibility — to use this scale and reach to make a positive impact across our value chains. That's why we are working to make meaningful progress to address some of the world's most pressing challenges such as:

- Reducing plastic waste in the environment;
- Helping to mitigate climate change; and
- Contributing to a thriving society for our employees, the communities where we operate and the people who depend on our products

We strive to create better environmental and social outcomes in the way we do business. Promoting safe, efficient, and ethical business practices provides better results not only for us, but also for the customers we serve and the communities in which we operate. Our business approach and drive for innovation are underpinned by key sustainability themes such as resource efficiency, climate change, safety, governance, and productive stakeholder dialogue. We work continuously towards sustainable successful outcomes and are committed to protecting the environment, human health and safety in the communities where we operate. We deliver on this commitment by:

- Producing the basic building blocks for products that enhance consumer safety, quality of life, convenience, and contribute to a low-carbon, circular economy;
- Minimizing our impact on the environment; and
- Supporting a variety of community service activities.

Two key sustainability ambitions we aim to achieve by 2030 are:

- Producing and marketing 2 million metric tons of recycled and renewable-based polymers annually; and
- Achieving a 15% reduction in $CO_2$ equivalent emissions per ton of product produced, compared with 2015

To further our commitment to reducing plastic waste in the environment, we will:

- Help to demonstrate successful plastic waste management in multiple cities and divert millions of tons of plastic waste through our participation in Alliance to End Plastic Waste projects; and
- Unlock at least five times our investment to increase the recovery and recycling of plastic and accelerate solutions to end plastic waste.

We are dedicated to safety excellence and strive for zero incidents, zero injuries and zero accidents. In 2020, LyondellBasell continued to operate with industry leading safety performance. The Company's safety performance in 2020, measured by total recordable incident rate ("TRIR") for employees and contractors, was 0.20. We utilize the U.S. Occupational Safety and Health Administration definition for TRIR, which is the number of injuries recorded per 200,000 hours worked.

Our operational excellence philosophy establishes uniform management system requirements for areas that have a direct impact on our operating performance. These management system requirements include programs for mechanical integrity and inspection, management of change, process hazard analysis, risk assessment, incident investigation and reporting, and the maintenance of process safety information. Other elements essential to a successful operational excellence program include effective communication and employee training.

Our process safety program is focused on the pro-active identification and management of hazards in our operations. It plays a significant role in our overall safety performance and in fulfilling our commitment to operate in a manner that protects our people, the environment and our business relationship with our customers.

Our product stewardship efforts promote the safe and responsible use of our products. We strive to understand the safety, health and environmental issues associated with the manufacture, distribution and use of our products and we share that understanding with our customers and other stakeholders.

## 2.5 Human Capital

Our success as a company is tied to the passion, knowledge and talent of our global team. We believe in integrity, diversity and fairness, and we focus on creating a work environment that is safe, respectful and inspires employees to strive for excellence. We recognize that individuals cannot succeed alone; we believe in the power of many and place a strong emphasis on teamwork.

We reward performance based on personal, team and company results. We engage in open and ongoing dialogue with employees and their representatives to ensure a proper balance between the best interests of the Company and its employees. At a minimum, we provide all workers with fair wages and uphold all applicable fair wage laws, wherever we work. We never use child, forced, bonded or involuntary labor, and we do not knowingly work with subcontractors or suppliers who use child or forced labor or engage in human trafficking practices. In several of our locations, we partner with employee representatives on initiatives such as health and safety. We use the services of contractors, primarily to assist with non-core business functions, and we require that all contractors adhere to our operational excellence standards and GoalZERO, a comprehensive program to protect the health and safety of our employees and contractors.

Our Code of Conduct sets out our expectations on topics such as respecting fellow employees, anti-corruption, conflicts of interest, trade compliance, anti-trust and competition law, insider trading, sanctions, misconduct and political donations. It is available in 18 languages on our company website. New employees are trained on the Code and all employees complete annual refresher training. In 2020, we adopted a human rights policy that established our standards for workforce health and safety; prevention of discrimination, harassment and retaliation; diversity and inclusion; workplace security; working conditions and fair wages; freedom of association; freely chosen employment; and child labor protections.

*Demographics*

As of 31 December 2020, we employed approximately 19,200 full-time and part-time employees around the world. Of this total, approximately 8,600 were in the U.S. and Canada and another 8,100 were in Europe. The remainder of our employees are in other global locations.

As of 31 December 2020, approximately 900 of our employees in the U.S. were represented by labor unions. Most of our employees in Europe and Latin America, and some of our employees in Asia Pacific, are subject to staff council or works council coverage or collective bargaining agreements.

Some examples of key programs and initiatives that are focused to attract, develop and retain our diverse workforce include:

*Talent Development and Engagement*

We believe in building an engaged, talented workforce by developing skill sets, supporting diversity and ensuring fair employment and work practices. In July 2020, we accelerated our efforts in the area of diversity, equity, and inclusion ("DEI") with the appointment of a Chief Talent & Diversity Officer, the establishment of a DEI Leadership Council, the development of a multi-year DEI strategy, and the implementation of activities focused on listening to our employees and obtaining their perspectives on DEI.

Employee growth and development are key elements supporting our vision of superior performance. We provide development opportunities for our employees through on-the-job experiences, learning from others, and in-class and online learning. In 2020, we offered more than 308,000 hours of training to our employees through both in-person classes and our online learning management system. We continue the investment in our leadership through Leadership Development programs, including accelerated development academies and robust development planning targeted at our high potential leaders. We encourage high performance and alignment with business goals through our performance management system which includes annual goal setting, continuous performance conversations throughout the year, and a year-end process to measure performance against goals. Employees are measured not only on results delivered, but how they are delivered based on established enterprise-wide competencies.

*Safety*

We are committed to providing a safe workplace, free from recognized hazards, and we comply with all applicable health and safety laws and recognized standards. Information on occupational health services is provided globally throughout the new hire on-boarding process and offered in various languages dependent on the site location. GoalZERO is our commitment to operating safely and with a goal of zero incidents, zero injuries and zero accidents. We cultivate a GoalZERO mindset with clear standards, regular communication, training, and targeted campaigns and events, including our annual Global Safety Day.

As the COVID-19 pandemic spread around the globe, we continued to operate with three key objectives: protecting the health and safety of our people; ensuring the safety and security of our work locations; and maintaining business continuity with our customers and suppliers. We quickly mobilized to develop a globally coordinated, locally implemented plan to protect our workforce at the beginning of the pandemic, which we have regularly updated as new developments occurred. Among the numerous safety measures and protocols we developed were: strict social distancing and facial coverage, critical personal protective equipment, thoughtful procedures for return to workplaces, and several initiatives to support our employees' mental health.

*Health, wellness, welfare and family resources*

Full-time employees at our major offices and manufacturing sites receive competitive benefits which may include, depending on location, the following: basic health and welfare benefits, which include medical coverage; life and accident insurance; business travel accident insurance; disability protection; retirement, savings and pension plans; share programs; and paid time off. Employees at our large sites have access to health services at an on-site clinic on paid work-time. We have defined benefit pension plans that cover employees in the U.S. and various non-U.S. countries. In addition, we provide other post-employment benefits such as early retirement and deferred compensation severance benefits to employees of certain non-U.S. countries.

In 2020, we implemented family-friendly policies that expanded the availability of paid parental leave, provided financial reimbursement for certain adoption expenses, and ensured all employees globally have a minimum of ten paid vacation or personal leave days.

## 2.6 Research and Development

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

In 2020 and 2019, our R&D expenditures were $101 million and $97 million, respectively. A portion of these expenses are related to technical support and customer service and are allocated to the other business segments. In 2020 and 2019, approximately 45% and 50% of all R&D costs were allocated to business segments other than Technology.

## 2.7 Governance Report of the Board of Directors

Our Board of Directors is responsible for overseeing the overall course of our business and strategy. Members of the Board are annually elected by shareholders and include our CEO and independent non-executives. Our Board and its committees oversee:

- Management's identification, measurement, monitoring, and control of our Company's material risks, including operational, credit, market, liquidity, compliance, strategic, and reputational risks;
- The Company's maintenance of high ethical standards and effective policies and practices to protect our reputation, assets, and business;
- Management's development and implementation of an annual financial operating plan and a multi-year strategic business plan, and our progress meeting these financial and strategic plans;
- The assessment of operational performance, the importance of environmental health and safety programs and the Company's performance with respect to key technologies;
- The corporate audit function, our independent registered public accounting firm, and the integrity of our consolidated financial statements; and
- The establishment, maintenance, and administration of appropriately designed compensation programs and plans.

The Board is also responsible for:

- Reviewing, monitoring, and approving succession plans for the Board, our CEO and other key executives to promote senior management continuity;
- Conducting an annual self-evaluation of the Board and its committees;
- Identifying and evaluating director candidates and nominating qualified individuals for election to serve on our Board; and
- Reviewing our CEO's performance and approving the compensation for our CEO and other executive officers.

Our Board currently has eleven members. Our Articles of Association provide that the Board will consist of at least nine members, including at least one executive director who will be the CEO. The Rules for the Board provide that the Board, in its sole discretion, will determine the size of the Board in accordance with our Articles of Association, our nomination agreement with Access Industries and applicable law or regulation, including the listing standards of the New York Stock

Exchange ("NYSE"), provided that the Board will have no more than twelve members. All directors are elected annually in accordance with our Articles of Association.

The members of the Board are elected by the general meeting of shareholders from a list of nominees that is selected and approved by the Board. Pursuant to our Articles of Association, the nominations are binding but may be overridden by two-thirds of the votes cast at the meeting if those two-thirds votes constitute more than one-half of the issued share capital of the Company.

Below shows information for each member of our Board as of 5 April 2021.

**Jacques Aigrain, French-Swiss, 66, Chairman of the Board of Directors, Non-Executive Director since 2011, Chair since 2018**

Mr. Aigrain is our Chair of the Board and a retired Senior Advisor and Partner of Warburg Pincus, a global private equity firm. Prior to joining Warburg Pincus in 2013, Mr. Aigrain served as Chief Executive Officer of Swiss Re, a publicly traded insurance company, and was Co-Global Head of M&A and Head of Financial Institutions at J.P. Morgan. He also has many years of experience as a director of public and multinational organizations, including The London Stock Exchange Group plc and WPP plc, a multinational advertising and public relations company. Mr. Aigrain's more than 30 years of financial services and management experience provide him with expertise in all areas of strategy, mergers and acquisitions, finance, and capital markets. Additionally, he brings substantial knowledge of board- and governance-related matters.

**Lincoln Benet, American-British, 57, Non-Executive Director since 2015**

Mr. Benet has served as Chief Executive Officer of Access Industries, a privately held industrial group with world-wide holdings, since 2006. Prior to joining Access, he spent 17 years at Morgan Stanley, including as Managing Director. Mr. Benet also has experience serving on the boards of several privately held companies, including those in the investment, music and publishing, oil and gas pipes and tubing, cement, sports media, and petrochemicals industries. As a result of this background, he brings to our board a working knowledge of global markets, mergers and acquisitions, executive management, strategic planning, and corporate strategy, as well as experience with international finance, including corporate finance matters such as treasury, insurance, and tax. Mr. Benet also serves as a director of Warner Music Group Corp.

**Jagjeet Bindra, American, 73, Non-Executive Director since 2011**

Mr. Bindra is a retired executive of Chevron, a multinational energy corporation, where he spent 32 years in senior leadership positions and retired as President of the company's worldwide manufacturing operations. Mr. Bindra holds a degree in chemical engineering and started his career at Chevron as a research engineer before progressing to increasingly senior positions, including the roles of Manager of Strategic Planning and Group Manager of Projects & Engineering Technology. His education and background provide him with extensive knowledge of global manufacturing, capital project management, engineering technology, strategic business planning, and health, safety, and environmental and operations matters. Mr. Bindra has served as a director of multiple private and publicly traded companies, including Edison International and its subsidiary, Southern California Edison, WorleyParsons, and Transocean Ltd., and he has broad knowledge of board and governance matters. Mr. Bindra currently serves as a member of the board of HPCL-Mittal Energy Limited (India).

**Robin Buchanan, British, 69, Non-Executive Director since 2011**

Mr. Buchanan has previously served as Dean and President of London Business School, the Chairman of PageGroup plc, a global specialist recruitment company, a director of Schroders plc, a global asset management firm, a director of Cicap Ltd, a global private equity firm, and a director of Bain & Company Inc., a global business consulting firm. As the former UK Senior Partner, he continues to serve in an advisory role to Bain. Mr. Buchanan also serves as an advisor to Access Industries and Non-Executive Chairman of its Advisory Board, which advises on portfolio strategy. Mr. Buchanan’s experience as a board member of publicly traded, private, and charitable companies, Dean of a leading Business School, and long tenure with Bain provide him with deep experience in strategy, leadership, board effectiveness, business development, and acquisitions across most industry sectors, including considerable involvement with chemicals and energy in Europe. He also brings a wealth of experience in board and governance matters, particularly as related to multi-national companies. Mr. Buchanan is a Chartered Accountant and a published author on strategy, acquisitions, leadership, board effectiveness, corporate governance, and compensation.

**Stephen Cooper, American, 74, Non-Executive Director since 2010**

Mr. Cooper has served as Chief Executive Officer and Director of Warner Music Group Corp., a recorded music and music publishing business, since 2011. He has also been a Managing Partner of Cooper Investment Partners, a private equity firm specializing in underperforming companies, since 2008. In the course of a long career as a financial advisor and corporate turnaround specialist, Mr. Cooper has served as the top executive of a number of publicly traded companies, including as Chief Executive Officer of Metro-Goldwyn-Mayer, Inc., a media company focused on film and television, and Hawaiian Telecom, the dominant telecom services provider in Hawaii. Mr. Cooper has expansive knowledge and experience relating to all matters of executive management, finance, and strategy, and due to his role as a sitting CEO he has deep insight into day-to-day business, management, and strategy issues.

**Nance Dicciani, American, 73, Non-Executive Director since 2013**

Ms. Dicciani is a retired senior executive and chemical engineer. She spent her early career in research and development at Air Products and Chemicals, and then joined Rohm and Haas, a specialty chemicals manufacturer, as business director for the Petroleum Chemicals Division. After 10 years with Rohm and Haas in which she rose to the level of Senior Vice President, Ms. Dicciani became President and Chief Executive Officer of Honeywell Specialty Materials, also a chemicals manufacturer. Ms. Dicciani served on the Executive Committees of the American Chemistry Council and the Society of Chemical Industry and was appointed by George W. Bush to the President's Council of Advisors on Science and Technology. Her background provides her with specific industry knowledge and an understanding of manufacturing, health, safety, and environmental matters; insight into the competitive landscape relevant to our industry; and a wealth of experience in all areas of executive management. Ms. Dicciani also has extensive experience in board and governance matters and has served as a director of several public companies, including Halliburton, an oilfield services company, and Linde, an industrial gases company.

**Claire Farley, American, 62, Non-Executive Director since 2014**

Ms. Farley is an advisor to KKR Energy Group and a retired executive in the oil and gas exploration and production industry. Ms. Farley has served in several roles with KKR Energy Group since 2011, including as Vice Chair from 2016 to 2017 and as a member of KKR Management LLC, the general partner of a global investment firm, from 2013 to 2015. Prior to joining KKR, Ms. Farley served as Chief Executive Officer of Randall & Dewey, an oil and gas asset transaction advisory firm. She became Co-President and then Senior Advisor at Jeffries & Company after Randall & Dewey became its oil and gas investment banking group, and then co-founded RPM Energy, a privately-owned oil and natural gas exploration and development company. Ms. Farley brings to the Board experience in business development, mergers, acquisitions, and divestitures, as well as knowledge of the chemical industry's feedstocks and their markets. She also has experience in all matters of executive management and a deep understanding of public company and governance matters due to her prior service on the boards of companies including Anadarko Petroleum Corporation, and Encana Corporation, and her current service on the board of TechnipFMC.

**Isabella Goren, American, 60, Non-Executive Director since 2014**

Ms. Goren has served in a wide range of executive roles in capital intensive and highly competitive global businesses, most recently as Chief Financial Officer of American Airlines, Inc. and its parent company, AMR Corporation, from 2010 to 2013. Her 27-year career at American and AMR spanned leadership roles in Revenue Management, Investor Relations, Operations, and Customer Service, including being the head of American's Asia Pacific Division and Customer Relationship Marketing. Ms. Goren was also President of AMR Services, an AMR Corporation subsidiary company with operations at 60 locations worldwide. Her experience and areas of expertise include strategic planning, management of complex international operations, business development, global asset management, and corporate finance. Ms. Goren is also a chemical engineer and began her career at DuPont. As a board member of major multinational companies, including MassMutual Financial Group and Gap Inc., she brings public company director experience and extensive knowledge of corporate governance matters.

**Michael Hanley, Canadian, 55, Non-Executive Director since 2018**

Mr. Hanley has more than 25 years of experience in senior management and finance roles, including as Chief Financial Officer of Alcan, a Canadian mining company and aluminum manufacturer, President and CEO of Alcan's Global Bauxite and Alumina business group, and Senior Vice President, Operations & Strategy of the National Bank of Canada. He brings strong financial and operational experience, deep knowledge of capital-intensive and process industries, experience with U.S. and international accounting standards, and a broad understanding of international markets. Mr. Hanley also has significant experience on public company boards and in the role of audit committee chair, and an appreciation for corporate governance matters and the board's role in financial oversight. He is currently a member of the Quebec Order of Chartered Professional Accountants. Mr. Hanley serves as a director for BRP, Inc., Shawcor Ltd. (until May 2021) and Nuvei Corporation.

**Albert Manifold, Irish, 58, Non-Executive Director since 2019**

Mr. Manifold has been the Group Chief Executive and a director of CRH plc, an international group of diversified building materials businesses supplying the construction industry, since 2014. Mr. Manifold joined CRH in 1998 and advanced to increasingly senior roles, including Finance Director of the Europe Materials Division, Group Development Director, Managing Director of Europe Materials, and Chief Operating Officer (2009 to 2014). Prior to joining CRH, Mr. Manifold was Chief Operating Officer of Allen McGuire & Partners, a private equity group. As a sitting CEO with a background in other senior management roles, Mr. Manifold has acquired extensive leadership experience in competitive industries. In addition, he has significant knowledge of corporate finance, capital markets, strategic planning, and international operations. Mr. Manifold is also a Fellow of the Institute of Certified Public Accountants in Ireland.

**Bhavesh Patel, American, 54, Executive Director since 2018**

Mr. Patel has served as our Chief Executive Officer since January 2015. From the time he joined the Company in 2010 until his appointment as CEO, he held the roles of Senior Vice President, Olefins and Polyolefins-Americas and Executive Vice President, Olefins and Polyolefins-Europe, Asia, International & Technology, with additional responsibility for all manufacturing operations outside of the Americas and the Company's Polypropylene Compounding business. Taken together with his previous tenure with Chevron Corp. and Chevron Phillips Chemical Company, Mr. Patel has nearly 30 years' experience in the chemicals, plastics, and refining industries, including extensive leadership experience on a global basis. This background gives him a detailed understanding of the Company's industries and operations. Mr. Patel serves on the boards of the Houston Branch of the Federal Reserve Bank of Dallas, the Greater Houston Partnership, the Board of Visitors at the University of Texas MD Anderson Cancer Center, and is a member of the Business Council. He is also on the external advisory council of the College of Engineering at The Ohio State University and the Board of Visitors of the Fox School of Business at Temple University. Mr. Patel serves as a director of Halliburton and Union Pacific Corporation (through May 2021).

**Independence of Board Members**

Our Board annually reviews the independence of its members. In February 2021, the Board affirmatively determined that all of our non-executive directors and director nominees are independent under the rules of the NYSE.

The Board has adopted categorical standards of independence that meet, and in some instances exceed, the requirements of the NYSE. In order to qualify as independent under our categorical standards, a director must be determined to have no material relationship with LyondellBasell other than as a director. The categorical standards include strict guidelines for non-executive directors and their immediate families regarding employment or affiliation with LyondellBasell and its independent registered public accounting firm. Our categorical independence standards are included in our Corporate Governance Guidelines and can be found on our website at www.LyondellBasell.com.

The Board has determined that there are no relationships or transactions that prohibit any of our non-executive directors or nominees from being deemed independent under the categorical standards and that each of our non-executive directors and nominees is independent. In addition to the relationships and transactions that would bar an independence finding under the categorical standards, the Board considered all other known relationships and transactions in making its determination, including those set forth below under "Section 2.8.4–Related Party Transactions." In determining that no known transactions or relationships affect the independence of any of the non-executive directors, the Board considered that all of the identified transactions are ordinary course and none of the dollar amounts involved were material to the Company or the relevant counterparty.

The Board was also made aware of, and considered the fairness of, certain transactions and relationships between the Company and other organizations where our directors have relationships. These transactions and relationships were also considered in evaluating the independence of the non-executive members of our Board and the outside commitments of our executive director, Mr. Patel.

Each commercial transaction described below was entered into on an arm's-length basis in the ordinary course of business, and no director initiated or participated in negotiation of the relevant purchases or sales.

- Access: Mr. Benet is CEO of Access Industries and a director of Warner Music Group Corp., a majority-owned investment of Access Industries; Mr. Buchanan is an adviser to Access Industries and Non-Executive Chairman of its Advisory Board, which advises on portfolio strategy; and Mr. Cooper is CEO and a director of Warner Music Group Corp.

- Bindra: The Company licenses certain technology and engineering services to HPCL-Mittal Energy Limited, where Mr. Bindra is a director.

- Buchanan: The Company has engaged Bain & Company, where Mr. Buchanan was previously a partner and continues in a limited and unrelated advisory role, for certain consulting services.

- Dicciani: The Company purchases industrial gases from, and sells crude hydrogen to, Linde plc, where Ms. Dicciani is a director, and Linde provides technical services to certain Company sites in Europe which license its technology. The Company sells temporary chemical diverters for well completion to Halliburton, where Ms. Dicciani is a director.

- Farley: The Company purchases measurement products and receives site engineering services from TechnipFMC, where Ms. Farley is a director.

- Hanley: The Company sells polymer products to Shawcor Ltd., where Mr. Hanley is currently a director. Mr. Hanley is not standing for re-election to Shawcor's board of directors in 2021.

- Patel: The Company receives transportation services from Union Pacific Corporation, where Mr. Patel is currently a director. Mr. Patel is not standing for re-election to Union Pacific's board of directors in 2021. The Company sells temporary chemical diverters for well completion to Halliburton, where Mr. Patel is a director.

Additionally, the Board determined that notwithstanding the relationships between certain directors and the Company's largest shareholder, Access Industries, these directors are independent for purposes of NYSE listing standards and the Company's categorical standards. However, under the Dutch Corporate Governance Code, a director is not considered to be independent if he is a representative in some way of an entity which holds at least 10% of the Company's shares. The Dutch Corporate Governance Code further provides that there should be no more than one director at any time who can be considered to be affiliated with or representing such a 10% shareholder. Although our Board has determined that each of Messrs. Benet, Buchanan, and Cooper is independent for the purposes of the NYSE listing standards and the Company's categorical standards, their nomination by Access Industries renders them not independent under the Dutch Corporate Governance Code, and the Company does not meet the requirement that there be no more than one director representing Access Industries as described above. Our Board believes that application of the NYSE independence standards is more appropriate for LyondellBasell, which is listed only on the NYSE and not on any exchange in the Netherlands. Our Board further believes that the service of Access nominees on the Company's key independent committees provides those committees with shareholder perspective and the significant skills, experience and qualifications of these directors, to the benefit of the Board, the Company, and our stakeholders more generally. In the opinion of the Board, each of the other independence requirements set forth in sections 2.1.7 through 2.1.9 of the Dutch Corporate Governance Code has been fulfilled.

**Meetings and Board Committees**

The Board currently has six standing committees, each consisting entirely of independent directors: (1) Audit Committee, (2) Compensation and Talent Development Committee, (3) Nominating and Governance Committee, (4) Health, Safety, Environmental, and Operations ("HSE&O") Committee, (5) Finance Committee, and (6) Executive Committee.

Our Compensation and Talent Development Committee, Nominating and Governance Committee and HSE&O Committee meet in connection with each regularly scheduled Board meeting (other than the Board's strategy session held in July) and hold additional meetings as needed, while other Committees meet independently as the matters under their respective responsibilities require. Committees regularly receive reports from LyondellBasell management, report on committee actions to the Board, and may retain outside advisors.

In 2020, the Board held five regularly scheduled meetings and four special meetings. Our directors' average attendance rate at Board and committee meetings was 95%, and each of our directors attended at least 85% of the meetings of the Board and committees of which he or she was a member. In addition, our Chair regularly attends meetings of the Audit Committee and the Compensation and Talent Development Committee. Although the Company does not maintain a policy regarding directors' attendance at its general meetings of shareholders, both our Chair and CEO attend the Company's annual general meeting each year and will attend the 2021 annual general meeting.

The table below provides membership and meeting information for each of the Board's committees as of 5 April 2021.

| Name | Audit | Compensation & Talent Development | Nominating & Governance | HSE&O | Finance | Executive |
|---|---|---|---|---|---|---|
| Jacques Aigrain | | | ● | | ● | Chair |
| Lincoln Benet | | | ● | | Chair | ● |
| Jeet Bindra | ● | | | Chair | | ● |
| Robin Buchanan | | ● | ● | | | |
| Stephen Cooper | | | | ● | | |
| Nance Dicciani | | Chair | | | ● | ● |
| Claire Farley | | ● | Chair | | | ● |
| Bella Goren | ● | ● | | | | |
| Michael Hanley | Chair | | | ● | | ● |
| Albert Manifold | ● | | | ● | ● | |
| Bob Patel | | | | | | |
| 2020 Meetings | 5 | 4 | 4 | 4 | 7 | 0 |

(1) The Executive Committee meets on an as-needed basis to discuss coordination among the Board and its committees, collaborate on meeting agendas, and discuss ad-hoc issues. The Committee did not hold any meetings in 2020.

Each of our committees has a written charter, approved by the Board. The charters can be found on our website at www.LyondellBasell.com by clicking on "Investors," then "Corporate Governance," then "Board of Directors." Each committee annually reviews and recommends any changes to its charter and conducts an evaluation of committee performance with respect to delegated duties and responsibilities..

***Audit Committee***

The Audit Committee is responsible for overseeing all matters relating to our financial statements and reporting, our internal audit function and independent auditors, and our compliance function. Listed below are the general responsibilities of the Audit Committee.

- *Independent Auditor*—Engage external auditor, review performance and approve compensation; review independence and establish policies relating to the hiring of auditor employees; and pre-approve audit and non-audit services;

- *Internal Audit*—Review plans, staffing and activities of the internal audit function and its effectiveness;

- *Financial Statements*—Review financial statements and earnings releases; discuss and review accounting policies and practices and external auditor reviews; and discuss and review the effectiveness of internal controls; and

- *Compliance*—Review plans, staffing and activities of the compliance function and its effectiveness; establish and review procedures for complaints, including anonymous complaints regarding accounting, controls and auditing; and review the Company's Code of Conduct and system for monitoring compliance therewith.

Our Board has determined that all Audit Committee members are independent under the NYSE listing standards, our categorical standards, and the heightened independence requirements applicable to audit committee members under U.S. Securities and Exchange Commission ("SEC") rules. Our Board has also determined that all Audit Committee members are financially literate in accordance with the NYSE listing standards and that Mr. Hanley, Ms. Goren, and Mr. Manifold qualify as audit committee financial experts under SEC rules.

***Compensation and Talent Development Committee***

The Compensation and Talent Development Committee is responsible for overseeing our executive compensation and talent management programs and developing the Company's compensation philosophy. In 2020, the Committee changed its name from the Compensation Committee to the Compensation and Talent Development Committee in recognition of its increased focus on talent development, as well as diversity, equity and inclusion (DEI) matters.

In fulfilling its responsibility for the oversight of compensation matters, the Compensation and Talent Development Committee may delegate authority for day-to-day administration and interpretation of the Company's plans to Company employees, including responsibility for the selection of participants, determination of award levels within plan parameters, and approval of award documents. The Compensation and Talent Development Committee may not, however, delegate authority under those plans for matters affecting the compensation and benefits of the Company's executive officers.

The Compensation and Talent Development Committee's responsibilities include the following:

- *Executive Compensation*—Approve the compensation and benefits of executive officers; review executive compensation practices to ensure consistency with corporate objectives; review and approve CEO goals and objectives and evaluate CEO performance; and make recommendations to the Board regarding CEO and other executive officer compensation;

- *Company Compensation and Benefits*—Review the Company's compensation philosophy, programs and practices; review and approve pension and benefit arrangements as well as funding of pension and benefit plans; review gender pay equity for the Company; and make recommendations to the Board on these subjects; and

- *Talent Management*—Review the Company’s organizational leadership structure and oversee leadership development, talent management and succession and continuity planning for the CEO and other executive officers.

Our Board has determined that all Compensation and Talent Development Committee members are independent under the NYSE listing standards, our categorical standards and independence requirements applicable to compensation committee members under NYSE rules.

*Compensation Committee Interlocks and Insider Participation*—No member of the Compensation and Talent Development Committee serves or has served as an officer or employee of the Company or any of our subsidiaries and, during 2020, no executive officer served on the compensation committee or board of any entity that employed any member of our Compensation and Talent Development Committee or Board.

***Nominating and Governance Committee***

The Nominating and Governance Committee is primarily responsible for identifying nominees for election to the Board and overseeing matters regarding corporate governance.

To fulfill those duties, the Nominating and Governance Committee has the responsibilities summarized below:

- *Administrative*—Coordinate evaluations by committees and the full Board;

- *Directors and Director Nominees*—Identify and recommend candidates for membership on the Board, with consideration of the expertise, skills, specialized knowledge, and other qualifications and attributes, including diversity, of potential candidates, and recommend committee memberships;

- *Director Compensation*—Evaluate and recommend director compensation; and

- *Corporate Governance*—Review the Company's governance profile and make necessary recommendations; review and propose modifications to the Company's governance documents and policies; and review and comment on shareholder proposals.

***Health, Safety, Environmental & Operations Committee***

The HSE&O Committee assists the Board in its oversight responsibilities by assessing the effectiveness of health, safety, and environmental programs and initiatives that support Company policies. The HSE&O Committee also reviews the Company’s material technologies and the risks relating to its technology portfolio, the physical security of the Company’s assets, and the Company’s performance in executing large capital projects and turnarounds.

The specific responsibilities of the HSE&O Committee are summarized below:

- *Administrative*—Review the status of the Company's health, safety and environmental policies and performance, including processes to ensure compliance with applicable laws and regulations;

- *HSE Performance and Sustainability*—Review and monitor the Company's health, safety and environmental performance results, provide oversight of the programs, initiatives and activities in the areas of technology and sustainability; review with management environment, health, safety, product stewardship and other sustainability issues that can have a material impact on the Company; and review the status of related policies, programs and practices;

- *Audit*—Review and approve the scope of the health, safety and environmental audit program; regularly monitor audit program results; and review and approve the annual budget for the health, safety and environmental audit program; and

- *Operational Performance*—Assess the Company’s operational performance; review the scope of the Company’s operational excellence auditor program and monitor program results; and review and monitor the Company’s progress on and results for capital projects and turnarounds.

***Finance Committee***

The Finance Committee is responsible for monitoring and assessing such matters as the Company's capital structure and allocation, strategic transactions, debt portfolio, and tax and derivative strategies. In 2020, in response to the COVID-19 pandemic and low oil price environment, the Finance Committee met seven times in order to focus on the Company’s liquidity, capital allocation planning, and capital markets transactions.

In fulfilling its duties, the Finance Committee has the following responsibilities:

- *Strategy*—Review analyses and provide guidance and advice regarding acquisitions and divestments and discuss and review the Company's tax strategies, planning and related structures;

- *Capital*—Review the Company's capital structure and capital allocation, including organic or inorganic investments, review and discuss the dividend policy; and review and discuss share repurchase activities and plans; and

- *Securities and Financing*—Review and discuss the Company's debt portfolio, credit facilities, compliance with financial covenants, commodity, interest rate and currency derivative strategies; and proposed securities offerings.

***Executive Committee***

The Executive Committee consists of the chairs of each of the other Board committees. The role of the Executive Committee is to facilitate and improve communication and coordination among the Board and its committees. It does so by, among other things, collaborating on agenda setting and discussing ad-hoc issues.

### 2.7.1 Evaluation of the Board of Directors and its Individual Members

Our Board and its committees evaluate their own effectiveness in a robust self-assessment process overseen by the Nominating and Governance Committee. Each year, directors respond to survey questions soliciting information to be used to improve the effectiveness of the Board and its committees. Survey results are supplemented by one-on-one interviews conducted by either the Chair or third parties, and the Nominating and Governance Committee periodically engages independent outside consultants to facilitate and refresh the evaluation process.

For 2020, the Board conducted its evaluation process as described below.

**Engagement of Outside Consultant**

In early 2020, the Nominating and Governance Committee engaged an independent outside consultant to lead the self-assessment process and facilitate individual director interviews. The same consultant also administered the Company's 2017 assessment cycle, allowing for continuity an observations regarding improvement in Board processes and effectiveness over recent years.

**Development and Approval of Evaluation Process and Topics**

In September 2020, the Nominating and Governance Committee discussed and approved the overall process and timeline for the 2020 evaluation cycle, including one-on-one interviews with the consultant based on agreed interview and survey questions. The Chair of the Nominating and Governance Committee and the Company's Chief Legal Officer worked with the consultant to develop suggested topics and questions for distribution to the individual Board members, which were approved by the Nominating and Governance Committee in November.

The Board member interviews included an evaluation of each individual director's contributions to the Board and its committees, including his or her availability and time commitment, communication, understanding of relevant business and regulatory issues and ESG issues and trends, and functional expertise, as well as topics related to the function of the Board and its committees as a whole (Board meetings, director training and education, and Board refreshment).

**Distribution of Surveys and Interview Process**

In late 2020, Board members participated in one-on-one interviews with, and received individual feedback from, the consultant.

In parallel, senior executives provided their views of Board effectiveness and interactions with management through confidential interviews with the consultant.

**Reporting and Board Review of Results**

The independent consultant prepared a report with findings and suggestions to enhance Board effectiveness and best governance practices. The conclusions of that report, including feedback from senior executives, were discussed during the February 2021 Board and committee meetings in executive sessions.

### 2.7.2 Compensation of the Board of Directors

**Non-Executive Members of the Board**

Our Nominating and Governance Committee reviews director compensation on an annual basis and recommends any changes in compensation determined advisable. The Board seeks to award compensation that fairly compensates directors for the work required by membership on our Board and aligns director interests with those of our shareholders. The Nominating and Governance Committee periodically receives advice from Pearl Meyer & Partners, LLC, the Board's independent compensation consultant, on director compensation practices and gives consideration to the qualifications and caliber of the Company's directors and significant commitment required for service on our Board, including the additional time and effort required by overseas travel for a majority of our Board meetings.

Following its annual review in November 2020, the Nominating and Governance Committee recommended no changes to director compensation and approved the continuation of the existing director compensation policy as further described below. No increases to director pay have been approved since 2014, apart from an increase in the annual retainer for the Board Chair in connection with the election of Mr. Aigrain to the role in 2018 and the expansion of Chair duties (including in support of the Company's strategic growth initiatives) and time commitment and travel required for the role.

Our non-executive directors receive cash compensation and equity compensation, in the form of restricted stock units ("RSUs"), for their service on the Board and its committees. Members of the Board have the option to elect to receive all or a portion of the cash component of their compensation in Company shares. Our CEO does not receive any additional compensation for his service as a director.

**Annual Retainer**

| | |
|---|---|
| Cash | $115,000 ($325,000 for Chair) |
| RSUs | Valued at $170,000 ($325,000 for Board Chair) |

**Committee Retainers**
**(excluding Executive Committee)**

| | |
|---|---|
| Members | $10,000 ($15,000 for Audit Committee) |
| Chairs | $20,000 ($27,500 for Audit and Compensation and Talent Development Committee Chairs) |

In addition to the retainers shown above, we provide members of the Board with a cash payment of $5,000 for each intercontinental trip taken in performing their board service.

**Share Ownership Guidelines**

Members of our Board are subject to Share Ownership Guidelines. Under the Share Ownership Guidelines, non-executive directors are prohibited from selling any shares of the Company until they own shares that are valued at no less than six times their annual cash retainer for Board service, or $690,000 for all directors other than our Chair, whose ownership requirement is $1,950,000. Once a director has reached his or her required ownership level, he or she may not sell shares that would bring ownership below the threshold level.

**Prohibition on Hedging and Pledging Shares**

Pursuant to our Policy Prohibiting Insider Trading, members of the Board are prohibited from purchasing, selling, or writing options on the Company's shares, engaging in short sales, participating in other derivative or short-term purchase or sale transactions, or otherwise engaging in transactions that would enable them to hedge against any decrease in our share price. Directors are also prohibited from pledging Company shares as collateral for personal loans or other obligations, including holding shares in a brokerage margin account. These restrictions extend to directors' immediate family members and certain related entities and are intended to keep the interests of our directors aligned with the long-term interests of the Company and our shareholders.

**Executive Director**

The compensation that was paid to our executive director, Mr. Patel, during 2020 was based on his duties as CEO of the Company and determined in accordance with the compensation program for the Company's executive officers.

Our executive compensation program is designed to:

- Take into account the realities of a cyclical, commodity industry and reward differential performance;
- Align the interests of management with those of our shareholders;
- Encourage both short-term and long-term results;
- Attract, retain, and incentivize the highest caliber team possible;
- Enable us to pay high achievers above-market median compensation based on individual performance, potential, and impact to the Company's results; and
- Recognize and maintain the Company's market-leading position in HSE performance, costs, and business performance.

Our compensation program for our executive officers, including our executive director, is structured to incorporate the following compensation components:

| Component | Objective | Key Features | Performance-Based |
|---|---|---|---|
| Base Salaries | Provide a regular fixed income in recognition of job responsibilities | Determined when executives are hired or promoted into their position and reviewed annually | Individual performance is a key driver of any annual base salary adjustment. Increases are not guaranteed and must be approved by the Compensation and Talent Development Committee |
| Short-Term Incentives | Incentivize executives by aligning their compensation with key annual objectives and the results that are achieved | Target value of annual bonus is determined as a percentage of base salary. Executives earn from 0 to 200% of target based on Company results | Payout is determined by the Compensation and Talent Development Committee based on corporate performance |
| Long-Term Incentives | Encourage executives to increase shareholder value over the long term and support talent retention | Target value of LTI awards at grant is determined as a percentage of base salary<br><br>**PSUs** – three-year performance period, vest from 0 to 200% of target<br><br>**RSUs** – generally cliff vest after three years<br><br>**Options** – vest ratably over three years; expire ten years from grant; exercise price is fair market value at date of grant | Value of all LTI awards varies in relationship to changes in share price<br><br>PSUs pay out based on Company performance, as determined by the Compensation and Talent Development Committee. For PSUs granted in 2018, 2019, and 2020, performance is based solely on TSR relative to peers |

**Perquisites and Other Benefits**: Our executive director receives the same benefits generally provided to all of our employees, which include vacation allowances, Company matching under our 401(k) plan, Company contributions to our defined benefit pension plan, and health and welfare benefits. The perquisites received by our executive director that are not offered to all employees include:

- Annual executive physical
- Financial, tax, and estate planning—the Company will reimburse up to $15,000 of expenses.
- Matching under the U.S. Deferral Plan—the Company makes contributions to the U.S. Deferral Plan for amounts that exceed the IRS limits under our 401(k) plan and our defined benefit pension plan. The value of the matching contributions is 11% for compensation in excess of the IRS limit.

From time to time, the Company provides other benefits to our executive director that are intended for business purposes, including tax equalization payments, limited personal use of Company aircraft or payment for spouse travel, relocation benefits, and the payment of business club memberships or dues.

Tax equalization payments are designed to make the executive director whole if he incurs income tax in jurisdictions other than his country and/or state of residence. For example, executives may travel to other jurisdictions on Company business and may be taxed on days worked in those jurisdictions. If, and only to the extent, those additional taxes cannot be offset against the executive's regular income tax liability (such as in the form of credits), the Company will reimburse an amount sufficient to make the tax liability equal to the full income tax for his jurisdiction of residence only.

The primary use of private aircraft is for business purposes. From time to time, the executive director's spouse, family members or personal guests may accompany him on private aircraft. The Company may also pay or reimburse the cost of occasional spouse travel related to business trips. When approved travel of a family member or guest is imputed as income to the executive director, we reimburse the additional income tax incurred.

**Competitive Positioning**

Annually, the Compensation and Talent Development Committee reviews the total target direct compensation for each of our executive officers, including our executive director, which includes base salaries, target bonuses, and the grant date value of long-term incentive awards. The Committee strives to set total target direct compensation and each individual component of compensation near the median compensation levels of our peer group companies, while considering other factors described below. A large portion of the total target direct compensation opportunity is directly tied to the achievement of financial and operational metrics that measure our performance both in absolute terms and relative to peers.

The Committee reviews publicly available financial and compensation information reported by our peer group companies and general survey data. The survey data used to inform the Committee's 2020 compensation decisions was collected from the 2019 Willis Towers Watson Executive Compensation Database. This survey data reflects a combination of general industry and chemical industry compensation for executives with responsibilities similar to our executives.

The Committee reviews the peer group and survey data to determine the median compensation and then sets base salary and compensation targets for the current year. This generally involves establishing an annual bonus target and the target value of long-term incentive awards as a percentage of base salary. Median compensation is used as a reference point for pay recommendations. Actual pay and targets vary from median based on industry experience; experience and performance in his role and at the Company; value of the role to the Company; internal pay parity among our executives; and any other factors the Committee deems relevant.

The compensation peer group is also used more generally when the Committee reviews our compensation program design, including the types of compensation awarded and the terms and conditions of compensation components.

**CEO Pay Ratio**

Pursuant to the rules established by the SEC, we were required to undertake an analysis of the ratio of the compensation paid to our Chief Executive Officer ("CEO") to the ratio of the median of the total annual compensation of all employees in 2020:

- The annual total compensation of the global median employee of our company (other than Mr. Patel, our CEO), was $92,064;
- The annual total compensation of Mr. Patel, our CEO, was $15,570,513; and
- Based on this information, the ratio of the annual total compensation of our CEO to the annual total compensation of the global median employee is 169 to 1.

For fiscal year 2019, we identified a new global median employee due to a substantial increase in our employee population as a result of our acquisition of A. Schulman in August 2018. We identified the 2019 global median employee by examining the total compensation for all regular full- and part-time employees who were actively employed by the Company on December 31, 2019 and students and interns who were hired for partial periods during 2019. For these employees, we calculated annual compensation using the following methodology and guidelines:

- To find the annual total compensation of all of our employees (other than our CEO), we considered all gross and net components of compensation (including short-term and long-term incentives) received by each employee and documented in the year-end payroll records for 2019.
- Compensation for full- and part-time employees hired during 2019 and still active as of 31 December 2019 was annualized. Compensation for all students and interns hired for partial periods during 2020 was not annualized.
- Annual compensation for expatriate employees and employees involved in permanent cross-border transfers during 2019 was calculated using all relevant country payroll records.

Although there was no change in the Company’s employee population or compensation arrangements in 2020 that would result in a significant change to the Company’s pay ratio disclosure, we have used a different median employee this year because the previously identified median employee left the Company during the year. In accordance with SEC rules, the newly selected global median employee is an employee with substantially similar 2019 compensation to the prior global median employee. After identifying this 2020 global median employee, we calculated 2020 total compensation for the selected employee using the same methodology as for compensation of the CEO under the SEC rules.

## 2.8 Corporate Governance and Risk Management

### 2.8.1 Corporate Governance Statement

We monitor and assess applicable Dutch, U.S., and other relevant corporate governance codes, rules, and regulations. We are subject to the Dutch Corporate Governance Code (the "Code"), as we are a listed company with its statutory seat in the Netherlands. As a NYSE-listed company, we also are required to comply with the U.S. Sarbanes-Oxley Act of 2002, as well as NYSE listing rules, and the rules and regulations promulgated by the SEC. As an overseas company, with executive offices in the United Kingdom, we are also required to comply with applicable requirements of U.K. company law, including the Companies Act 2006.

Our corporate governance structure is based on the requirements of the Dutch Civil Code, the company's Articles of Association and the rules and regulations applicable to companies listed on the NYSE, complemented by several internal procedures including the Rules for the Board and Corporate Governance Guidelines, which are available on our website. These procedures include a risk management and control system, as well as a system of assurance of compliance with laws and regulations.

For the full text of the Code, please refer to the website http://www.commissiecorporategovernance.nl/. For the full text of the U.S. Sarbanes-Oxley Act of 2002, as well as NYSE listing rules and the rules and regulations promulgated by the SEC, see www.sec.gov/about/laws/soa2002.pdf, http://nyse.com/, and www.sec.gov/about.shtml respectively.

The Code contains principles and best practices for Dutch companies with listed shares. We agree with both the general approach and the vast majority of its principles and best practice provisions. Any deviations from the Code are explained, in accordance with the Code's "comply or explain" principle.

Any material changes in our corporate governance structure and/or our compliance with the Code will be discussed at LyondellBasell's 2021 annual general meeting of shareholders as a separate agenda item. The Board is of the opinion that the company's corporate governance structure, as described here, is the most appropriate for LyondellBasell. With the exception of those aspects of our governance structure which can only be amended with the approval of shareholders, the Board may make adjustments to the way the Code is applied, if this is considered to be in the interest of the Company. If adjustments are made, they will be published and reported in the annual report for the relevant year.

### 2.8.2 Code of Conduct

Part of LyondellBasell's risk management and control system is the Company's Code of Conduct. The Code of Conduct covers such topics as fair an accurate business dealings, corruption, health and safety, discrimination, and environmental protection.

The Company has a Code of Conduct for all employees and directors and a Financial Code of Ethics specifically for our CEO, CFO, Chief Accounting Officer and persons performing similar functions. Copies of these codes can be found on our website at www.LyondellBasell.com by clicking on “Investors,” then “Corporate Governance.” Any waivers of the codes must be approved, in advance, by our Board, and any amendments to or waivers from the codes that apply to our executive officers and directors will be posted on the “Corporate Governance” section of our website.

We expect all employees to report possible violations or concerns regarding our Code of Conduct. We offer an independent whistleblower helpline and website, EthicsPoint, that enables employees and other stakeholders to report complaints anonymously. Our Chief Compliance Officer, who has a direct reporting line to the Audit Committee, provides regular reports to the Committee on compliance with the Company’s Code of Conduct, related training programs, and complaints received and investigated by the compliance function.

Compliance with the Code of Conduct is monitored on a regular basis, and mandatory training courses on our Code of Conduct are conducted annually for all employees worldwide.

### 2.8.3 Conflicts of Interest

The Company has a Related Party Transaction Approval Policy, described below, that requires Audit Committee approval of certain transactions between the Company and related parties. During 2020, no transactions occurred that could have given the appearance of conflicts of interests or that effectively involved conflicts of interests. The Company also has a Conflicts of Interest Policy that governs the approval process for relationships of officers, directors and employees, that might conflict, or appear to conflict with the best interests of the Company. Best practice provisions 2.7.3 through 2.7.5 of the Dutch Corporate Governance Code have been complied with.

### 2.8.4 Related Party Transactions

We have adopted a written Related Party Transaction Approval Policy, which requires the disinterested members of the Audit Committee to review and approve certain transactions that we may enter into with related parties, including members of the Board, executive officers, and certain shareholders. The policy applies to any transaction:

- In the ordinary course of business with an aggregate value of $25 million or more,
- Not in the ordinary course of business, regardless of value, or

- With a value of $120,000 or more and in which an executive officer or non-executive director has a direct or indirect material interest.

Related party relationships are identified and disclosed on an ongoing basis, as well as through responses to annual questionnaires completed by all directors, director nominees, and executive officers.

The Audit Committee reviews all the relevant facts of each related party transaction, including the nature of the related person's interest in the transaction, and determines whether to approve the transaction by considering, among other factors, (i) whether the terms of the transaction are fair to the Company and on the same basis as those which could be obtained from non-related parties, (ii) the business reasons for the Company to enter into the transaction, (iii) whether the related party transaction would impair the independence of any independent Board member, and (iv) whether the transaction would present an improper conflict of interest for any director or executive officer of the Company. No director votes on approval or, unless requested by the Audit Committee, participates in the discussion of a related party transaction in which he or she has an interest. The Audit Committee also conducts an annual review of all transactions with related parties, including those that do not meet the thresholds for related party transactions described above.

The following is a description of related party transactions in existence since the beginning of fiscal year 2020.

***Access Industries***

In 2010, we entered into certain agreements with affiliates of Access Industries, including a registration rights agreement, which obligates us to register and bear the costs for the resale of equity securities owned by Access Industries or its affiliates, and a nomination agreement. Pursuant to the nomination agreement, Access Industries has the right to nominate individuals for appointment to the Board if certain ownership thresholds are met. Access Industries currently owns more than 18% of our outstanding shares and nominated Messrs. Benet, Buchanan and Cooper pursuant to the agreement. The Company entered into these agreements with Access Industries before it became publicly traded and the Related Party Transaction Policy was adopted. Amendments to the nomination agreement are approved by disinterested directors.

***Calpine Corporation***

Calpine Corporation, the owner and operator of power plants across the United States and Canada, supplies power and steam to the Company's Houston Refinery and is owned by a group of investors including a minority investment by Access Industries. The Audit Committee has reviewed and approved, most recently in October 2020, the Company's contracts with Calpine, which were determined to be on terms fair to the Company and more advantageous than those offered by other parties. In 2020, the Company purchased approximately $62 million of power, steam, and water from Calpine and sold approximately $13 million of excess gas and raw water to Calpine.

***Plasto-Cargal Group***

From time to time, the Company's Advanced Polymer Solutions segment sells certain additives to Plasto-Cargal Group, a manufacturer of plastic container and film products, in which Access Industries holds an indirect minority investment. Sales are conducted in the ordinary course and no approval is required under the Company's Related Party Transaction Approval Policy; however, the Audit Committee has reviewed and approved the continuation of such transactions, which totaled less than $0.5 million for 2020.

*Indemnification*

We indemnify members of our Board to the fullest extent permitted by law so that they will be free from undue concern about personal liability in connection with their service to the Company. Our Articles of Association establish this indemnification right, and we have also entered into agreements with each of our non-executive directors and our CEO contractually obligating us to indemnify them.

### 2.8.5 Dutch Corporate Governance Code

As a Dutch company, our governance practices are governed by the Code, a copy of which is available at http://www.commissiecorporategovernance.nl. The Code contains a number of principles and best practices. The Code, in contrast to U.S. laws, rules and regulations, contains a "comply or explain" principle, offering the possibility to deviate from the Code and still be in compliance as long as any such deviations are explained. In certain cases, we have not applied the Code's practices and provisions and in those instances explain the non-application.

We conduct our operations in accordance with internationally accepted principles of good governance and best practice, while ensuring compliance with the corporate governance requirements applicable in the countries in which we operate. There is considerable overlap between the requirements we must meet under U.S. rules and regulations and the provisions of the Code and we comply with almost all of the provisions of the Code. For clarity purposes, we have listed below deviations from the Code and our reasons for deviating.

***2.1.5 and 2.1.6***

The Company's Board currently consists of eleven directors, three of whom are female. The Board believes that diversity, including with respect to gender, nationality, ethnicity. experience and background is important and beneficial to a well-functioning board. Subject to the availability of suitable candidates at the time of appointments, the Company aims to reach a well-balanced mix of men and women on the Board. The Company understands that under prior Dutch law, a board of directors was considered balanced if at least 30% of the members are men and if at least 30% of the members are women. While we do not currently meet this target, the Nominating and Governance Committee, as well as its outside consultants, include women and minority candidates in each pool from which director candidates are selected. We also understand that new legislation regarding gender balance targets is currently pending, and we intend to adopt gender balance targets in accordance with Dutch law requirements once that legislation comes into effect.

The Company has not implemented a diversity policy. However, the Board and its Nominating and Governance Committee evaluates the Company's diversity initiatives and efforts to recruit and retain diverse employees and directors and specifically considers diversity of views and experiences pursuant to its corporate governance guidelines available at www.LyondellBasell.com by clicking on "Investors," then "Corporate Governance." In July 2020, the Company accelerated its efforts in the area of diversity, equity, and inclusion ("DEI") with the appointment of a Chief Talent & Diversity Officer, the establishment of a DEI Leadership Council, the development of a multi-year DEI strategy, and the implementation of activities focused on listening to our employees and obtaining their perspectives on DEI. Also in 2020, the Company adopted a human rights policy that established our standards for workforce health and safety; prevention of discrimination, harassment and retaliation; diversity and inclusion; workplace security; working conditions and fair wages; freedom of association; freely chosen employment; and child labor protections.

***2.1.7***

Our Board currently consists of eleven directors, three of whom (Messrs. Benet, Buchanan, and Cooper) have been nominated by a shareholder pursuant to a nomination agreement. Under the provisions of the Code, but not under the NYSE listing standards, those three directors are not considered independent as a result of their affiliation with the shareholder that nominated them, which owns more than 10% of our shares. Under the Code, for each shareholder holding 10% or more of the Company's shares at most one director may be on the Board. This deviation from the Code is a result of our obligation under the nomination agreement with an affiliate of Access Industries to nominate individuals to our Board. The Company entered into the nomination agreement before it became publicly traded; however, subsequent amendments to the nomination agreement have been approved by our disinterested Board members. The Board believes that each of the Access-nominated directors brings with him a level of skill, experience and qualifications that benefit the workings of the Board and therefore the Company's stakeholders generally.

***2.2.2***

Members of the Board are appointed for one-year terms; however, there is no limit on the number of terms a Board member may serve.

Currently, the Board does not believe there is a driving interest in limiting members to the "maximum of two four-year terms plus two two-year terms" provision of the Code. In 2020, Messrs. Aigrain, Bindra, Buchanan, and Cooper were nominated and elected to serve on the Board, each having served as director for eight years or more. The Board believes that a depth of history and knowledge of the Company, which can be developed through long-term service, continues to be key to an effective oversight of the Company, and that the Company's mandatory retirement age (as described below) and annual evaluation process for renominations are currently more effective means of ensuring Board refreshment and renewal, while also allowing for continuity of service. The Board revisits the provisions in its governing documents on at least an annual basis and may determine that limitations of the number of terms for Board members is appropriate. Notwithstanding any such determinations, under the nomination rights described above, as long as certain shareholders maintain their share ownership at required levels, they will be able to nominate individuals of their choosing; the result of which may be for individuals nominated by them to serve for longer than any Board-determined terms.

***2.2.4***

We do not maintain a schedule of retirement for our directors. Our Corporate Governance Guidelines and Rules for the Board of Directors, which are available on our website at www.LyondellBasell.com by clicking on "Investors," then "Corporate Governance," provide that directors will not be re-nominated for election to the Board after they reach the age of 75, which acts effectively as a retirement schedule. While the Board does not believe there is a specific age after which directors should no longer serve on boards, it does believe mandatory retirement ages are useful for promoting board refreshment. In 2019, Albert Manifold joined our Board, replacing a retiring director, and as of 31 December 2020, we had a vacancy on our Board due to another retiring director. The Board believes that the mandatory retirement age and an annual evaluation process for deciding whether to re-nominate individuals for election are currently more effective means of ensuring board refreshment and renewal, while also allowing for continuity of service.

***3.1.2.v***

The number of options and restricted stock units that we grant to our executives are determined based on an overall target of equity based compensation, calculated as a percentage of base salary, rather than on the achievement of specified targets as is considered best practice under the Code. The targeted values of options and restricted stock units granted are determined based on peer group analyses to ensure competitive compensation for attracting and retaining our executives.

***3.1.2.vi***

In contrast to best practices provision 3.1.2.vi under the Code, we do not require all shares granted as compensation to be held for five years or until the end of employment. Instead, our Compensation and Talent Development Committee implemented share ownership requirements that restrict selling of shares by executives unless certain levels of equity are held. We believe that the share ownership guidelines appropriately ensure executives retain substantial equity to make certain their interests are aligned with shareholders while also allowing flexibility for diversification of personal wealth.

***3.1.2.vii***

The stock options we grant to our executive officers are exercisable before the third anniversary of the date of grant, which is contrary to best practices provision 3.1.2.ii in the Code. We believe our vesting schedules are in line with the practices of our peer group used for executive compensation purposes and necessary to attract and retain the best people.

***3.2.1***

Mr. Patel, our CEO and executive director, is party to an employment agreement that provides for severance payments that are in excess of one year's base salary. Executives other than Mr. Patel are participants in our Executive Severance Plan. The severance plan provides for severance payments in an amount equal to the executive's base salary plus target annual bonus (or, in the case of Mr. Patel, 1.5 times such amount (or 2.5 times such amount in the event of certain termination circumstances within one year of a change in control)). We believe that these severance arrangements are consistent with market practices and our peer group severance arrangements and are necessary to attract and retain qualified leaders.

***3.3.2 and 3.3.3***

Members of the Board have been granted restricted stock units as a portion of their annual remuneration. The restricted stock units entitle the recipient to an equal number of the Company's shares after certain time-based vesting requirements have been met. Additionally, Board members are allowed to receive shares of our common stock in lieu of their cash retainers. This is a deviation from the Code, which states that board members shall not be granted shares and/or rights to shares by remuneration.

The Company believes that granting shares and rights to acquire shares aligns the Board members' interests with those of shareholders, thereby increasing the incentives to make decisions that create long-term value for the Company.

Additionally, as part of their review of director compensation, the Nominating & Governance Committee and the Board consider, among other factors, the practices at a comparative group of public companies, based on market comparison studies prepared by an outside independent consultant. All of the companies in the comparative group offer some form of equity compensation. For that reason, among others, the Company believes that equity awards are reflective of the market and are necessary to attract and retain highly skilled individuals with relevant experience and to reflect the time and talent required to serve on the board of directors of a complex, multinational corporation.

***4.2.2***

We do not maintain a policy on bilateral contacts with our shareholders. We engage with shareholders through a number of different forums, including investor conferences, our bi-annual investor day presentation, individual meetings and calls, our annual general meeting of shareholders, and by responding to shareholder correspondence. We maintain a flexible approach to shareholder engagement and prioritize our ability to respond to each communication received from shareholders on a case-by-case basis to accommodate both shareholder preferences as well as Company objectives. Such a policy is not customary for NYSE-listed issuers.

### 2.8.6 Shareholders and General Meeting of Shareholders

*Powers*

A general meeting of shareholders will be held at least once a year in the Netherlands. In this meeting, the following items are expected to be discussed and/or approved:

- The written report of the Board containing the course of affairs in LyondellBasell and the conduct of the management during the past financial year as disclosed in this Annual Report;
- The adoption of the annual accounts;
- The Company's reserves and dividend policy and justification thereof;
- The discharge of the members of the Board in respect of their duties during the previous financial year;
- Each material change in the Company's corporate governance structure (if any occurred); and
- Any other item the Board determines to place on the agenda.

The approval of the general meeting of shareholders and the Board is also required for resolutions regarding a significant change in the identity or character of LyondellBasell or its business, including in any event:

- A transfer of the business or virtually all of the business to a third party;
- Entry into or termination of long-term cooperation by the Company or a subsidiary with another legal entity or partnership or as a general partner with full liability in a limited or general partnership if such cooperation or the termination thereof is of far-reaching significance for the Company; and
- An acquisition or disposal by the Company or a subsidiary of a participation in the capital of another company, the value of which equals at least one third of the amount of the assets according to the consolidated statement of financial position with explanatory notes attached to the annual accounts as most recently adopted.

Proposals placed on the agenda by the Board, or at the request of shareholders, provided that they have submitted the proposals in accordance with the provisions of LyondellBasell's Articles of Association, will be discussed and decided. Shareholders are entitled to request items for the annual general meeting agenda no less than sixty days before the meeting, and provided that they represent at least 1 percent of LyondellBasell's issued share capital.

The Board may convene extraordinary general meetings as often as it deems necessary. Such meetings must be held if one or more shareholders and others entitled to attend the meetings jointly representing at least one-tenth of the issued share capital make a written request to that effect to the Board, specifying in detail the items to be discussed.

*Information to shareholders*

To ensure fair disclosure, LyondellBasell distributes Company information that may influence the share price to shareholders and other parties in the financial markets simultaneously and through means that are public to all interested parties.

When LyondellBasell's annual and quarterly results are published by means of a press release, interested parties, including shareholders, can participate through conference calls and view the presentation of the results on LyondellBasell's website. The schedule for communicating the annual financial results is in general published through a press release and is posted on LyondellBasell's website.

It is LyondellBasell's practice to post the presentations given to analysts and investors at investor conferences on its website. Information regarding presentations to investors and analysts and conference calls are announced in advance on LyondellBasell's website. Meetings and discussions with investors and analysts shall, in principle, not take place shortly before publication of regular financial information. LyondellBasell does not assess, comment upon, or correct analysts' reports and valuations in advance, other than to comment on factual errors. LyondellBasell does not pay any fees to parties carrying out research for analysts' reports, or for the production or publication of analysts' reports, and takes no responsibility for the content of such reports.

At the annual general meetings of shareholders, shareholders will be provided with all requested information, unless this is contrary to an overriding interest of the Company. If this should be the case, the Board will provide its reasons for not providing the requested information.

Furthermore, the Investor Relations section on LyondellBasell's website provides links to information about LyondellBasell published or filed by LyondellBasell in accordance with applicable rules and regulations.

*Relationship with Institutional Investors*

LyondellBasell finds it important that its institutional investors participate in LyondellBasell's general meetings of shareholders. The Company believes that providing internet proxy voting should achieve high levels of participation at the meeting.

### 2.8.7 Takeover Directive; Anti-Takeover Provisions and Control

*General*

The EU Takeover Directive requires that certain listed companies publish information providing insight into defensive structures and mechanisms which they apply. The relevant provision has been implemented into Dutch law by means of a decree of 5 April 2006. Pursuant to this decree, Dutch companies whose securities have been admitted to trading on an EU regulated market have to include information in their annual report which could be of importance for persons who are considering taking an interest in the company. The Company's shares are admitted to trading on the NYSE and not on any EU regulated markets.

According to provision 4.2.6 of the Code, we are required to provide a survey of our actual or potential anti-takeover measures, and to indicate in what circumstances it is expected that they may be used.

Accordingly, we have set out below a number of provisions in the Articles of Association that in a Dutch context technically are not necessarily considered to be anti-takeover measures, but which could restrict the ability of a controlling shareholder to effectively exercise control over the Company:

- As per article 12.3 of the Articles of Association, and subject to article 12.4, the appointment of a member of the Board shall take place by way of a binding nomination prepared by the Board. The general meeting of shareholders may render such nomination non-binding by means of a resolution adopted by at least two-thirds (2/3) of the valid votes cast, such two-third (2/3) majority representing more than one-half (1/2) of the issued capital. In case of such a vote, the general meeting of shareholders will be free in its selection and appointment of a Board member to fill the vacancy by means of a resolution adopted by at least two-thirds (2/3) of the valid votes cast, such two-third (2/3) majority representing more than one-half (1/2) of the issued capital. If the proportion of the share capital of at least one-half (1/2) as referred to in the preceding sentence is not represented at the meeting, then no new meeting may be convened without such proportion of the share capital being represented; and
- As per article 22.1 of the Articles of Association, the Articles of Association may only be amended by the general meeting of shareholders on the proposal of the Board.

In the event of a hostile takeover bid, in general the Board reserves the right to use all powers available to it in the interests of the Company and its affiliated enterprise, taking into consideration the relevant interests of the Company's stakeholders.

### 2.8.8 Risk Management

A certain degree of risk is inherent in our business (see Section 2.2, "Risk Factors," generally, as well as Section 2.1.3 "Outlook," with respect to risks to our business, including those related to the COVID-19 pandemic). Additionally, pursuing business strategies and objectives inevitably leads to taking risks. Risks can jeopardize strategies and objectives in various ways. Each type of risk we encounter is addressed in a manner and with the intensity that matches the nature and size of the risk in relation to the Company's risk appetite. The risk appetite is the total residual impact of risks that we are willing to accept in the pursuit of our objectives.

Effective risk management is a key factor for the Company realizing its business and strategic objectives. Risk areas with a low-risk appetite and thus a low acceptable residual risk require strong risk management and strong internal controls. The risk areas where we have a low-risk appetite include those relating to the safety of our employees, our assets, the environment and the communities in which we operate and those relating to legal and regulatory compliance.

The management of the Company and the Board are responsible for ensuring that LyondellBasell complies with applicable legislation and regulations. They are also responsible for the financing of LyondellBasell and for managing the internal and external risks related to its business activities.

The establishment of our internal risk management and control system is based on the identification of external and internal risk factors that could influence the operational and financial objectives of the Company, and contains a system of monitoring, reporting, and operational reviews.

To help identify risks, LyondellBasell uses a formal enterprise risk management approach, consisting of a set of risks definitions which are discussed amongst senior management of LyondellBasell at least annually, as described below. Based on this risk assessment, actions are initiated to further enhance the Company's risk mitigation.

The disclosure of the risks that potentially could have a significant impact on the Company's strategy execution, operations or financial position is derived in part from LyondellBasell's internal risk assessment, comprising elements of the risk assessment model as mentioned in the Committee of Sponsoring Organizations of the Treadway Commission ("COSO") report.

The Company publishes two annual reports in respect of the financial year ("2020 Annual Reports"): (i) a Statutory Annual Report in accordance with Dutch legal requirements in accordance with IFRS and International Financial Reporting Interpretation Committee ("IFRIC") interpretations as adopted by the European Union and (ii) an Annual Report on Form 10-K in accordance with U.S. securities laws, based on the United States of America Generally Accepted Accounting Principles ("U.S. GAAP"). Both 2020 Annual Reports include risk factors that are specific to the petrochemical industry, LyondellBasell, and ownership of its shares. LyondellBasell also provides sensitivity analyses by including:

- A narrative explanation of its financial statements;
- The context within which financial information should be analyzed; and
- Information about the quality, and potential variability, of LyondellBasell's earnings and cash flow.

In the "Statements of the Board of Directors" (included in Section 2.8.10), the Board addresses the Company's internal risk management and control systems.

We are required to conduct an evaluation, under the supervision and with the participation of our CEO and CFO, of the effectiveness of the Company's internal control over financial reporting and, based on that evaluation, conclude whether the Company's internal control over financial reporting was effective as of 31 December 2020, providing reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with U.S. GAAP. PricewaterhouseCoopers LLP, the Company's independent registered accounting firm under U.S. securities rules and regulations, also reports on the effectiveness of the Company's internal control over financial reporting in its Consent of Independent Registered Public Accounting Firm as included in our 2020 Annual Report on Form 10-K for the year ended 31 December 2020.

For the Statutory Annual Report, the Company follows the requirements of Dutch law and regulations, including preparation of the consolidated financial statements in accordance with IFRS and IFRIC interpretations as adopted by the European Union. For the Annual Report on Form 10-K, the Company applies the requirements of the U.S. Securities and Exchange Act of 1934, and prepares the financial statements included therein in accordance with U.S. GAAP.

LyondellBasell currently has a Disclosure Committee, consisting of various members of management from different business and functional areas within the Company. The Disclosure Committee reports to and assists the CEO and CFO in the maintenance, review and evaluation of disclosure controls and procedures. The Disclosure Committee's main responsibilities are to ensure compliance with applicable disclosure requirements arising under United States and applicable stock exchange rules.

**Board's Role in Risk Oversight**

While the Company's CEO is responsible for assessing and managing the Company's day-to-day risks and related control systems, the Board has broad oversight of the Company's risk profile and risk management. In this oversight role, the Board is responsible for satisfying itself that the risk management processes designed and implemented by management, including the Company's Enterprise Risk Management ("ERM") organization, are functioning and that necessary steps are taken to foster a culture of risk-adjusted decision-making throughout the organization. The Company believes that this division of responsibilities has been effective in achieving sound risk management, and that the Board's involvement ensures effective oversight.

The primary means by which our Board oversees the Company's risk management structure and policies is through its regular communication with management. At each Board meeting, members of management are asked to report to the Board and, when appropriate, specific committees. These presentations provide members of the Board with direct communication with members of management and the information necessary for a full understanding of the Company's risk profile, including information regarding the Company's specific risk environment, exposures potentially affecting our operations, and the Company's plans to address such risks. In addition to providing general updates on the Company’s operational and financial condition, members of management report to the Board about the Company’s outlook, forecasts, and any impediments to meeting them or to successfully pursuing the Company’s strategies more generally.

In carrying out its oversight responsibility, the Board has delegated to individual Board committees certain elements of its oversight function.

- The Audit Committee oversees of the integrity of the Company's financial statements; the qualifications, performance and independence of our independent accountants; the performance of the Company's internal audit function and compliance program; the Company's monitoring, control and reporting of significant corporate risk exposure, including information technology and cybersecurity risks; related party transactions; and our system of disclosure and internal controls.
- The Compensation and Talent Development Committee oversees the Company's executive compensation programs; evaluates whether our compensation programs and practices create excessive risk or any changes to those programs or practices are warranted; and monitors management retention, recruitment, and succession planning.
- The Nominating and Governance Committee reviews the Company's corporate governance practices and develops, reviews and recommends corporate governance guidelines and policies.
- The Health, Safety, Environmental & Operations ("HSE&O") Committee reviews and monitors compliance with health, safety and environmental matters; provides oversight of the Company's technology program and the execution of large capital projects and turnarounds; discusses the Company's HSE and Operational Excellence programs and safety and environmental incidents and statistics; reviews sustainability issues and their impacts; and plans initiatives to continuously improve health, safety, environmental and operational results.
- The Finance Committee provides oversees strategic transactions, including those that may impact our capital position; reviews our tax strategy and planning; and reviews our capital structure, capital allocation, dividend policy, share repurchase programs, debt profile, and hedging strategies.

The Company has an enterprise risk management (ERM) organization, with a group of employees dedicated to deploying the enterprise-wide risk management framework. The CEO and Chief Financial Officer are responsible for overseeing these risk management programs, including assessing risk tolerances, evaluating whether such tolerances are aligned with the Company’s strategic goals, and defining our overall risk profile. Each year, ERM leads a risk workshop with the CEO and his Leadership Team to refresh the Company’s risk profile. Together, the participants validate existing enterprise risks (both opportunities and threats), select new and emerging risks to add to the risk register, and ensure risk ownership is assigned to the appropriate leadership team executives and Board Committees.

The CEO has delegated to an internal Risk Management Committee the authority to review and approve transactions, including hedging strategies, that are in accordance with the Company’s approved risk management policies and procedures. The standing members of the Risk Management Committee include the CEO, the Chief Financial Officer, and the Chief Legal Officer. Under the Committee's oversight, the Company's Financial Risk Management Group manages foreign exchange, interest rate, and other financial risks, across the Company's global operations. Through a variety of policies and procedures, senior management and their leadership teams identify, monitor, mitigate, and report on risks and develop risk management plans aligned with the Company’s enterprise risk management framework.

The results of the risk management processes and updates on material risks are reported to the Board and its committees on a regular basis. The Audit Committee is responsible for ensuring that an effective risk assessment process is in place, and reports are made to the Audit Committee in accordance with NYSE requirements.

In recent years, members of the Board have participated in dedicated workshops, interviews, and surveys with the Company’s enterprise risk management organization and outside consultants. During these sessions, Board members and management identify and assess the Company’s primary risks. In 2020, in response to director feedback and requests, the enterprise risk management team conducted an accelerated evaluation of risks related to the Company’s operations and investments in China. .

The direct line of communication between the Board and members of management facilitated at Board meetings and through these workshops allows the Board to further evaluate and assess the management of the Company’s day-to-day risks.

**Risk Management and Control Systems**

The management of the Company, including our executive director, is primarily responsible for the design, implementation and integration of the Company's internal risk management and control systems. The purpose of these systems is to effectively respond to and manage the significant risks to which the Company is exposed. Such systems can never provide absolute assurance regarding achievement of corporate objectives, nor can they provide an absolute assurance that material errors, losses, fraud and the violation of laws or regulations will not occur.

To adhere to our duties in the area of internal risk management and control systems, the Company has designed and implemented an enterprise risk management process.

Enterprise risks are threats and opportunities identified by our management which may have significant consequences or benefits impacting key objectives and the ability to deliver the strategy. The identification and assessment of enterprise risks is conducted in accordance with the LyondellBasell Enterprise Risk Management ("ERM") framework which is based on the COSO Enterprise Risk Management model and ISO 31000 International Standard for Risk Management.

Updates concerning the significant business risks identified during the annual enterprise risk assessment are reported to the Board for review. A profile of our enterprise risks is provided to the Board at least annually, with some risks incorporated into key decision-making processes outside of the formal enterprise risk management process.

The Company's enterprise risks, as identified in accordance with the described process, are each assigned to a member of the senior management team as a risk owner. The identified owner is responsible for utilizing the ERM framework to assess the impact and develop actions to effectively manage his or her assigned risks. In addition, the Audit Committee of the Board is responsible for ensuring that an effective risk assessment process is in place, and reports are made regularly to the Audit Committee on financial and compliance risks in accordance with requirements of the NYSE.

In addition, department risks, that are not reportable to the Board are assessed and managed at the business/functional level with executive leadership. These department-focused enterprise risk assessments utilize the ERM framework and are an evergreen process conducted on a regular cadence incorporating the business segments, manufacturing operations and the critical business support functions.

We use various other measures to ensure adherence to our duties in the area of internal risk management and control systems, including:

- Operational review meetings of the Board with LyondellBasell's senior management on financial performance and realization of operational objectives and responses to emerging issues;
- Monthly meetings with LyondellBasell's CEO, CFO and senior finance management focusing on monthly financial figures and internal control evaluations;
- Monthly and quarterly financial reporting, primarily to LyondellBasell's senior management;
- Letters of representation that are signed by LyondellBasell's key personnel on a quarterly basis in which they confirm that for their responsible area and based upon their knowledge (i) an effective system of internal controls and procedures is maintained and (ii) the financial reports fairly present the financial position, results of operations and cash flows;
- Assessments by LyondellBasell's Disclosure Committee with respect to the timely review, disclosure, and evaluation of periodic (financial) reports;
- Discussions on process safety, product safety, environmental and security matters within the HSE&O Committee of the Board;
- Discussions on management letters and audit reports provided by the Company's internal and external auditors to the Audit Committee of the Board;
- Corporate policies assigning responsibility for identification and management of risks;
- LyondellBasell's Code of Conduct;
- LyondellBasell's Financial Code of Ethics applicable to the CEO, CFO and Chief Accounting Officer;
- LyondellBasell's Ethics Hotline and whistleblower procedures; and
- LyondellBasell's Compliance programs and training, which facilitate the development of controls which will aid in prevention, deterrence and detection of fraud against LyondellBasell.

### 2.8.9 Audit of Financial Reporting

*Financial Reporting*

LyondellBasell has comprehensive internal procedures in place for the preparation and publication of annual reports, annual accounts, quarterly figures, and all other financial information. These internal procedures are frequently discussed in the Audit Committee and the Board of Directors. The Company's Disclosure Committee assists the Company's management in overseeing LyondellBasell's disclosure activities and ensures compliance with applicable disclosure requirements arising under U.S. and Dutch law and regulatory requirements.

The Audit Committee reviews and approves the external auditor's audit plan for the audits planned during the financial year. The audit plan also includes the activities of the external auditor with respect to their reviews of the quarterly results other than the annual accounts. These reviews are based on agreed upon procedures and are approved by the Audit Committee. The external auditor regularly updates the Audit Committee on the progress of the audits and other activities.

*Appointment, Role, Assessment of the Functioning of the External Auditor, and the Auditor's Fee*

In accordance with Dutch law, LyondellBasell's external auditor is appointed by the general meeting of shareholders and is nominated for appointment by the Board upon advice from the Audit Committee. LyondellBasell's current external auditor for its Dutch statutory accounts is PricewaterhouseCoopers Accountants N.V. ("PwC"), and the Board, on the recommendation of the Audit Committee, is proposing shareholders appoint PwC as its auditor to audit the 2021 Dutch statutory accounts at the 2021 annual general meeting.

The Audit Committee reports annually to the Board on the functioning of, and the developments in, the relationship with of the external auditor as required by the Dutch Corporate Governance Code.

The external auditor has functioned to the satisfaction of the Audit Committee.

Annually, the Audit Committee provides the Board with a report on the relationship with the external auditor, including the required auditor independence. To determine the external auditor's independence, the relationship between the audit services and the non-audit services provided by the external auditor is important, as well as the rotation of the responsible lead audit partner every five years. Non-audit services (including tax fees and non-audit-related fees) performed by the external auditor comprised less than ten percent of the external auditor's services in 2020. Based on the proportion audit fees versus non-audit related fees, it was concluded and confirmed by the external auditor that the external auditor acts independently.

The external auditor will be present at the 2021 annual general meeting to respond to questions, if any, from the shareholders about the auditor's report on the financial statements.

The Audit Committee, on behalf of the Board, approves the remuneration of the external auditor as well as the non-audit services to be performed, after consultation with the CFO. It has been agreed among the members of the Board that the Audit Committee has the most relevant insight and experience to be able to approve both items, and therefore the Board has delegated these responsibilities to the Audit Committee.

The external auditor attends all meetings of the Audit Committee, unless this is deemed not necessary by the Audit Committee. The findings of the external auditor are discussed at these meetings.

The Audit Committee reports on all issues discussed with the external auditor to the Board, including the external auditor's report with regard to the audit of the annual accounts as well as the content of the annual accounts. In the audit report, the external auditor refers to the financial reporting risks and issues that were identified during the audit, internal control matters, and any other matters requiring communication under the auditing standards generally accepted in the Netherlands and in the United States.

*Internal Audit Function*

The internal audit function of LyondellBasell forms one of the key elements to address the topics of risk management and internal control over financial reporting as required under the Code and the Sarbanes-Oxley Act, respectively. To ensure the independence of this function, the Company's head of internal audit reports to the Audit Committee. The external auditor and the Audit Committee are involved in drawing up the work schedule and audit scope of the audit department. The head of internal audit regularly provides updates on his findings to the Audit Committee.

### 2.8.10 Statements of the Board of Directors

The management of the Company is responsible for the preparation of the Annual Accounts and the Annual Report of LyondellBasell Industries N.V. ("LyondellBasell N.V.") for the year ended 31 December 2020 in accordance with applicable Dutch law and IFRS as adopted by the European Union and with Part 9 of Book 2 of the Dutch Civil Code.

As required by Section 5:25C(2)(c) of the Dutch Financial Markets Supervision Act ("Wet op het financieel toezicht") and on the basis of the foregoing and the explanations contained in Section 2.8.8 "Risk Management," the Board confirms that to the best of its knowledge:

- The LyondellBasell N.V. 2020 Annual Accounts give a true and fair view of the assets, liabilities, financial position and profit or loss of LyondellBasell N.V. and the entities included in the consolidation taken as a whole; and
- The LyondellBasell N.V. 2020 Annual Report gives a true and fair view of the development and performance of LyondellBasell N.V. and the entities included in the consolidation taken as a whole as at 31 December 2020 and the state of the affairs during the financial year to which the report relates and describes the principal risks facing LyondellBasell N.V. and a discussion of the principal risks and uncertainties.

Based on the outcome of the measures described under Section 2.8.8, "Risk Management" and to the best of its knowledge and belief, the Board states that:

**Risk Management and Control Systems, Reporting on Going-concern Basis**

Based on the current state of affairs, it is justified that the financial reporting is prepared on a going concern basis, and the Annual Report disclose all material risks and uncertainties that are relevant regarding the expectation as to the continuity of LyondellBasell N.V. for the 12-month period after the date of issue of this Annual Report. The Annual Report provides sufficient insights into any important deficiencies in the effectiveness of the internal risk management and control systems that were detected during the 2020 financial year. The aforementioned systems provide reasonable assurance that the Annual Accounts do not contain any material errors.

**Evaluation of Disclosure Controls and Procedures**

Employees within the Company, with the participation of our CEO and our CFO have evaluated the effectiveness of our disclosure controls and procedures in ensuring that the information required to be disclosed in reports in accordance with International Financial Reporting Standards as adopted by the European Union that we file or submit to the Chamber of Commerce in The Netherlands, as amended, is recorded, processed, summarized and reported within the time periods specified in the Dutch Law, including ensuring that such information is accumulated and communicated to management as appropriate to allow timely decisions regarding required disclosure. Based on such evaluation, our CEO and CFO have concluded that such disclosure controls and procedures were effective as of 31 December 2020, the end of the period covered by this annual report.

**Internal Control over Financial Reporting**

The establishment of LyondellBasell's internal control and risk management systems is based on the identification of external and internal risk factors that could influence the operational and financial objectives of the Company and contains a system of monitoring, reporting and operational reviews. All material risk management activities have been discussed with the Audit Committee and the Board.

**Financial Statements**

The Report of the Independent Auditor, PricewaterhouseCoopers Accountants N.V., is included in the "Other Information". The financial statements are being presented for adoption by shareholders at the 2021 annual general meeting. The Board recommends that shareholders adopt these financial statements.

**LyondellBasell Industries N.V.**

**The Board of Directors**,

/s/ Jacques Aigrain (Chair)

/s/ Lincoln Benet

/s/ Jagjeet S. Bindra

/s/ Robin Buchanan

/s/ Stephen F. Cooper

/s/ Nance K. Dicciani

/s/ Claire S. Farley

/s/ Isabella D. Goren

/s/ Michael S. Hanley

/s/ Albert J. Manifold

/s/ Bhavesh V. Patel

5 April 2021

# CONSOLIDATED FINANCIAL STATEMENTS

## CONSOLIDATED STATEMENT OF INCOME

| Millions of U.S. Dollars, except per share data | Note | Year ended 31 December 2020 | 2019 |
|---|---|---|---|
| Revenue | 5 | $ 28,165 | $ 34,911 |
| Cost of sales | 6 | 24,820 | 29,711 |
| Gross profit | | 3,345 | 5,200 |
| Selling costs | 6 | 356 | 394 |
| Administrative expenses | 6 | 877 | 817 |
| Impairment of long lived asset | 15 | 582 | — |
| Other expense, net | 10 | 74 | 27 |
| Operating profit | | 1,456 | 3,962 |
| Finance income | | 12 | 20 |
| Finance costs | 11 | (410) | (360) |
| Share of profit of investments accounted for using the equity method | 17 | 141 | 142 |
| Profit before income tax | | 1,199 | 3,764 |
| Income tax benefit/(expense) | 12 | 151 | (662) |
| Profit for the year | | $ 1,350 | $ 3,102 |
| **Attributable to:** | | | |
| Profit attributable to | | | |
| -Owners of the Company | | $ 1,350 | $ 3,102 |
| -Non-controlling interests | | — | — |
| Total | | $ 1,350 | $ 3,102 |
| **Earnings per share:** | | | |
| -Basic | 13 | $ 4.02 | $ 8.75 |
| -Diluted | 13 | 4.02 | 8.75 |

The notes on pages 63 to 136 are an integral part of these Consolidated Financial Statements.

## CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

| Millions of U.S. Dollars | Note | Year Ended 31 December 2020 | 2019 |
|---|---|---|---|
| Profit for the year | | $ 1,350 | $ 3,102 |
| **Other comprehensive loss, net of tax** | | | |
| ***Items that will not be reclassified subsequently to profit or loss:*** | | | |
| Remeasurements of post-employment benefits obligations | 28 | (50) | (323) |
| Tax benefit from re-measurements of post-employment benefits obligations | 12 | 13 | 87 |
| | | (37) | (236) |
| ***Items that may be reclassified subsequently to profit or loss:*** | | | |
| Unrealized gains on financial instruments at fair value through other comprehensive income | | 1 | 1 |
| Income tax (expense) benefit on financial assets at fair value through other comprehensive income | 12 | — | — |
| | | 1 | 1 |
| Net movement on cash flow hedges | 4 | (343) | (205) |
| Amount reclassed out of OCI to net income | | 4 | (10) |
| Income tax benefit on cash flow hedges | 12 | 82 | 46 |
| | | (257) | (169) |
| Net movement on net investment hedge | | (3) | — |
| Income tax (expense) benefit on net investment hedges | 12 | — | — |
| | | (3) | — |
| Currency translation of foreign operations | | 35 | (8) |
| Income tax benefit (expense) on currency translation of foreign operations | 12 | 30 | (8) |
| | | 65 | (16) |
| Other comprehensive loss, net of tax | | (231) | (420) |
| Total comprehensive income | | $ 1,119 | $ 2,682 |
| Attributable to: | | | |
| -Owners of the Company | | $ 1,119 | $ 2,682 |
| -Non-Controlling interest | | — | — |
| | | $ 1,119 | $ 2,682 |

The notes on pages 63 to 136 are an integral part of these Consolidated Financial Statements.

## CONSOLIDATED STATEMENT OF FINANCIAL POSITION

### ASSETS

| Millions of U.S. Dollars | Note | 31 December 2020 | 31 December 2019 |
|---|---|---|---|
| Non-current assets: | | | |
| Intangible assets | 14 | $ 2,534 | $ 2,597 |
| Property, plant and equipment | 15 | 18,327 | 15,069 |
| Right-of-use assets | 16 | 1,535 | 1,458 |
| Investments in associates and joint ventures | 17 | 1,275 | 1,203 |
| Deferred income tax assets | 27 | 79 | 81 |
| Derivative financial instruments | 20 | 244 | 255 |
| Trade and other receivables | 22 | 139 | 141 |
| Total non-current assets | | 24,133 | 20,804 |
| Current assets: | | | |
| Inventories | 21 | 3,878 | 4,278 |
| Trade and other receivables | 22 | 4,162 | 3,694 |
| Financial assets at fair value through other comprehensive income | 20 | 349 | 162 |
| Financial assets at fair value through profit or loss | 20 | 353 | 34 |
| Derivative financial instruments | 20 | 31 | 54 |
| Income tax receivable | | 818 | 171 |
| Cash and cash equivalents | 23 | 1,933 | 939 |
| Total current assets | | 11,524 | 9,332 |
| Total assets | | $ 35,657 | $ 30,136 |

The notes on pages 63 to 136 are an integral part of these Consolidated Financial Statements.

**EQUITY AND LIABILITIES**

| **Millions of U.S. Dollars** | **Note** | **31 December 2020** | **31 December 2019** |
|---|---|---|---|
| Equity attributable to the owners of the Company: | 24 | | |
| Share capital | | $ 19 | $ 19 |
| Share premium | | 35 | 6 |
| Other reserves | | (1,720) | (1,489) |
| Retained earnings | | 9,421 | 9,491 |
| Treasury shares | | (531) | (580) |
| | | 7,224 | 7,447 |
| Non-controlling interests | 25 | 17 | 19 |
| Total equity | | 7,241 | 7,466 |
| Non-current liabilities: | | | |
| Borrowings | 26 | 16,048 | 11,740 |
| Lease liabilities | 16 | 1,259 | 1,232 |
| Deferred income tax liability | 27 | 2,220 | 1,981 |
| Retirement benefit obligations | 28 | 1,921 | 1,737 |
| Derivative financial instruments | 20 | 645 | 130 |
| Provisions | 30 | 220 | 201 |
| Accruals and deferred income | | 307 | 279 |
| | | 22,620 | 17,300 |
| Current liabilities: | | | |
| Trade and other payables | 29 | 4,421 | 4,109 |
| Income tax payable | | 113 | 239 |
| Borrowings | 26 | 731 | 472 |
| Lease liabilities | 16 | 320 | 275 |
| Derivative financial instruments | 20 | 162 | 205 |
| Provisions | 30 | 49 | 70 |
| | | 5,796 | 5,370 |
| Total liabilities | | 28,416 | 22,670 |
| Total equity and liabilities | | $ 35,657 | $ 30,136 |

The notes on pages 63 to 136 are an integral part of these Consolidated Financial Statements.

## CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

| Millions of U.S. Dollars | Note | Share Capital | Share Premium | Treasury Shares | Other Reserves | Retained Earnings | Equity attributable to the owners of the Company | Non-Controlling Interest | Total Equity |
|---|---|---|---|---|---|---|---|---|---|
| Balance at 1 January 2019 | | $ 22 | $ 10 | $ (2,206) | $ (1,069) | $ 13,100 | $ 9,857 | $ 23 | $ 9,880 |
| Adoption of accounting standards | | — | — | — | — | 92 | 92 | — | 92 |
| *Transactions with owners:* | | | | | | | | | |
| Shares purchased | 24 | — | — | (3,728) | — | — | (3,728) | — | (3,728) |
| Common Stock dividends paid relating to 2019 | 24 | — | — | — | — | (1,462) | (1,462) | — | (1,462) |
| Preferred stock dividends paid | | — | — | — | — | (7) | (7) | — | (7) |
| Employees share-based payments: | | | | | | | | | |
| -Issuance of shares | | — | 33 | 42 | — | (3) | 72 | — | 72 |
| -Tax credits related to share-based awards | 12 | — | — | — | — | 5 | 5 | — | 5 |
| Cancellation of Treasury shares | | (3) | (37) | 5,312 | — | (5,272) | — | — | — |
| Purchase of non-controlling interest | | — | — | — | — | (64) | (64) | — | (64) |
| Distribution to Non-Controlling interest | | — | — | — | — | — | — | (4) | (4) |
| | | 19 | 6 | (580) | (1,069) | 6,389 | 4,765 | 19 | 4,784 |
| *Comprehensive income for the period:* | | | | | | | | | |
| Profit for the year | | — | — | — | — | 3,102 | 3,102 | — | 3,102 |
| Other comprehensive income/ (expense): | | | | | | | | | |
| Financial derivatives | | — | — | — | (169) | — | (169) | — | (169) |
| Remeasurements of post employment benefit obligation | 12/ 28 | — | — | — | (236) | — | (236) | — | (236) |
| Currency translation differences | | — | — | — | (16) | — | (16) | — | (16) |
| Financial Instruments at Fair Value through Other comprehensive income | | — | — | — | 1 | — | 1 | — | 1 |
| Total Comprehensive income/ (loss) for the period | | — | — | — | (420) | 3,102 | 2,682 | — | 2,682 |
| Balance at 31 December 2019 | | $ 19 | $ 6 | $ (580) | $ (1,489) | $ 9,491 | $ 7,447 | $ 19 | $ 7,466 |

The notes on pages 63 to 136 are an integral part of these Consolidated Financial Statements.

## CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

| Millions of U.S. Dollars | Note | Share Capital | Share Premium | Treasury Shares | Other Reserves | Retained Earnings | Equity attributable to the owners of the Company | Non-Controlling Interest | Total Equity |
|---|---|---|---|---|---|---|---|---|---|
| Balance at 1 January 2020 | | $ 19 | $ 6 | $ (580) | $ (1,489) | $ 9,491 | $ 7,447 | $ 19 | $ 7,466 |
| *Transactions with owners:* | | | | | | | | | |
| Shares purchased | 24 | — | — | (4) | — | — | (4) | — | (4) |
| Common Stock dividends paid relating to 2020 | 24 | — | — | — | — | (1,405) | (1,405) | — | (1,405) |
| Preferred stock dividends paid | | — | — | — | — | (7) | (7) | — | (7) |
| Employees share-based payments: | | | | | | | | | |
| -Issuance of shares | | — | 29 | 53 | — | (15) | 67 | — | 67 |
| Purchase of non-controlling interest | | — | — | — | — | 7 | 7 | — | 7 |
| Distribution to Non-Controlling interest | | — | — | — | — | — | — | (2) | (2) |
| | | 19 | 35 | (531) | (1,489) | 8,071 | 6,105 | 17 | 6,122 |
| *Comprehensive income for the period:* | | | | | | | | | |
| Profit for the year | | — | — | — | — | 1,350 | 1,350 | — | 1,350 |
| Other comprehensive income/ (loss): | | | | | | | | | |
| Financial derivatives | | — | — | — | (259) | — | (259) | — | (259) |
| Remeasurements of post employment benefit obligation | 12/ 28 | — | — | — | (37) | — | (37) | — | (37) |
| Currency translation differences | | — | — | — | 65 | — | 65 | — | 65 |
| Total Comprehensive income/ (loss) for the period | | — | — | — | (231) | 1,350 | 1,119 | — | 1,119 |
| Balance at 31 December 2020 | | $ 19 | $ 35 | $ (531) | $ (1,720) | $ 9,421 | $ 7,224 | $ 17 | $ 7,241 |

The notes on pages 63 to 136 are an integral part of these Consolidated Financial Statements.

## CONSOLIDATED STATEMENT OF CASH FLOWS

| Millions of U.S. Dollars | Note | Year Ended 31 December 2020 | 2019 |
|---|---|---|---|
| **Cash flows from operating activities:** | | | |
| Profit before income tax | | $ 1,199 | $ 3,765 |
| Adjustments for: | | | |
| Depreciation and amortization | 6 | 1,792 | 1,685 |
| Impairment of long lived assets | 15 | 582 | — |
| Share-based compensation | 8 | 55 | 48 |
| Finance cost, net | | 398 | 338 |
| Other expense, net | 10 | 74 | 26 |
| Share of profit of investments accounted for using the equity method | 17 | (141) | (142) |
| Changes in working capital relating to: | | | |
| (Increase)/decrease in trade receivables | | (331) | 339 |
| (Increase)/decrease in inventories | | 508 | 169 |
| Increase/(decrease) in trade payables | | 155 | (198) |
| Other, net | | 204 | (18) |
| Cash generated from operations | | 4,495 | 6,012 |
| Interest paid | | (627) | (423) |
| Net income taxes paid | | (176) | (403) |
| Net cash from operating activities | | 3,692 | 5,186 |
| | | | |
| **Cash flows from investing activities:** | | | |
| Purchase of property, plant and equipment | | (1,985) | (2,716) |
| Payments for repurchase agreements | | — | 527 |
| Purchases of equity securities at FVTPL | | (608) | (33) |
| Proceeds from the sale of equity securities at FVTPL | | 313 | 332 |
| Purchase of marketable securities held at FVOCI | | (270) | (108) |
| Proceeds from sale and maturities of marketable securities held at FVOCI | 4 | 114 | 511 |
| Purchases of business, associates and joint ventures | 17 | (2,389) | (22) |
| Net proceeds from sale of business, associates and joint ventures | | 15 | 5 |
| Interest received | | 10 | 19 |
| Dividends received from associates and joint ventures | 17 | 107 | 157 |
| Other, net | | (93) | (168) |
| Net cash used in investing activities | | (4,786) | (1,496) |
| | | | |
| **Cash flows from financing activities:** | | | |
| Repurchase of Company ordinary shares | 24 | (4) | (3,752) |
| Repayments of borrowings | 26 | (2,911) | (3,001) |
| Proceeds from borrowings | 26 | 6,414 | 5,031 |
| Proceeds from issue of short-term debt | 26 | 558 | 2,504 |
| Repayments of short-term debt | | (506) | (1,526) |
| Costs Related to Repayment of Long-Term Debt | | (77) | — |
| Payment of equity and debt issuance cost | | (63) | (22) |
| Net proceeds from commercial paper | 26 | 239 | (549) |
| Dividends paid | 24 | (1,405) | (1,462) |
| Preferred stock dividend paid | | (7) | (7) |
| Purchase of non-controlling interest | | (30) | (63) |
| Principal elements of lease payments | | (333) | (305) |
| Payments on forward starting interest rate swaps that include financing elements | | (238) | — |
| Settlement of cross currency swaps | | 346 | — |
| Proceeds from settlement of hedge derivative contract | | 887 | — |
| Payments for settlement of hedge derivative contract | | (882) | — |
| Other, net | | (8) | (11) |
| Net cash used in financing activities | | 1,980 | (3,163) |

| | | | |
|---|---|---|---|
| **Net increase in cash and cash equivalents** | | 886 | 527 |
| Cash and cash equivalents at beginning of period | | 938 | 415 |
| Exchange rate differences | | 109 | (4) |
| Cash and cash equivalents at end of the period | 23 | $ 1,933 | $ 938 |

The notes on pages 63 to 136 are an integral part of these Consolidated Financial Statements.

## 1 General

LyondellBasell Industries N.V. is a limited liability company (*Naamloze Vennootschap*) incorporated under Dutch law by deed of incorporation dated 15 October 2009. Unless otherwise indicated, the "Company," "we," "us," "our" or similar words are used to refer to LyondellBasell Industries N.V. together with its consolidated subsidiaries ("LyondellBasell N.V.").

LyondellBasell N.V. is a worldwide manufacturer of chemicals and polymers, a refiner of crude oil, a significant producer of gasoline blending components and a developer and licensor of technologies for production of polymers. LyondellBasell Industries N.V.'s shares are listed on the New York Stock Exchange ("NYSE"). The address of our principal executive offices is 4th Floor, One Vine Street, London, W1J0AH, The United Kingdom. Our registered office address is Delftseplein 27E, 3013 AA Rotterdam, The Netherlands and is registered at the chamber of commerce under number 24473890. Our other principal office is 1221 McKinney St., Suite 300 Houston, Texas, USA 77010.

The Consolidated Financial Statements for the year ended 31 December 2020 of LyondellBasell N.V. were approved for issue by the Board of Directors on 5 April 2021.

The Consolidated Financial Statements are subject to adoption by the Annual General Meeting of Shareholders on 28 May 2021.

## 2 Summary of Significant Accounting Policies

### Basis of Preparation and Consolidation

The Consolidated Financial Statements of LyondellBasell N.V. and its subsidiaries have been prepared in accordance with International Financial Reporting Standards ("IFRS") and International Financial Reporting Interpretation Committee ("IFRIC") interpretations as issued by the International Accounting Standards Board ("IASB") and as adopted by the European Union. Subsidiaries are entities over which the Company has control. The Company controls an entity when the Company is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity.

Subsidiaries are fully consolidated from the date on which control is transferred to the Company. They are deconsolidated from the date that control ceases. All intercompany transactions and balances have been eliminated in consolidation.

As the corporate financial information of LyondellBasell Industries N.V. is included in the Consolidated Financial Statements, the Corporate Statement of Income is presented in abbreviated format in accordance with Section 402, Book 2 of Dutch Civil Code.

The Consolidated Financial Statements have been prepared under the historical cost convention, except as noted for the use of fair value. Accounting policies of subsidiaries, associates and joint arrangements have been changed as needed to ensure consistency with the accounting policies adopted by the Company.

### New and Amended Standards Adopted

We have applied the following standards and amendments for the first time for annual reporting period commencing 1 January 2020:

*IFRS 3, Business Combinations* — The new guidance clarifies that to be considered a business, an integrated set of activities and assets must include, at a minimum, an input and a substantive process that, together, significantly contribute to the ability to create output. Furthermore, it clarifies that a business can exist without including all of the inputs and processes needed to create outputs. These amendments had no impact on our consolidated financial statements.

*IFRS 7 and IFRS 9 Interest rate Benchmark Reform* —The amendments modify specific hedge accounting requirements to allow hedge accounting to continue for affected hedges during the period of uncertainty before the hedged items or hedging instruments affected by the current interest rate benchmarks are amended as a result of the interest rate benchmark reforms. In September 2020, additional guidance was issued for the post reform period allowing accounting for changes in financial contracts as a result of the rate transition reform by only updating the effective interest rate and also provide a series of exemptions from the requirements of hedge accounting. These amendments did not have a material impact on our consolidated financial statements.

*IAS 1 and IAS 8, Definition of Material* — The amendments make the definition of material in IAS 1easier to understand and are not intended to alter the underlying concept of materiality in IFRS Standards. The amendments incorporate the concept of obscuring material information with immaterial information and change the threshold for materiality influencing users from 'could influence' to 'could reasonably be expected to influence' as part of the new definition

*Conceptual Framework for Financial Reporting* — The revisions to the conceptual Framework includes updated definitions and recognition criteria for assets and liabilities and other clarifications. These amendments had no impact on our consolidated financial statements.

*IFRS 16, Lease term and Covid-19 Related Rent Concessions* — The IFRS Interpretations Committee issued a clarification that in determining the lease term, the entity should consider the broader economics beyond the contractual term. The adoption of the guidance did not have a material impact on the lease term, associated lease liability and leased asset for our leasing arrangements.

In May 2020, new amendments to IFRS 16 were released to provide relief to lessees from applying lease modification accounting for rent concessions arising as a direct consequence of the Covid-19 pandemic. The amendments provide lessees the option not to assess and account for changes in lease payments as a result of Covid-19 related concession as a lease modification under IFRS 16. The amendment applies to annual reporting periods beginning on or after 1 June 2020 with early adoption permitted. We have not adopted the practical expedient and thus did not have a material impact on our consolidated financial statements.

New standards, amendments and interpretations issued but not effective for the financial year 2020 and we have not elected early adoption

*Amendments to IAS 1, Classification of Liabilities as Current or Non-current* — The amendments clarify that liabilities should be classified as either current or non-current, depending on the rights and obligations that exist at the end of the reporting period and should be unaffected by the expectations of the entity or events after the reporting date. The amendments are effective from January 1, 2023 and must be applied retrospectively. Early adoption is permitted. We are currently assessing the impact of the guidance on our consolidated financial statements.

*Amendments to IAS 16, Proceeds before intended use* — The amendment disallows deducting from the cost of an item of property, plant and equipment any proceeds received from selling items produced while the asset is not ready for its intended use. Instead such amounts should be recorded in the Consolidated Statement of Income. The amendments are effective retrospectively for annual periods beginning after 1 January 2022 but only to items of property, plant and equipment that are made capable of operating in the manner intended by management on or after 1 January, 2021 with the cumulative effect of initially applying the amendments as an adjustment to the opening balance of retained earnings. The new guidance is not expected to have a material impact on our consolidated financial statements.

*Amendments to IFRS 10 and IAS 28, Sale or contribution of assets between an investor and its associate or joint venture* — The amendments clarify that when the non-monetary assets sold or contributed to an associate or joint venture constitute a 'business' as defined under IFRS 3, the investor recognizes full gain or loss on the sale or contribution of assets. If the assets do not meet the definition of a business, the gain or loss is recognized by the investor only to the extent of the other investor's interests in the associate or joint venture. The amendments apply prospectively. The new guidance is not expected to have a material impact on our consolidated financial statements.

**Business Combination**

We recognize and measure the assets acquired and liabilities assumed in a business combination based on their estimated fair values at the acquisition date, with any remaining difference versus the purchase consideration recorded as goodwill or gain from a bargain purchase. Subsequent to the acquisition, and no later than one year from the acquisition date, we may record adjustments to the assets acquired and liabilities assumed, with the corresponding offset to goodwill on a retrospective basis and comparative information is restated. Upon the conclusion of the measurement period, any subsequent adjustments are recorded to earnings. Acquisition-related costs are expensed as incurred.

**Investments in Associates and Joint Arrangements**

Investments in entities over which we have the right to exercise significant influence but not control are classified as associates. Significant influence generally exists if we have an ownership interest representing between 20% and 50% of the voting rights. Arrangements under which we have contractually agreed to share control with another party or parties are joint arrangements, and classified either as, joint operations or joint ventures, depending on the contractual rights and obligations that each investor has, rather than the legal structure of the joint arrangement. The Company has assessed the nature of its joint arrangements and determined that it has both joint operations and joint ventures.

The Companies recognizes its share of the assets, liabilities, revenue and expenses of joint operations on a line by line basis in the Consolidated Financial Statements. Interests in associates and joint ventures are accounted for using the equity method. They are initially recognized at cost and subsequently adjusted for our share of profit or loss, other comprehensive income ("OCI") and distributed dividends. Where our share of the losses in an equity method investment equals or exceeds our interest in the entity, including any other unsecured long-term receivables, we do not recognize further losses unless we have incurred legal or constructive obligations on behalf of the other entity. Unrealized gains and losses on other transactions with the associates and joint arrangements are eliminated to the extent of our interest in them.

At each reporting date, we determine whether there is any objective evidence of impairment of our investments in associates or joint ventures. If an impairment is indicated, we calculate the amount of impairment as the difference between the recoverable amount of the associate or joint venture and its carrying value and recognize the amount as a component of our Share of profit/(loss) of investments accounted for using the equity method in the Consolidated Statement of Income.

**Foreign Currency Translation and Remeasurement**

*Functional and reporting currency*—Items included in the financial statements of each of LyondellBasell N.V.'s entities are measured using the currency of the primary economic environment in which the entity operates ("the functional currency") and then translated to the U.S. dollar reporting currency ("the reporting currency") through OCI as follows:

- Assets and liabilities are translated at the closing rate at the reporting date;
- Income and expenses are translated at average exchange rates for the period presented; and
- All resulting exchange differences are recognized as a separate component within OCI (currency translation of foreign operations).

*Transactions and Balances*—Foreign currency transactions are recorded in the entity's functional currency using exchange rates prevailing at the transaction date. Foreign exchange gains and losses resulting from the settlement of such transactions and from the remeasurement of monetary assets and liabilities denominated in foreign currencies at year-end exchange rates are recognized in our Consolidated Statements of Income.

Foreign exchange gains and losses that relate to borrowings and cash and cash equivalents are presented in the Consolidated Statement of Income within Finance costs. All other foreign exchange gains and losses are presented in the Consolidated Statement of Income within Other expense, net.

**Revenue Recognition**

Substantially all our revenues are derived from contracts with customers. We account for contracts when both parties have approved the contract and are committed to perform, the rights of the parties and payment terms have been identified, the contract has commercial substance, and collectability is probable.

Revenue is recognized when obligations under the terms of a contract with our customer are satisfied. This generally occurs at the point in time when performance obligations are fulfilled and control transfers to the customer. In most instances, control transfers upon transfer of risk of loss and title to the customer, which usually occurs when we ship products to the customer from our manufacturing facility. Revenue is measured as the amount of consideration we expect to receive in exchange for transferring goods. Customer incentives are generally based on volumes purchased and recognized over the period earned. Sales, value added, and other taxes that we collect concurrent with revenue-producing activities are excluded from the transaction price as they represent amounts collected on behalf of third parties. We apply the practical expedient to recognize the incremental costs of obtaining a contract as expense when incurred if the amortization period of the asset that we otherwise would have recognized is one year or less. Shipping and handling costs not treated as a separate performance obligation.

Payments are typically required within a short period following the transfer of control of the product to the customer. We occasionally require customers to prepay purchases to ensure collectability. Such prepayments do not represent financing arrangements, since payment and fulfillment of the performance obligation occurs within a short time frame. We apply the practical expedient which permits us not to adjust the promised amount of consideration for the effects of a significant financing component when, at contract inception, we expect that payment will occur in one year or less.

Contract balances typically arise when a difference in timing between the transfer of control to the customer and receipt of consideration occurs. Our contract liabilities, which are reflected in our Consolidated Financial Statements as Trade and other payables, consist primarily of customer payments for products or services received before the transfer of control to the customer occurs.

**Segment Reporting**

Our operations are managed through six operating segments. Our operating segments are managed by senior executives who report to our CEO and discrete financial information for each of the segments is available. Our CEO uses the operating results of each of the six operating segments for performance evaluation and resource allocation and, as such, is the chief operating decision maker.

**Share-Based Compensation**

The Company recognizes compensation expense for equity-classified share-based compensation awards over the vesting period based on the fair value of the award at the grant date. The fair value of stock options is determined using the Black-Scholes model. The fair value of performance share units is determined using a Monte Carlo model.

Compensation for liability-classified share-based awards are recognized on a straight-line basis over the vesting period as a liability and re-measured, at fair value, at the end of reporting period.

**Leases**

The group leases storage tanks, terminal facilities, land, office facilities, railcars, pipelines, barges, plant equipment and other equipment. Rental contract has terms ranging from 1 year to 30 years. While extension clauses are included in our leases do not materially impact our Right-of-use asset or lease liability, certain leases include options to extend the lease for up to 20 years. Contracts may contain both lease and non-lease components. We elected the practical expedient to account for lease and associated non-lease components as a single component for all asset classes with the exception of utilities and pipeline assets within major manufacturing equipment.

Assets and liabilities arising from lease are initially measured on the present value of the lease payments over the lease terms discounted using our incremental borrowing rate, unless an implicit rate is readily determined. Lease payments include fixed payments, variable payments which are derived from usage or market-based indices such as the consumer price index, and the exercise price of options to extend or terminate the lease, when it is reasonably certain that we will exercise those options. Right-of-use assets are measured at cost comprising of the amount of initial measurement of lease liability, initial direct costs, and restoration costs. The lease liability is remeasured with a corresponding adjustment to the related right-of-use asset whenever the lease payments change due to changes in an index or rate the lease liability is remeasured by discounting the revised lease payments using an unchanged discount rate.

Leases with an initial term of 12 months or less are not recorded on the Consolidated Statement of Financial Position.

Each lease payment is allocated between the liability and finance cost. The finance cost is charged to profit or loss over the lease period so as to produce a constant periodic rate of interest on the remaining balance of the liability for each period. Right-of-use assets are generally depreciated over the shorter of the asset’s useful life and the lease term on a straight-line basis.

**Intangible Assets**

*Intangible Assets*—Intangible assets primarily consist of customer relationships, trade names, know-how, emission allowances, various contracts (favorable utility contracts and licensing contracts), research and development costs and software costs. These assets are amortized using the straight-line method over the shorter of their estimated useful lives or the expected term of the contractual agreement and generally as follows:

- 5-8 years for know-how assets
- 5 years for technology patents and licenses
- 15-25 for emission allowances
- 15 years for customer relationships

*Research and development*—Costs incurred on development projects are recognized as intangible assets when it is probable that we will achieve economic benefits in the future, considering its commercial and technological feasibility, and costs can be measured reliably. Research expenditure and development expenditure that do not meet the aforementioned criteria are recognized as expense as incurred Amortization starts when development is complete and the asset is available for use. It is amortized over the period of expected future benefit.

## Property, Plant and Equipment

Property, plant and equipment are recorded at historical cost. Historical cost includes expenditures that are directly attributable to the acquisition of the items. Costs may also include borrowing costs incurred on debt during construction of major projects exceeding one year, costs of major maintenance arising from turnarounds of major units when it is probable that there is an associated future economic benefit, and committed decommissioning costs. Routine maintenance and repair costs are expensed as incurred. Land is not depreciated.

Depreciation is computed using the straight-line method over the estimated useful lives of the assets to their residual values, generally as follows:

- 25 years for major manufacturing equipment
- 30 years for buildings
- 5 to 20 years for light equipment and instrumentation
- 15 years for office furniture
- 2 to 7 years for turnarounds of major units, and
- 3 to 5 years for information system equipment.

The residual values and useful lives of assets are reviewed, and adjusted if appropriate, whenever events or circumstances indicate that a revision is warranted.

## Impairments of Non-Financial Assets

Non-financial assets are reviewed for impairment whenever events or changes in circumstances indicate that their carrying amount may not be recoverable. An impairment loss is recognized for the amount by which the carrying amount of the asset exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs to sell and value in use. For the purposes of assessing impairment, assets are grouped at the lowest level for which there are separately identifiable cash flows (cash-generating units) which for the Company is generally at the plant group level (or, at times, individual plants in certain circumstances where we have isolated production units with separately identifiable cash flows). Non-financial assets other than goodwill that have been impaired are reviewed for possible reversal of the impairment at each reporting date.

Goodwill and other assets that have an indefinite useful life are tested for impairment annually. Goodwill is allocated to operating group of cash-generating units which represents the lowest level at which the goodwill is monitored for internal management purposes which for us is the level of the operating segment The cash generating units to which goodwill has been allocated are tested for impairment annually, or more frequently when there is an indication that the unit may be impaired. If the recoverable amount of the cash-generating unit is less than the carrying amount of the unit, the impairment loss is allocated first to reduce the carrying amount of any goodwill allocated to the unit and then to the other assets of the unit pro-rata on the basis of the carrying amount of each asset in the unit. An impairment loss recognized for goodwill is not reversed in a subsequent period.

Houston Refinery Impairment—During the third quarter of 2020, we identified impairment triggers relating to our Houston refinery’s cash generating unit which resulted in a $582 million impairment charge recognized during the third quarter of 2020. Refer to Note 15 to our Consolidated Financial Statements.

The estimates of the Houston refinery’s discounted post-tax cash flows and estimated fair value utilized significant assumptions including management’s best estimates of the expected future cash flows, the estimated useful lives of the asset group, and the residual value of the refinery. These estimates required considerable judgment and are sensitive to changes in underlying assumptions such as future commodity prices, margins on refined products, operating rates and capital expenditures including repairs and maintenance. As a result, there can be no assurance that the estimates and assumptions made for purposes of our impairment determination will prove to be an accurate prediction of the future. Should our estimates and assumptions significantly change in future periods, it is possible that we may determine future impairment charges. In addition, assumptions about the effects of COVID-19 and the macroeconomic environment are inherently subjective and contingent upon the duration of the pandemic and its impact on the macroeconomic environment, which is difficult to forecast. We base our fair value estimates on projected financial information which we believe to be reasonable. However, actual results may differ from these projections. An estimate of the sensitivity to net income resulting from impairment calculations is not practicable, given the numerous assumptions, including pricing, volumes and discount rates, that can materially affect our estimates. That is, unfavorable adjustments to some of the above listed assumptions may be offset by favorable adjustments in other assumptions.

**Derivative Financial Instruments and Hedging Activities**

Pursuant to our risk management policies, we selectively enter into derivative transactions to manage volatility related to market risks associated with changes in commodity pricing, currency exchange rates and interest rates. Derivatives used for these purposes are generally designated as net investment hedges, cash flow hedges or fair value hedges. Derivative instruments are recorded at fair value on the Statement of Financial Position. Gains and losses related to changes in the fair value of derivative instruments not designated as hedges are recorded in earnings. For derivatives designated as net investment hedges and cash flow hedges, the effective portion of the gains and losses is recorded in OCI. The ineffective portion of net investment hedges and cash flow hedges is recorded in earnings. For net investment hedges, gains and losses accumulated in equity are included in the income statement when the foreign currency operation is partially disposed of or sold. For cash flow hedges, gains and losses accumulated in equity are included in earnings when the hedged item affects profit or loss. For derivatives that have been designated as fair value hedges, the gains and losses of the derivatives and hedged items are recorded in earnings.

Derivatives are initially recognized at fair value on the inception date and are subsequently re-measured at fair value as of each reporting date. The method of recognizing the resulting gain or loss depends on whether the derivative is designated as a hedging instrument, and if so, the nature of the item being hedged. The Company designates certain derivatives as either:

a. hedges of the fair value of recognized assets or liabilities (fair value hedge); or
b. hedges of a particular risk associated with a recognized asset or liability or a highly probable forecasted transaction (cash flow hedge); or
c. hedges of a net investment in a foreign operation (net investment hedge).

At the inception of the transaction, the Company documents the relationship between the hedging instrument and the hedged item, its risk management objectives and strategy for undertaking various hedging transactions. The Company also documents its assessment, both at hedge inception and on an ongoing basis, of whether the derivative that is used in the hedging transaction is highly effective in offsetting changes in the fair value or cash flow of the hedged item.

The fair values of various derivative instruments used for hedging purposes are disclosed in Note 20. The full fair value of the derivatives is classified as a non-current asset or liability if the remaining maturity of the derivative is more than 12 months and as a current asset or liability if the remaining maturity is less than 12 months.

(a) Fair value hedges

Our fair value hedges consist of fixed-for-floating interest rate swaps. We use the long-haul, quantitative method to assess hedge effectiveness using a regression analysis approach. We perform the regression analysis over an observation period of three years, utilizing data that is relevant to the hedge duration. We use the dollar offset method to measure ineffectiveness.

The Company applies fair value hedge accounting for hedging the changes in fair value of fixed-rate borrowings. The gain or loss relating to the effective and ineffective portion of interest rate swaps hedging fixed rate borrowings as well as changes in value of the fixed-rate borrowings attributable to interest rate risk are recognized as Finance costs.

We evaluate the effectiveness of the hedging relationship quarterly and calculate the changes in the fair value of the derivatives and the underlying hedged item basis adjustments separately. If the hedge no longer qualifies for hedge accounting, the adjustment to the carrying amount of the hedged item is amortized over its remaining term utilizing the effective interest method.

(b) Cash flow hedges

Our cash flow hedges include cross currency swaps, forward starting interest rate swaps, and commodity futures, swaps and options.

Cash flow hedges utilizing commodity futures, swaps and options may use the critical terms match approach or long-haul, quantitative method to assess hedge effectiveness. We use the dollar offset method under the hypothetical derivative method to measure ineffectiveness.

For our forward starting interest rate swaps, we use the long-haul, quantitative method to assess hedge effectiveness under the hypothetical derivative approach. We use the dollar offset method under the hypothetical derivative method to measure hedge ineffectiveness.

When a hedging instrument expires or is sold, or when a hedge no longer qualified for hedge accounting, any cumulative gain or loss existing in Equity at that time remains and is recognized in the Consolidated Statement of Income when the forecast transaction ultimately is recognized in the Consolidated Statement of Income. When a forecast transaction is no longer expected to occur, the cumulative gain or loss that was reported in Equity is immediately transferred to the Consolidated Statement of Income in the line item the hedged forecast transaction would have been recorded to within the Consolidated Statement Income.

(c) Net investment hedges

Our net investment hedges include foreign currency derivatives and foreign currency denominated debt. Our foreign currency derivative contracts may consist of cross currency swaps and foreign currency forward exchange contracts.

For all our hedging instruments, we use the spot method to assess hedge effectiveness resulting in changes to their value from changes in spot foreign exchange rates over the hedge accounting designation to be recorded within OCI while the effect of the initial forward points and cross currency basis spread are excluded from the assessment of hedge effectiveness. For our cross currency basis swaps, the associated interest receipts and payments are recorded to Finance costs. For our foreign currency forward contracts, we amortize initial forward point values on a straight-line basis to Finance cost over the term of the hedging instrument designation. We monitor over hedging conditions quarterly and rebalance the hedge designation as required to remove any overhedged condition, recording any incurred ineffectiveness just prior to rebalance.

Cash flows related to our foreign currency contracts designated as net investment hedges are reported in Cash flows from investing activities in the Consolidated Statement of Cash Flows. Cash flows related to our foreign currency denominated debt designated as net investment hedges are reported in Cash flows from financing activities and related interest payments are reported in Cash flows from operating activities in the Consolidated Statement of Cash Flows.

**Classification and Measurement of Financial Assets**

Financial liabilities are generally classified as loans and borrowings, payables, or as derivatives designated as hedging instruments in an effective hedge, as appropriate. All financial liabilities are recognized initially at fair value and, in the case of loans and borrowings and payables, carried at amortized cost using the effective interest rate method.

Financial liabilities other than contingent consideration in a business combination, held for trading, or designated as at FVTPL, are measured subsequently at amortized cost using the effective interest method.

**Offsetting Financial Instruments**

When there is a legally enforceable right to offset and the intention to net settle, the financial assets and financial liabilities are reported on a net basis in the Consolidated Statement of Financial Position.

**Fair Value Measurement**

We categorize assets and liabilities, measured at fair value, into one of three different levels depending on the observability of the inputs employed in the measurement. Level 1 inputs are quoted prices in active markets for identical assets or liabilities. Level 2 inputs are observable inputs other than quoted prices included within Level 1 for the asset or liability, either directly or indirectly through market corroborated inputs. Level 3 inputs are unobservable inputs for the asset or liability reflecting significant modifications to observable related market data or our assumptions about pricing by market participants.

When available, quoted market prices are used to determine fair value and such measurements are classified within Level 1. In some cases where market prices are not available, observable market-based inputs are used to calculate fair value, in which case the measurements are classified within Level 2. If quoted or observable market prices are not available, fair value is based upon internally-developed models that use, where possible, current market-based parameters such as interest rates, yield curves and currency rates. These measurements are classified within Level 3.

Fair value measurements are classified according to the lowest level input or value-driver that is significant to the valuation. A measurement may therefore be classified within Level 3 even though there may be significant inputs that are readily observable.

*Changes in fair value levels*—Management reviews the disclosures regarding fair value measurements annually at year end. If an instrument classified as Level 1 subsequently ceases to be actively traded, it is transferred out of Level 1. In such cases, instruments are reclassified as Level 2, unless the measurement of its fair value requires the use of significant unobservable inputs, in which case it is reclassified as Level 3.

Due to the short maturity, the fair value of all non-derivative financial instruments included in Current assets and Current liabilities except precious metal financings approximates the applicable carrying value. Short-term loans receivable, which represent our repurchase agreements, and short-term and long-term debt are recorded at amortized cost in the Consolidated Statement of Financial Position.

We use the following inputs and valuation techniques to estimate the fair value of our financial instruments:

Cross-Currency Swaps—The fair value of our cross-currency swaps is calculated using the present value of future cash flows discounted using observable inputs such as yield curves and with the foreign currency leg revalued using published spot and forward exchange rates on the valuation date.

Forward-Starting and fixed for floating Interest Rate Swaps—The fair value of our forward-starting and fixed for floating interest rate swaps is calculated using the present value of future cash flows method and based on observable inputs such as benchmark interest rates.

Commodity Derivatives—The fair values of our commodity derivative are measured using closing market prices at the end of the reporting period obtained from the New York Mercantile Exchange and from third-party broker quotes and pricing providers.

The fair value of our commodity swaps and options classified as Level 2 is determined using a combination of observable and unobservable inputs. The observable inputs consist of future market values of various crude and heavy fuel oils and feedstocks which are readily available through public data sources. The unobservable input, which is the estimated discount or premium used in the market pricing, is calculated using an internally-developed, multi-linear regression model based on the observable prices of the known components and their relationships to historical prices. A significant change in this unobservable input would not have a material impact on the fair value measurement of our Level 2 commodity swaps and options.

Forward Exchange Contracts—The fair value of our foreign currency derivatives is based on forward market rates.

Financial Assets at FVOCI/FVTPL—The fair value of our investments in debt securities is calculated using observable market data for similar securities and broker quotes from recognized purveyors of market data. The fair value of our equity interest in limited partnership investments is based on the net asset value provided by the fund administrator and are classified as Level 2 in the fair value hierarchy on the basis of their redemption features.

Loans Receivable—The fair value of our investments in tri-party repurchase agreements are based on discounted cash flows, which consider prevailing market rates for the respective instrument maturity in addition to corroborative support from the minimum underlying collateral requirements.

Short-term Debt—The fair values of short-term borrowings related to precious metal financing arrangements are determined based on the forward market price of the associated precious metal.

Long-term Debt—The fair value of our senior and guaranteed notes is calculated using pricing data obtained from well-established and recognized vendors of market data for debt valuation. The fair value of our term loan is determined based on a discounted cash flow model using observable inputs such as benchmark interest rate and public information on our credit risk.

**Impairment of Financial Assets**

We measure the loss allowance for trade receivables at an amount equal to lifetime expected credit loss ("ECL") using historical, loss rates for the respective risk categories and incorporating forward-looking estimates.

We measure the loss allowance for debt security instruments at an amount equal to the lifetime ECL if the credit risk on that financial instrument has increased significantly since initial recognition. However, if the credit risk on a financial instrument has not increased significantly since initial recognition we measure the loss allowance for that financial instrument at an amount equal to 12-month ECL. The allowance for credit losses is recorded in the Consolidated Statement of Income and is updated at each reporting date to reflect the changes in credit risk.

We have receivables for tri-party repurchase agreements in which we make purchases of securities where the counterparty has an obligation to repurchase and we have an obligation to sell back the same securities at a predetermined date for a price equal to the purchase price plus interest. These securities are held by a third-party custodian and have a minimum collateral value of 102% securing the counterparties' obligation to repurchase the securities. Because we consider this collateral in the measurement of ECL, we record no ECL for such repurchase agreements.

**Inventories**

Inventories are stated at the lower of cost and net realizable value. Cost is determined using the first in, first out ("FIFO") method and comprises direct purchase costs and other directly attributable costs including related production overheads (based on normal operating capacity). Net realizable value is the estimated selling price in the ordinary course of business, less the estimated cost of completion and the estimated costs necessary to make the sale.

**Trade Receivables**

Trade receivables are amounts due from customers for merchandise sold or services performed in the ordinary course of business and are carried at transaction price net of allowance for credit losses.

**Cash Equivalents**

Cash equivalents consist of highly liquid debt instruments such as certificates of deposit, commercial paper and money market accounts placed with major international banks and financial institutions. Cash equivalents include instruments with maturities of three months or less when acquired. Bank overdrafts are shown within Borrowings in current liabilities on the consolidated statement of financial position. Cash and cash equivalents exclude restricted cash.

Although, we have no current requirements for compensating balances in a specific amount at a specific point in time, we may maintain compensating balances at our discretion for some of our banking services and products.

**Income Taxes**

The income tax for the period comprises current and deferred tax. Income tax is recognized in the Consolidated Statement of Income, except to the extent that it relates to items recognized in Other comprehensive income or directly in equity. In these cases, the applicable tax amount is recognized in Other comprehensive income or directly in equity, respectively.

The current income tax charge is calculated on the basis of the tax laws enacted or substantively enacted at the Consolidated statement of financial position date, and any adjustment to tax payable in respect to previous years. Management evaluates positions with respect to applicable tax regulation which is subject to interpretation. The Company establishes provisions where appropriate on the basis of amounts expected to be paid to the tax authorities. Where it is not considered probable that a particular tax treatment will be accepted, the effect of the uncertainty is reflected in the tax provision by estimating the tax payable (or receivable) using either the most likely amount method or the expected value method.

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes, as well as the net tax effects of net operating loss carryforwards, using the liability method. Deferred income taxes are measured at the tax rates and under the tax laws that have been enacted or substantially enacted at the Consolidated statement of financial position date and are expected to apply when the related deferred tax assets are realized or the deferred tax liabilities are settled. The carrying amount of deferred tax assets is reviewed at each consolidated statements of financial position date and reduced to the extent that it is no longer probable that sufficient taxable profits will be available to enable all or part of the asset to be recovered.

**Employee Benefits**

*Pension Plans*—We have both funded and unfunded defined benefit plans and defined contribution plans. For the defined benefit plans, a defined benefit obligation is calculated annually by independent actuaries using the projected unit credit method. When the calculation results in a potential asset, the recognized asset is limited to the present value of economic benefits available in the form of any future refunds from the plan or reductions in future contributions to the plan.
Pension costs primarily represent the increase in the actuarial present value of the obligation for pension benefits based on employee service during the year, the net interest expense (income) that is calculated as the product of the net defined benefit liability (asset) and the discount rate determined at the end of the year and employees past-service costs.

Remeasurement gains and losses arising from experience adjustments, changes in actuarial assumptions and the return on plan assets (excluding interest) are charged or credited to Equity and are reflected in OCI in the period in which they arise. Remeasurements recognized in OCI are not reclassified.

For defined contribution plans, we pay contributions to publicly or privately administered pension insurance plans on a mandatory, contractual or voluntary basis. The contributions are recognized as employee benefit expense when they are due.

*Other Post-employment Obligations*—Certain employees are entitled to post-retirement medical benefits upon retirement. The entitlement to these benefits is usually conditional on the employee remaining in service up to retirement age and the completion of a minimum service period. The expected costs of these benefits are accrued over the period of employment using the same accounting methodology as used for defined benefit plans.

*Termination Benefits*—Termination benefits are payable when employment is terminated before the normal retirement date, or whenever an employee accepts voluntary termination benefits. We recognize termination benefits when we are committed to terminating the employment of employees according to a detailed formal plan without possibility of withdrawal. In the case of an offer for voluntary termination benefits, the termination benefits are measured based on the number of employees expected to accept the offer. Benefits due more than 12 months after the end of the reporting period are discounted to present value.

**Trade and Other Payables**

Trade and other payables are presented as current liabilities unless payment is not due within 12 months after the reporting period. Trade and other payables are initially recognized at fair value and subsequently measured at amortized cost.

**Other Provisions**

Provisions are recognized when the Company has a present legal or constructive obligation as a result of past events, it is probable that an outflow of resources will be required to settle the obligation, and the amount can be reliably estimated. Provisions are not recognized for future operating losses.

*Asset Retirement Obligation*—At some sites, we are contractually obligated to decommission our plants upon site exit. The asset retirement obligation is generally recognized when the construction of the asset is complete. Upon initial recognition, the present value of the estimated costs is capitalized to the cost of the related long-lived asset and depreciated on a straight-line basis over the useful life of the asset. Accretion expense relating to the liability is recognized over the useful life of the related asset and included in Finance costs.

**Share capital**

Ordinary shares are classified as equity. The consideration paid, including any directly attributable incremental costs (net of income taxes) for the shares repurchased by the Company (treasury shares), is deducted from equity attributable to the Company's equity holders until the shares are cancelled or reissued. Where such ordinary shares are subsequently reissued, any consideration received, net of any directly attributable incremental transaction cost and the related income tax effects, is included in equity attributable to the Company's equity holders.

## 3 Critical Accounting Estimates and Judgments

The preparation of financial statements in conformity with IFRS requires management to make estimates and judgments that affect the reported amounts of assets and liabilities and the reported amounts of revenue and expenses during the period as well as the information disclosed.

**Critical Accounting Estimates and Assumptions**

For our critical accounting estimates and assumptions, reference is made to the notes to these Consolidated Financial Statements, including the determination of deferred tax assets for loss carry forwards and the provision for tax contingencies (see Notes 12 and 27), the determination of the value in use of cash-generating units for use in goodwill impairment testing (see Note 14), the depreciation rates for property, plant and equipment (see Note 15) and intangible assets (see Note 14), the discount rate used to determine the provision for retirement benefit obligations and periodic pension cost (see Note 28) and the more likely than not assessment required to determine if a provision should be recognized and measured (see Notes 30 and 31).

Also, reference is made to Note 4 Financial Risk Management, which discusses our exposure to credit risk and financial market risks.

Actual results in the future may differ from these estimates. Management estimates and judgments are continually evaluated based on historic experience and other factors, including expectations of future events believed to be reasonable under the circumstances.

## Critical Accounting Estimates or Judgments in Applying LyondellBasell N.V.'s Accounting Policies

*Property, Plant and Equipment and Intangible Assets*—With respect to property, plant and equipment and intangible assets, key assumptions included estimates of useful lives and the recoverability of carrying values of fixed assets and other intangible assets. Such estimates could be significantly modified and/or the carrying values of the assets could be impaired by such factors as new technological developments, new chemical industry entrants with significant raw material or other cost advantages, uncertainties associated with the European, U.S. and other world economies, the cyclical nature of the chemical and refining industries, and uncertainties associated with regulatory governmental actions.

*Goodwill*-As of 31 December 2020, the Goodwill balance was $1,732 million. Of this amount $1,271 million was recognized as a result of the acquisition of A. Schulman in August 2018, which is included in our APS segment, and is mainly attributed to acquired workforce and expected synergies. The remaining goodwill at 31 December 2020 represents the tax effect of the differences between the tax and book bases of our assets and liabilities resulting from the revaluation of those assets and liabilities to fair value in connection with the Company's acquisition of LyondellBasell Subholdings B.V. and LyondellBasell Finance Company on 30 April 2010. Goodwill is allocated to a group of cash-generating units and tested for impairment annually or more frequently if events or changes in circumstances indicate impairment. The recoverable amount of the cash-generating units is determined on value-in-use basis using pre-tax cash flows as per management approved financial budgets and extrapolated growth models, and discounted using the weighted average cost of capital of the Company.

*Joint Arrangements*—We are a party to several joint arrangements. The Company has joint control over these arrangements as unanimous consent is required from all parties to the agreements to direct the activities that significantly affect the returns of the arrangement, such as annual production budgets, capital expenditures, incurrence of indebtedness, election of key management team members, approval of pricing policies and admission of new parties.

The classification of these joint arrangements as either a joint operation or a joint venture is driven by the rights and obligations of the parties particularly as it relates to transfer of marketing rights, offtake obligations, and credit risks relating to the activities of the arrangement to the parties, including guarantees of third party debt, rather than the legal form of the arrangement.

The joint ventures of the Company are structured as legal entities and provide the parties to the agreements with rights to the net assets of the entities under the arrangements. The parties are not substantially the only source of cash flows contributing to the continuity of the operations of the joint venture.

The output of the joint operations of the Company is for the sole use of the parties to the joint arrangement. The parties are substantially the only source of cash flows contributing to the continuity of the operations of the joint operation.

*Employee Benefits*—Our costs for long-term employee benefits, particularly pension and other postretirement medical and life insurance benefits, are incurred over long periods of time, and involve many uncertainties over those periods.

The current benefit service costs, as well as the existing liabilities, for pensions and other postretirement benefits are measured on a discounted present value basis. The discount rate is a current rate, related to the rate at which the liabilities could be settled. Our assumed discount rate is based on yield information for high-quality corporate bonds.

The benefit obligation and the periodic cost of other postretirement medical benefits are measured based on assumed rates of future increase in the per capita cost of covered health care benefits.

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

## 4 Financial Risk Management

We are exposed to market risks, such as changes in commodity pricing, currency exchange rates and interest rates. To manage the volatility related to these exposures, we selectively enter into derivative transactions pursuant to our risk management policies.

### Commodity Price Risk

Our products and raw materials are subject to changes in market price as supply and demand fundamentals change. Natural gas, crude oil and refined products, along with feedstocks for ethylene and propylene production, constitute the main commodity exposures. We try to protect against such instability through various business strategies including provisions in sales contracts which allows us to pass on higher raw material costs to our customers through timely price increases and through the use of commodity swap, options and futures contracts. In addition, we are exposed to volatility on the prices of precious metals to the extent that we have obligations, classified as embedded derivatives, tied to the price of precious metals associated with secured borrowings.

*Cash Flow Hedges*—In 2020, we entered into over-the-counter commodity swaps with a total notional amount of $60 million. During 2020, we also entered into costless collars, which are a combination of a purchased call option with an aggregate notional volume of 27 million MMBtu and a sold put option with an aggregate notional volume of 27 million MMBtu. These transactions were designated as cash flow hedges to manage the volatility of commodity prices related to anticipated purchases of feedstock for the years 2021 and 2022. As of 31 December 2020, commodities contracts outstanding and designated as cash flow hedges had a net asset fair value of $5 million.

We recorded pre-tax gains of $5 million and pre-tax losses of $6 million in other comprehensive loss related to our commodity derivatives contracts designated as cash flow hedges during the years ended 31 December 2020 and 2019, respectively. As of 31 December 2020, on a pre-tax basis, $5 million is scheduled to be reclassified from Other reserves as an increase to interest expense over the next twelve months.

In 2019, we entered into commodity futures contracts to mitigate the risk of variability in feedstock and product sales prices. During 2019, we paid $20 million in settlement of commodity futures contracts that hedge the risk of variability in feedstock prices with a total notional amount of $336 million. Additionally, we received $26 million in settlement of commodity futures contracts that hedge the risk of variability in product sales prices with a total notional amount of $437 million. As of 31 December 2019, we had no commodity derivative contracts outstanding and designated as cash flow hedges.

At 31 December 2020 and 2019, an instantaneous parallel shift up or down in the underlying commodity price of 10% and no corresponding change in the underlying implied volatilities of those prices, would have had a resulting additional impact to Other comprehensive loss of approximately $11 million and less than $1 million, respectively.

### Foreign Exchange Risk

We manufacture and market our products in many countries throughout the world and, as a result, are exposed to changes in foreign currency exchange rates.

A significant portion of our reporting entities use the euro as their functional currency. Our reporting currency is the U.S. dollar. The translation gains or losses that result from the process of translating the euro denominated financial statements to U.S. dollars are deferred in other comprehensive income (OCI) until such time as those entities may be liquidated or sold. Changes in the value of the U.S. dollar relative to the euro can therefore have a significant impact on comprehensive income.

Some of our operations enter into transactions that are not denominated in their functional currency. This results in exposure to foreign currency risk for financial instruments, including, but not limited to, third party and intercompany receivables and payables and intercompany loans.

Our policy is to maintain a balanced position in foreign currencies to minimize exchange gains and losses arising from changes in exchange rates. To minimize the effects of our net currency exchange exposures, we enter into foreign exchange contracts and cross-currency swaps. We also engage in short-term foreign exchange swaps in order to roll certain hedge positions and to make funds available for intercompany financing. Our net position in foreign currencies is monitored daily.

We maintain risk management control practices to monitor the foreign currency risk attributable to our inter-company and third party outstanding foreign currency balances. These practices involve the centralization of our exposure to underlying currencies that are not subject to central bank and/or country specific restrictions. By centralizing most of our foreign currency exposure into one subsidiary, we are able to take advantage of any natural offsets thereby reducing the overall impact of changes in foreign currency rates on our earnings. At 31 December 2020 and 2019, a 10% fluctuation compared to the U.S. dollar in the underlying currencies that have no central bank or other currency restrictions related to non-hedged monetary net assets would have had a resulting additional impact to earnings of approximately $4 million and $2 million, respectively.

For foreign currency forward and swap contracts that economically hedge recognized foreign currency monetary assets and liabilities, hedge accounting is not applied. Changes in the fair value of such forward and swap contracts, which are reported in the Consolidated Statements of Income, are offset in part by the currency remeasurement results recognized within earnings on the assets and liabilities.

Other expense, net, in the Consolidated Statements of Income reflected net exchange rate foreign currency losses of $7 million (2019: gains of $9 million). For forward contracts, including swap transactions, that economically hedge recognized monetary assets and liabilities in foreign currencies, no hedge accounting is applied. Changes in the fair value of foreign currency forward and swap contracts are reported in the Consolidated Statements of Income and offset the currency exchange results recognized on the assets and liabilities. At 31 December 2020, these foreign currency contracts, which will mature between January 2021 and June 2021, inclusively, had an aggregated notional amount of $225 million and the fair value was a net liability of $1 million. At 31 December 2019, we had an aggregated notional amount of $780 million and the fair value was a net asset of $4 million. A 10% fluctuation compared to the U.S. dollar would have had a resulting additional impact to earnings of approximately $5 million and $31 million in 2020 and 2019, respectively.

In October 2020, we entered into €750 million of foreign currency contracts to economically hedge the redemption of €750 million aggregate principal amount of our 1.875% guaranteed notes originally due in 2022 which were redeemed in November 2020. These foreign currency contracts were not designated as hedges. In November 2020, upon settlement of these foreign currency contracts, we paid $882 million to our counterparties and received €750 million ($887 million at the expiry spot rate) from our counterparties.

*Net Investment Hedges*—The following table summarizes our net investment hedges outstanding for the periods presented:

| Millions of euro/dollars | 31 December 2020 Notional Value | Equivalent US$ | 31 December 2019 Notional Value | Equivalent US$ | Expiration Date |
|---|---|---|---|---|---|
| Foreign currency | € 1,667 | $ 1,890 | € 617 | $ 650 | 2021 to 2030 |
| Foreign-currency denominated debt | € — | $ — | € 750 | $ 842 | 2022 |

In September 2020, we entered into €300 million of foreign currency contracts that were designated as net investment hedges.

In October 2020, euro denominated debt due 2022 with notional amounts totaling €750 million previously designated as net investment hedge, were dedesignated. Concurrent with the dedesignation of the 2022 euro denominated debt, we entered into €750 million of cross currency interest rate swaps that were designated as net investment hedges.

For the year ended 31 December 2020, we recognized $3 million loss in Other comprehensive loss relating to the cost of hedging and $1 million loss in profit or loss relating to ineffectiveness. For the year ended 31 December 2019, we recognized less than $1 million loss in other comprehensive income relating to the cost of hedging and $3 million gain in profit or loss relating to ineffectiveness.

The table below illustrates the impact on Other comprehensive loss of a 10% fluctuation in the foreign currency rate associated with each net investment hedge and the EURIBOR and LIBOR rates associated with the cross-currency basis swaps at 31 December:

| | 2020 | 2019 | | 2020 | 2019 |
|---|---|---|---|---|---|
| **Net Investment Hedges** | **Notional Amount** | | **10% Variance on Foreign Currency Rate** | **Impact on Other Comprehensive Loss** | |
| Cross Currency Basis Swaps | €617 million | €617 million | euro/U.S. dollar rate | $77 million | $70 million |
| | | | EURIBOR and LIBOR rates | Less than $1 million | Less than $1 million |
| Cross Currency Swaps | €750 million | — | euro/U.S. dollar rate | $101 million | — |
| Forward Exchange Contracts | €300 million | — | euro/U.S. dollar rate | $37 million | — |
| Guaranteed Euro Notes due 2022 | — | €750 million | euro/U.S. dollar rate | — | $84 million |

*Cross-Currency Swaps*—We have cross-currency swap contracts that reduce our exposure to the foreign currency exchange risk associated with certain intercompany loans. Under the terms of these contracts, which have not been designated hedges, we will make interest payments in euros and receive interest in U.S. dollars. Upon the maturities of these contracts, we will pay the principal amount of the loans in euros and receive U.S. dollars from our counterparties. Each reporting period, the swaps are marked to market to arrive at their fair value. The resulting gains and losses are classified as Other (income) expense, net.

In May 2020, we terminated and cash settled $2,000 million in notional value of our cross-currency interest rate swaps originally set to mature in 2021 and 2024. Upon termination of the swaps, we received $346 million from our counterparties. Concurrent with the settlement of the swaps, we entered into $1,705 million cross-currency interest rate swaps with euro notional amounts and maturity dates matching the original swaps.

At 31 December 2020 and 2019, non-cancellable cross-currency swaps with an aggregated notional of $2,005 million and $2,300 million, respectively, are outstanding. These foreign currency contracts have maturity dates ranging from 2021 to 2027 and their fair value was a net liability of $259 million and a net asset fair value of $205 million as of 31 December 2020 and 2019, respectively. A 10% fluctuation compared to the U.S. dollar would have had a resulting additional impact to earnings of approximately $250 million and $238 million in 2020 and 2019, respectively. Finance costs in the Consolidated Statement of Income reflected gains of $57 million and loss of $45 million for the periods ended 31 December 2020 and 2019, respectively, related to changes in currency exchange rates and cross-currency swaps.

**Interest Rate Risk**

Interest rate risk management is viewed as a trade-off between cost and risk. The cost of interest is generally lower for short-term debt and higher for long-term debt, and lower for floating rate debt and higher for fixed rate debt. However, the risk associated with interest rates is inversely related to the cost, with short-term debt carrying a higher refinancing risk and floating rate debt having higher interest rate volatility. Our interest rate risk management strategy attempts to optimize this cost/risk/reward trade-off.

We are exposed to interest rate risk with respect to our fixed and variable rate debt. Fluctuations in interest rates impact the fair value of fixed-rate debt as well as pre-tax earnings stemming from interest expense on variable-rate debt. To minimize earnings at risk as part of our interest rate risk management strategy, we target to maintain floating rate debt, through the use of interest rate swaps and issuance of floating rate debt, equal to our cash and cash equivalents, marketable securities and tri-party repurchase agreements, as those assets are invested in floating rate instruments.

*Cash Flow Hedges*—A pre-issuance interest rate strategy is utilized to mitigate the risk that benchmark interest rates (i.e. U.S. Treasury, mid-swaps, etc.) will increase between the time a decision has been made to issue debt and when the actual debt offering is issued.

In January 2020, we amended existing forward-starting interest rate swaps entered into in February 2019, with a total notional amount of $1,000 million (the “Swaps”) to extend their maturities to July 2023 and April 2024. As of 31 December 2020 and 2019, the Swaps were designated as cash flow hedges to mitigate the risk of variability in interest rates of future expected debt issuance by July 2023 and April 2024. Derivative financial instruments asset as of 31 December 2020 includes $238 million of collateral held with our counterparties related to our forward-starting interest rate swaps; this amount represents the maximum amount of collateral required in accordance with the Swap agreements. Related cash flows are included in financing activities in the Consolidated Statements of Cash Flows.

In October 2020, we terminated and cash settled $500 million in notional value of our forward-starting interest rate swaps which were designated as cash flow hedges originally set to expire in 2021. Upon termination of the forward-starting interest rate swaps, we paid $229 million to our counterparties.

At 31 December 2020, the total notional amount of our interest rate contracts designated as cash flow hedges, which have maturity dates ranging from 2023 to 2024, was $1,000 million and the fair value was a net liability of $343 million. At 31 December 2019, the total notional amount of our interest rate contracts designated as cash flow hedges, was $1,500 million and the fair value was a net liability of $225 million. We estimate that a 10% change in market interest rates as of 31 December 2020 and 2019, would change the fair value of our forward-starting interest rate swaps outstanding and would have had a resulting impact on Other comprehensive loss of approximately $44 million and $66 million, respectively.

We recorded pre-tax losses of $348 million and $199 million in other comprehensive loss related to our forward-starting interest rate swaps designated as cash flow hedges during the years ended 31 December 2020 and 2019, respectively. In addition, we reclassified pre-tax losses of $4 million and pre-tax gains of $4 million from other comprehensive loss into earnings during the years ended 31 December 2020 and 2019, respectively.

In February 2019, concurrent with the redemption of $1,000 million of our then outstanding 5% senior notes due 2019, we received $4 million in settlement of $1,000 million of forward-starting interest rate swaps that we designated as cash flow hedges of forecasted interest payments.

The ineffectiveness recorded for this hedging relationship was less than $1 million and $26 million for the years ended 31 December 2020 and 2019, respectively.

As of 31 December 2020, on a pre-tax basis, $5 million is scheduled to be reclassified from other comprehensive loss as an increase to interest expense over the next twelve months.

*Fair Value Hedges*—The following table summarizes our fair value hedges outstanding for the periods presented:

| | 31 December 2020 | 31 December 2019 | |
|---|---|---|---|
| **Millions of dollars** | **Notional Value** | **Notional Value** | **Expiration Date** |
| Interest rates | $ 122 | $ 2,140 | 2026 |

We enter into interest rate swaps as part of our interest rate risk management strategy. In January 2020, we entered into a euro fixed-for-floating interest rate swap to mitigate the change in the fair value of €100 million of our €500 million guaranteed notes due 2026 associated with the risk of variability in the 6-month EURIBOR rate, the benchmark interest rate. The fixed-rate and variable-rate components are settled annually and semi-annually, respectively.

In April 2020, we terminated $2,000 million in notional value of our fixed-for-floating interest rate swaps which were designated as fair value hedges originally set to expire in 2021 and 2027. Upon termination of the fixed-for-floating interest rate swaps, we received $147 million from our counterparties.

In November 2020, concurrent with the redemption of €750 million of our outstanding 1.875% guaranteed notes due 2022, we terminated €125 million in notional value of our fixed-for-floating interest rate swaps previously designated as fair value hedge originally set to expire in 2022. Upon termination of the fixed-for-floating interest rate swaps, we received $3 million from our counterparty.

At 31 December 2020, the total notional amount of an interest rate swap designated as a fair value hedge, which matures in 2026, was $122 million and the fair value was an asset of $2 million.

In February 2019, concurrent with the redemption of $1,000 million of our outstanding 5% senior notes due 2019, we paid $5 million in settlement of $1,000 million of fixed-for-floating interest rate swaps.

The pre-tax effect of the periodic receipt of fixed interest and payment of variable interest associated with our fixed-for-floating interest rate swaps resulted in a $4 million decrease in interest expense for the year ended 31 December 2020 and $6 million increase in interest expense for the year ended 31 December 2019.

*Fixed-rate debt*—At 31 December 2020, after giving consideration to the $122 million of fixed-rate debt that we have effectively converted to floating through these fixed-for-floating interest rate swaps, approximately 83% of our debt portfolio, on a gross basis, incurred interest at a fixed-rate and the remaining 17% of the portfolio incurred interest at a variable-rate. We estimate that a 10% change in market interest rates as of 31 December 2020 and 2019, would change the fair value of our interest rate swaps outstanding and would have had a resulting impact on our pre-tax income of approximately less than $1 million and $15 million, respectively.

*Variable-rate debt*—Our variable rate debt consists of our $2,500 million Senior Revolving Credit Facility, our $900 million U.S. Receivables Facility, our Term Loan due 2022, our Guaranteed Floating Rate Notes due 2023 and our Commercial Paper Program. At 31 December 2020, there were no outstanding borrowings under our Senior Revolving Credit Facility nor our U.S. Receivables Facility. At December 31, 2020, our Term Loan due 2022, Guaranteed Floating Rate Notes due 2023 and our Commercial Paper Program had outstanding borrowings of $1,448 million, $646 million and $500 million, respectively. Based on our average variable-rate debt outstanding per year, we estimate that a 10% change in market interest rates would have had a $3 million and $1 million impact on earnings in 2020 and 2019, respectively.

### Cash Concentration

Our cash equivalents are placed in high-quality commercial paper, money market funds and time deposits with major international banks and financial institutions.

*Marketable Securities*—We invest cash in investment-grade securities for periods not exceeding three years. Investments in securities with original maturities of three months or less are classified as Cash and cash equivalents. At 31 December 2020 and 2019, we had marketable securities classified as Cash and cash equivalents of $682 million and $389 million, respectively.

We also have investments in marketable securities classified as fair value through other comprehensive income (FVOCI). Investments classified as FVOCI are carried at fair value with unrealized gains and losses recorded in OCI. Credit impairment losses/reversals are recognized through earnings with an offset to OCI.

*Investments in Marketable Securities*—The following table summarizes the amortized cost, gross unrealized gains and losses, and fair value of our FVOCI securities that are outstanding as of 31 December 2020 and 2019.

| Millions of U.S. Dollars | Cost | Gross Unrealized Gains | Gross Unrealized Losses | Fair Value |
|---|---|---|---|---|
| Financial Assets at Fair Value through other comprehensive income | | | | |
| Debt securities at 31 December 2020 | $ 348 | $ 1 | $ — | $ 349 |
| Debt securities at 31 December 2019 | 162 | — | — | 162 |

No allowance for credit losses related to our FVOCI securities was recorded for the year ended 31 December 2020 and 2019.

As of 31 December 2020, our Debt securities classified as FVOCI securities had maturities between 1 and 6 months.

The proceeds from maturities and sales of our FVOCI securities during the years ended 31 December 2020 and 2019 are summarized in the following table.

| | 31 December | |
|---|---|---|
| Millions of U.S. Dollars | 2020 | 2019 |
| Proceeds from maturities of securities | $ 24 | $ 331 |
| Proceeds from sales of securities | 90 | 180 |

The gross realized gains and losses associated with the sale of FVOCI securities during the year ended 31 December 2020 and 2019, were less than $1 million, respectively. We use the specific identification methods to identify the cost of the securities we sell and the amounts we reclassify out of Other comprehensive loss into earnings.

*Investments in Equity Securities*— Our equity securities primarily consist of limited partnership investments, reflected in Short-term investments on our Consolidated Statement of Financial Position. At 31 December 2020, we had investments in equity securities with a notional amount and a fair value of $353 million. These investments may be redeemed within 7 days following written notice from the Company. At 31 December 2019, we had investments in equity securities with a notional amount and a fair value of $34 million.

We received proceeds of $313 million and $332 million related to the sale of our investments in equity securities during the years ended 31 December 2020 and 2019, respectively.

The following table summarizes the portion of unrealized gains and losses for the equity securities classified at FVTPL that are outstanding as of 31 December:

| Millions of U.S. dollars | 2020 | 2019 |
|---|---|---|
| Net gains recognized during the period | $ — | $ 9 |
| Less: Net gains recognized during the period on securities sold | — | 9 |
| Unrealized gains recognized during the period | $ — | $ — |

## Capital Risk Management

Capital includes equity attributable to the equity holders of the parent. A discussion of credit risk can be found in Note 19.
The primary objective of the Group's capital management is to ensure that it maintains a strong credit rating and healthy capital ratios in order to support its business and maximize shareholder value.
The Group manages its capital structure and makes adjustments to it in light of changes in economic conditions. To maintain or adjust the capital structure, the Group may issue new debt, repay debt, return capital to shareholders or issue new shares.

*Liquidity and Capital Resources*—As of 31 December 2020, we had unrestricted cash and cash equivalents of $1,933 million ($939 million in 2019). In addition at 31 December 2020, we had total unused availability under our credit facilities of $2,777 million ($2,919 million in 2019) and $702 million marketable securities classified as FVOCI and FVTPL ($196 million in 2019).

We may repay or redeem our debt, including purchases of our outstanding bonds in the open market, using cash and cash equivalents, cash from our short-term investments, cash from operating activities, proceeds from the issuance of debt, proceeds from asset divestitures, or a combination thereof. In connection with any repayment or redemption of our debt, we may incur cash and non-cash charges, which could be material in the period in which they are incurred.

We plan to fund our ongoing working capital, capital expenditures, debt service and other funding requirements with cash from operations, which could be affected by general economic, financial, competitive, legislative, regulatory, business and other factors, many of which are beyond our control. We believe that our current liquidity availability and cash from operating activities provide us with sufficient financial resources to meet our anticipated capital requirements and obligations as they come due. Further, we believe the current economic environment will not have an adverse effect on our ability to be in compliance with our debt covenants.

We intend to continue to declare and pay quarterly dividends, with the goal of increasing the dividend over time, after giving consideration to our cash balances and expected results from operations.

We believe that our current liquidity availability and cash from operating activities provide us with sufficient financial resources to meet our anticipated capital requirements and obligations as they come due.

The table below provides a maturity analysis of our financial liabilities based on the remaining contractual maturities as of 31 December.

| Millions of U.S. Dollars | Total obligations | Less than 1 year | Between 1 to 2 years | Between 2 to 5 years | Over 5 years |
|---|---|---|---|---|---|
| **31 December 2020** | | | | | |
| Borrowings | $ 16,892 | $ 739 | $ 1,456 | $ 3,414 | $ 11,283 |
| Interest payment on total borrowings | 10,280 | 576 | 576 | 1,582 | 7,546 |
| Trade and other payables | 4,421 | 4,421 | — | — | — |
| Commodity derivatives | 16 | 16 | — | — | — |
| Lease liabilities | 1,827 | 375 | 546 | 379 | 527 |
| | $ 33,436 | $ 6,127 | $ 2,578 | $ 5,375 | $ 19,356 |

| Millions of U.S. Dollars | Total obligations | Less than 1 year | Between 1 to 2 years | Between 2 to 5 years | Over 5 years |
|---|---|---|---|---|---|
| **31 December 2019** | | | | | |
| Borrowings | $ 12,318 | $ 493 | $ 1,022 | $ 4,630 | $ 6,173 |
| Interest payment on total borrowings | 6,306 | 468 | 468 | 989 | 4,381 |
| Trade and other payables | 4,109 | 4,109 | — | — | — |
| Commodity derivatives | 34 | 34 | — | — | — |
| Lease liabilities | 1,756 | 329 | 279 | 610 | 538 |
| | $ 24,523 | $ 5,433 | $ 1,769 | $ 6,229 | $ 11,092 |

## Fair Value Estimates

The following table summarizes financial assets and liabilities outstanding at 31 December that are measured at fair value on a recurring basis.

| | 31 December 2020 | | 31 December 2019 | |
|---|---|---|---|---|
| **Millions of U.S. Dollars** | **Notional Amount** | **Fair Value** | **Notional Amount** | **Fair Value** |
| **Assets -** | | | | |
| Derivatives designated as hedges: | | | | |
| Foreign currency | $ — | $ 6 | $ — | $ 2 |
| Interest Rates | 122 | 240 | 1,940 | 63 |
| Commodities | 60 | 7 | — | — |
| Derivatives not designated as hedges | | | | |
| Commodities | 44 | 1 | 3 | — |
| Foreign currency | — | 21 | 2,580 | 244 |
| Non-derivatives: | | | | |
| Debt securities | 348 | 349 | 162 | 162 |
| Equity securities | 353 | 353 | 34 | 34 |
| | $ 927 | $ 977 | $ 4,719 | $ 505 |
| **Liabilities -** | | | | |
| Derivatives designated hedges | | | | |
| Foreign currency | $ 1,890 | $ 171 | $ 650 | $ 44 |
| Interest Rates | 1,000 | 343 | 1,700 | 231 |
| Commodities | — | 2 | | |
| Derivatives not designated hedges: | | | | |
| Commodities | 140 | 14 | 224 | 34 |
| Foreign Currency | 2,230 | 277 | 500 | 26 |
| | $ 5,260 | $ 807 | $ 3,074 | $ 335 |

All financial instruments in the tables above are classified as Level 2. There were no transfers between Level 1 and Level 2 for any of our financial instruments during the years ended 31 December 2020 and 2019.

*Financial Instruments Not Measured at Fair Value on a Recurring Basis*—The following table presents the carrying value and estimated fair value of our financial instruments that are not measured at fair value on a recurring basis for the periods presented. Due to the short maturity, the fair value of all non-derivative financial instruments included in Current assets and Current liabilities for which the carrying value approximates fair value are excluded from the table below. Short-term and long-term debt are recorded at amortized cost in the Consolidated Statement of Financial Position. The carrying and fair values of short-term and of long-term debt exclude commercial paper and other miscellaneous debt.

| | 31 December 2020 | | 31 December 2019 | |
|---|---|---|---|---|
| **Millions of U.S. Dollars** | **Carrying Value** | **Fair Value** | **Carrying Value** | **Fair Value** |
| Liabilities: | | | | |
| Current borrowings | $ 731 | $ 722 | $ 472 | $ 507 |
| Non-Current borrowings | 16,048 | 18,068 | 11,740 | 12,692 |
| Total | $ 16,779 | $ 18,790 | $ 12,212 | $ 13,199 |

All financial instruments in the table above are classified as Level 2. There were no transfers between Level 1 and Level 2 for any of our financial instruments during the years ended 31 December 2020 and 2019.

## 5 Revenue

*Contract Balances*—Contract liabilities were $194 million and $124 million at 31 December 2020 and 2019, respectively. We are obligated to deliver products or services in connection with sales agreements under which customer payments were received before transfer of control to the customers occurs. These contract liabilities will be recognized in earnings when control of the product or service is transferred to the customer. The long-term portion of such advances totaled $37 million as of 31 December 2020.

*Disaggregation of Revenues*—We participate globally across the petrochemical value chain and are an industry leader in many of our product lines. Our chemicals businesses consist primarily of large processing plants that convert large volumes of liquid and gaseous hydrocarbon feedstocks into plastic resins and other chemicals. Our chemical products tend to be basic building blocks for other chemicals and plastics. Our plastic products are used in large volumes as well as smaller specialty applications. Our refining business consists of our Houston refinery, which processes crude oil into refined products such as gasoline, diesel and jet fuel.

Revenues disaggregated by key products are summarized below:

| Millions of U.S. dollars | 2020 | 2019 |
|---|---|---|
| Sales and other operating revenues: | | |
| Olefins & co-products | $ 2,503 | $ 2,957 |
| Polyethylene | 5,932 | 6,075 |
| Polypropylene | 4,762 | 5,185 |
| Propylene oxide & derivatives | 1,714 | 1,924 |
| Oxyfuels and related products | 2,278 | 3,116 |
| Intermediate chemicals | 2,087 | 2,516 |
| Compounding and solutions | 3,227 | 4,100 |
| Advanced polymers | 680 | 750 |
| Refined products | 4,346 | 7,599 |
| Other | 636 | 689 |
| Total | $ 28,165 | $ 34,911 |

The following table presents our revenues disaggregated by geography, based upon the location of the customer:

| Millions of U.S. dollars | 2020 | 2019 |
|---|---|---|
| Sales and other operating revenues: | | |
| United States | $ 12,117 | $ 16,349 |
| Germany | 2,113 | 2,708 |
| China | 1,697 | 1,225 |
| Mexico | 1,197 | 1,634 |
| Italy | 1,175 | 1,435 |
| Poland | 926 | 960 |
| Japan | 876 | 1,039 |
| France | 875 | 1,345 |
| The Netherlands | 785 | 929 |
| Other | 6,404 | 7,287 |
| Total | $ 28,165 | $ 34,911 |

*Transaction Price Allocated to the Remaining Performance Obligations*—We have elected to exclude contracts which have an initial term of one year or less from this disclosure. Our contracts with customers are commodity supply arrangements that settle based on market prices at future delivery dates; therefore, transaction prices are entirely variable. Transaction prices are known at the time revenue is recognized since they are generally determined by the commodity price index at a specific date, at month-end or at the month average once products are shipped to our customers. Future estimates of transaction prices for disclosure purposes are substantially constrained as they are highly susceptible to factors outside our influence, including volatility in commodity markets, industry production capacities and operating rates, planned and unplanned industry operating interruptions, foreign exchange rates and worldwide geopolitical trends.

## 6 Expenses by Nature

| Millions of U.S. Dollars | Note | 2020 | 2019 |
|---|---|---|---|
| Change in inventories of finished goods and work in progress | | $ (412) | $ (230) |
| Raw materials and utilities | | 19,085 | 23,938 |
| Employee benefit expenses | 7 | 2,790 | 2,803 |
| Depreciation and amortization | 15 | 1,792 | 1,685 |
| Distribution expenses | | 1,155 | 1,231 |
| Other expenses | | 1,643 | 1,496 |
| Total cost of sales, selling costs, and administration expenses | | $ 26,053 | $ 30,923 |

## 7 Employee Benefit Expenses

| Millions of U.S. Dollars | Note | 2020 | 2019 |
|---|---|---|---|
| Wages and salaries | | $ 2,109 | $ 2,078 |
| Social security | | 340 | 335 |
| Share-based compensation granted to directors and employees | 8 | 55 | 48 |
| Pension costs - defined benefit obligations | 28 | 121 | 134 |
| Pension costs - defined contribution obligations | | 63 | 61 |
| Other post-employment benefits - defined benefit obligations | 28 | 12 | 14 |
| Other employee benefits | | 90 | 133 |
| Total cost of employee benefits | | $ 2,790 | $ 2,803 |

## 8 Share-Based Compensation Granted to Directors and Employees

We are authorized to grant restricted stock units, stock options, performance share units, and other cash and stock awards under our Long-Term Incentive Plan ("LTIP"). The Compensation Committee oversees our equity award grants, the type of awards, the required performance measures, and the timing and duration of each grant. The maximum number of shares of our common stock reserved for issuance under the LTIP is 22,000,000 shares. As of 31 December 2020, there were 2,817,543 shares remaining available for issuance assuming maximum payout for performance share units awards.

Our share-based compensation awards, which are subject to customary partial or accelerated vesting or forfeiture in the event of certain termination events, are accounted for as equity awards with compensation cost recognized over the vesting period in the income statement. We use a straight-line vesting method for cliff-vested awards and a graded vesting method for step-vested awards. When options are exercised and awards are paid out shares are issued from our treasury shares.

Total share-based compensation expense and the associated tax benefits are as follows for the years ended 31 December:

| Millions of U.S. Dollars | 2020 | 2019 |
|---|---|---|
| Compensation expense: | | |
| Restricted stock units | $ 26 | $ 21 |
| Stock options | 8 | 7 |
| Performance share units | 21 | 20 |
| | $ 55 | $ 48 |
| Tax benefit: | | |
| Restricted stock units | $ 6 | $ 5 |
| Stock options | 2 | 2 |
| Performance share units | 5 | 4 |
| | $ 13 | $ 11 |

*Restricted Stock Unit Awards* ("*RSUs*")—RSUs entitle the recipient to be paid out an equal number of ordinary shares upon vesting. RSUs generally cliff vest on the third anniversary of the grant date.

The holders of RSUs are entitled to nonforfeitable dividend equivalents settled in the form of cash payments, which are recognized as dividends in Retained earnings.

The fair value of RSUs is based on the market price of the underlying stock on the date of grant. The weighted average grant date fair value for RSUs granted during the years ended 31 December 2020 and 2019 was $79.58 and $87.36, respectively. The total fair value of RSUs vested during 2020 and 2019 was $18 million and $13 million, respectively.

The following table summarizes RSU activity:

| | 2020 | | 2019 | |
|---|---|---|---|---|
| | Number of Units (in thousands) | Weighted Average Granted Fair Value (Per Share) | Number of Units (in thousands) | Weighted Average Granted Fair Value (Per Share) |
| Outstanding at 1 January | 613 | $ 93.37 | 462 | $ 95.69 |
| Granted | 335 | 79.58 | 338 | 87.36 |
| Vested | (230) | 88.67 | (147) | 86.22 |
| Forfeited | (25) | 88.25 | (40) | 95.67 |
| Outstanding at 31 December | 693 | $ 88.45 | 613 | $ 93.37 |

As of 31 December 2020, the unrecognized compensation cost related to RSUs was $25 million, which is expected to be recognized over a weighted average period of 2 years.

*Stock Option Awards ("Stock Options")*—Stock Options allow employees the opportunity in the future to purchase ordinary shares of stock at an exercise price equal to the market price at the date of grant. The awards generally have a three-year vesting period that vests in equal increments on the first, second, and third anniversary of the grant date and have a contractual term of ten years.

The fair value of each Stock Option is estimated based on several assumptions, on the date of grant using the Black-Scholes option valuation model. The principal assumptions utilized in valuing Stock Options include the expected stock price volatility (based on our historical stock price volatility over the expected term); the expected dividend yield; and the risk-free interest rate (an estimate based on the yield of a United States Treasury zero coupon bond with a maturity equal to the expected term of the option).

The expected term of all Stock Options granted is estimated based on a simplified approach which is consistent with the historical exercise pattern.

Weighted average fair values of Stock Options granted and the assumptions used in estimating those fair values are as follows:

| | 31 December | |
|---|---|---|
| | 2020 | 2019 |
| Weighted average fair value: | $ 12.18 | $ 15.76 |
| Fair value assumptions: | | |
| Dividend yield | 5 % | 4.2 % |
| Expected volatility | 28.3-38.4% | 27.2-28.1% |
| Risk-free interest rate | 0.3-1.4% | 1.5-2.6% |
| Weighted average expected term, in years | 6.0 | 6.0 |

The following table summarizes Stock Option activity:

| | Number of Shares (in thousands) | | Weighted Average Exercise Price | Weighted Average Remaining Term | | Aggregate Intrinsic Value (Millions of U.S. Dollars) |
|---|---|---|---|---|---|---|
| Outstanding at 1 January 2019 | 1,281 | | 90.30 | | | |
| Granted | 604 | | 89.78 | | | |
| Exercised | (18) | | 70.33 | | | |
| Forfeited | (64) | | 94.39 | | | |
| Expired | (21) | | 98.82 | | | |
| Outstanding at 31 December 2019 | 1,782 | $ | 90.08 | 7.3 years | $ | 13 |
| Exercisable at 31 December 2019 | 942 | $ | 87.25 | 6.2 years | $ | 9 |
| Outstanding at 1 January 2020 | 1,782 | | 90.08 | | | |
| Granted | 701 | | 82.92 | | | |
| Exercised | (16) | | 44.76 | | | |
| Forfeited | (53) | | 85.10 | | | |
| Expired | (10) | | 98.32 | | | |
| Outstanding at 31 December 2020 | 2,404 | $ | 88.36 | 7.1 years | $ | 14 |
| Exercisable at 31 December 2020 | 1,357 | $ | 89.37 | 5.9 years | $ | 8 |

The aggregate intrinsic value of Stock Options exercised during the years ended 31 December 2020 and 2019 was $1 million and less than $1 million, respectively.

As of 31 December 2020, the unrecognized compensation cost related to Stock Options was $5 million, which is expected to be recognized over a one-year period. During 2020, cash received from the exercise of Stock Options was $1 million and the tax benefit associated with these exercises was less than 1 million.

*Performance Share Units Awards ("PSUs")*—A target number of PSUs is granted to participants at the beginning of each performance period. These awards cliff vest after a three-year performance cycle and are settled in shares of common stock, where the ultimate payout can be between 0% and 200% of the target shares granted. Each unit is equivalent to one share of our common stock.

The final number of shares payable was determined after the performance period based on the relative Total Shareholder Return ("TSR"). TSR is an objective calculation that takes into account our TSR rank within its peer group and whether our specific TSR is positive or negative. The fair value of PSUs is estimated on the grant date using a Monte-Carlo simulation.

Outstanding PSUs accrue dividend equivalent units, which will be converted to shares upon payment at the end of the performance period and are classified as trade and other payables on the Consolidated statement of financial position. Dividend equivalents units for are recorded in Retained earnings.

The weighted average fair value of PSUs granted in each respective year and the assumptions used in the Monte Carlo simulation to estimate those fair value are as follows:

| | | 2020 | | 2019 |
|---|---|---|---|---|
| Weighted average fair value | $ | 82.70 | $ | 76.35 |
| Fair value assumptions: | | | | |
| Expected volatility of LyondellBasell N.V. common stock | | 25.96-41.50 | | 24.11 % |
| Expected volatility of peer companies | | 16.13-50.42% | | 14.57-40.55% |
| Average correlation coefficient of peer companies | | 0.45-0.58 | | 0.50 |
| Risk-free interest rate | | 0.23-1.35% | | 2.48 % |

The following table summarizes PSU activity, which assumes target payout at 100%:

| | Equity Awards | | | | Liability Awards | | | |
|---|---|---|---|---|---|---|---|---|
| | 2020 | | 2019 | | 2020 | | 2019 | |
| | Number of Units (in thousands) | Weighted Average Grant Date Fair Value (per share) | Number of Units (in thousands) | Weighted Average Grant Date Fair Value (per share) | Number of Units (in thousands) | Weighted Average Grant Date Fair Value (per share) | Number of Units (in thousands) | Weighted Average Grant Date Fair Value (per share) |
| Outstanding at 1 January | 683 | $ 85.32 | 430 | $ 91.33 | — | $ — | 349 | $ 78.01 |
| Granted | 310 | 82.70 | 307 | 76.35 | — | — | — | — |
| Vested | (212) | 93.28 | — | — | — | — | (349) | 78.01 |
| Forfeited | (32) | 82.97 | (54) | 82.27 | — | — | — | — |
| Outstanding at 31 December | 749 | $ 82.07 | 683 | $ 85.32 | — | $ — | — | $ — |

The total fair value of PSUs vested during 2020 and 2019 was $9 million and $22 million, respectively. As of 31 December 2020, the unrecognized compensation cost related to PSUs was $24 million, which is expected to be recognized over a weighted average period of two years.

*Employee Stock Purchase Plan*

We have an Employee Share Purchase Plan ("ESPP") which allows participants to purchase our stock at a 10% discount on the lower of the fair market value at either the beginning or end of the purchase period. As a result of the 10% discount and the look-back provision, the ESPP is considered a compensatory plan. Total expense related to our ESPP for 2020 and 2019 was $4 million and $2 million, respectively.

## 9 Directors' Remuneration

The Company is managed by its Board of Directors consisting of non-executive directors and one executive director, our CEO.

*Executive Director Remuneration*

Mr. Patel is the sole executive member of our Board of Directors. He receives a base salary, annual bonus, and grants of share-based awards under the Company's Long-Term Incentive Plan. The share-based awards include performance share units, stock options, and restricted stock units. Information on these awards can be found in Note 8, Share-Based Compensation Granted to Directors and Employees.

The following table summarizes the compensation expense recorded in our Financial Statements associated with Mr. Patel for the years ended 31 December 2020 and 2019.

| Thousands of U.S. Dollars | Salary | Share-Based Compensation (1) | Short-Term Incentives (2) | Pension Service Cost | All other Compensation (3) | Total |
|---|---|---|---|---|---|---|
| 2020 | $ 1,575 | $ 11,378 | $ 1,474 | $ 13 | $ 442 | $ 14,882 |
| 2019 | $ 1,575 | $ 11,504 | $ 2,092 | $ 12 | $ 435 | $ 15,618 |

(1) Share-based compensation expense represents costs for which are recognized over the vesting period.

(2) Short-term incentives represent annual bonuses paid for performance. The target annual bonus, set as a percentage of base salary, is multiplied by the payout for corporate-wide results. The payout for corporate-wide results ranges from 0 to 200% and is based on (i) health, safety and environmental performance; (ii) business results (earnings before interest, taxes, depreciation and amortization); and (iii) cost discipline. The corporate wide results paid out at 66% of target for 2020 and 69% of target for 2019. For 2019, the Compensation Committee exercised its discretion to reduce Mr. Patel's annual bonus payout due to certain challenges in global projects performance.

(3) Amounts included in "All Other Compensation" in the table above include Company 401(k) matching contributions and pension plan contributions; Company contributions under the Company's U.S. Senior Management Deferral Plan; Company reimbursement, and gross-up on that reimbursement, of state taxes owed for work performed by Mr. Patel in those states on behalf of the Company; executive physicals; payment of professional fees for tax filings; payment of business club memberships and dues; financial planning allowances; and the incremental cost of spousal travel, and gross-up on that payment, for business travel where spouses were invited.

The following tables show the equity compensation activity for Mr. Patel during 2020:

Overview of stock options

| | | In 2020 | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Grant Year** | **Out-standing at 1 Jan 2020** | **Granted** | **Exercised** | **Forfeited/ Expired** | **Out-standing at 31 Dec 2020** | **Vested in 2020** | **Exercise price** | **Expiration Date** |
| 2014 | 2,418 | — | — | — | 2,418 | — | $ 85.80 | 20/02/2024 |
| 2015 | 227,058 | — | — | — | 227,058 | 56,764 | 76.15 | 12/01/2025 |
| 2015 | 70,211 | — | — | — | 70,211 | — | 89.94 | 17/02/2025 |
| 2016 | 101,108 | — | — | — | 101,108 | — | 77.93 | 16/02/2026 |
| 2017 | 130,572 | — | — | — | 130,572 | 43,524 | 92.69 | 16/02/2027 |
| 2018 | 136,656 | — | — | — | 136,656 | 45,552 | 109.09 | 21/02/2028 |
| 2019 | 190,596 | — | — | — | 190,596 | 63,532 | 88.50 | 21/02/2029 |
| 2020 | — | 242,060 | — | — | 242,060 | — | 83.35 | 20/02/2030 |
| Total | 858,619 | 242,060 | — | — | 1,100,679 | 209,372 | | |

Overview of restricted stock units

| | | In 2020 | | | | |
|---|---|---|---|---|---|---|
| **Grant Year** | **Outstanding at 1 Jan 2020** | **Granted** | **Vested** | **Forfeited** | **Outstanding at 31 Dec 2020** | **Share price at grant date** |
| 2015 | 23,637 | — | 23,637 | — | — | $ 76.15 |
| 2017 | 30,344 | — | 30,344 | — | — | 92.69 |
| 2018 | 27,071 | — | — | — | 27,071 | 109.09 |
| 2019 | 34,782 | — | — | — | 34,782 | 88.50 |
| 2020 | — | 35,431 | — | — | 35,431 | 83.35 |
| Total | 115,834 | 35,431 | 53,981 | — | 97,284 | |

Overview of performance share units which assumes target payout at 100%(1)

| | | In 2020 | | | | |
|---|---|---|---|---|---|---|
| **Grant Year** | **Outstanding at 1 Jan 2020** | **Granted** | **Vested** | **Forfeited** | **Outstanding at 31 Dec 2020** | **Share Price at grant date** |
| 2017(2) | 60,687 | — | 30,344 | 30,343 | — | $ 92.69 |
| 2018 | 54,142 | — | — | — | 54,142 | 109.09 |
| 2019 | 69,563 | — | — | — | 69,563 | 88.50 |
| 2020 | — | 70,861 | — | — | 70,861 | 83.35 |
| Total | 184,392 | 70,861 | 30,344 | 30,343 | 194,566 | |

(1) PSUs granted in 2017 received $11.70 of accumulated and accrued dividend equivalents per outstanding unit which were converted to additional PSUs at the end of the performance period ended 31 December 2019. PSUs granted in 2018, 2019 and 2020 received $12.35, $8.35 and $4.20 respectively, of accumulated and accrued dividend equivalents per outstanding unit which will be converted to additional PSUs at the end of the performance period ending 31 December 2020, 2021 and 2022 as of that date and subject to the same terms and conditions as the original award.

(2) PSUs that were granted in 2017 were issued in 2020 at less than 100% of the target value.

*Non-Executive Director Remuneration*

Non-executive members of our Board of Directors receive cash and equity compensation, in the form of RSUs, for their service on the Board and its committees. Additionally, Directors can elect to receive the cash component of their compensation in Company shares. The compensation program for our non-executive Directors is shown in the table below.

| | |
|---|---|
| **Annual retainer:** | |
| Cash | $115,000 ($325,000 for Chair of the Board) |
| Restricted stock units | Valued at $170,000 ($325,000 for Chair of the Board) |
| | |
| **Committee retainers:** | |
| **(excluding Executive Committee)** | |
| Members | $10,000 ($15,000 for Audit Committee) |
| Chairs | $20,000 ($27,500 for Audit and Compensation Chair) |
| | |
| **Travel fees** | $5,000 for each intercontinental round trip |

The following table summarizes the compensation expense recorded in our Financial Statements associated with the non-executive members of the Board of Directors for the years ended 31 December 2020 and 2019.

| | 2020 | | | | 2019 | | | |
|---|---|---|---|---|---|---|---|---|
| **Thousands of U.S. Dollars** | **Fees Earned or Paid in Cash** (1) | **Stock Compen-sation** (2) | **All Other Compen-sation** (3) | **Total** | **Fees Earned or Paid in Cash** (1) | **Stock Compen-sation** (2) | **All Other Compen-sation** (3) | **Total** |
| Jacques Aigrain *Chair of the Board* | $ 345 | $ 327 | $ 5 | $ 677 | $ 341 | $ 390 | $ 20 | $ 751 |
| Lincoln Benet | 145 | 171 | — | 316 | 145 | 170 | 10 | 325 |
| Jagjeet S. Bindra | 150 | 171 | 12 | 333 | 150 | 170 | 12 | 332 |
| Robin W. T. Buchanan | 135 | 206 | — | 341 | — | 315 | — | 315 |
| Stephen F. Cooper | — | 332 | 2 | 334 | — | 357 | 2 | 359 |
| Nance K. Dicciani | — | 369 | 2 | 371 | — | 394 | 2 | 396 |
| Claire S. Farley | 145 | 214 | 2 | 361 | — | 341 | 2 | 343 |
| Isabella D. Goren | 140 | 171 | 7 | 318 | 140 | 170 | 22 | 332 |
| Michael Hanley | 153 | 182 | 7 | 342 | 113 | 229 | 19 | 361 |
| Albert Manifold(4) | 140 | 172 | — | 312 | 82 | 100 | 5 | 187 |
| *Former Director* | | | | | | | | |
| Rudy M. J. van der Meer(5) | 55 | 70 | 2 | 127 | 135 | 170 | 14 | 319 |
| Bruce A. Smith(6) | — | — | 2 | 2 | — | 173 | 2 | 175 |

(1) Includes retainers for services earned or paid through 31 December 2020 and 2019. Mr. Cooper and Ms. Dicciani each elected to receive all of the cash component of their 2020 compensation in the form of shares of our stock. For 2019, Mr. Buchanan, Mr. Cooper, Ms. Dicciani, Ms. Farley, Mr. Smith and Mr. Hanley each elected to receive all or a portion of the cash component of their 2019 compensation in the form of shares of our stock.

(2) Represents annual grants of RSUs for all directors and shares of stock issued in lieu of cash compensation. The annual grants of RSUs are made in conjunction with the Board's regularly scheduled meeting in May of each year. The RSUs vest one year from the date of grant and are entitled to dividend equivalents settled in the form of cash payments. In 2020, the annual grant for each director other than Mr. Aigrain, was 2,640 shares. Mr. Aigrain received 5,047 shares as Chair of the Board. These awards are the only stock awards outstanding at 2020 fiscal year-end for the non-executive Board members. In 2019, the annual grant for each director, other than Mr. Aigrain and Mr. Manifold, was 2,197 shares. Mr. Aigrain received 4,199 shares as Chair of the Board, and Mr. Manifold received 2,290 shares as he was elected the day after the Board's regularly scheduled meeting. In accordance with *IFRS 2, Share based payments*, the grant date fair value of the awards is the number of shares granted times the fair market value of our shares on that date. See Note 8 to the Consolidated Financial Statements for the year ended 31 December 2020 for a description accounting for equity-based compensation.

The shares received in lieu of cash compensation are issued at the same time quarterly cash payments for retainers and travel fees are otherwise made. The number of shares issued is based on the average of the closing price of the Company's shares over the quarter in which the compensation was earned. The shares issued in lieu of cash compensation in 2020 were as follows: Mr. Cooper - 1,788 shares and Ms. Dicciani - 2,249 shares. In 2019, the shares issued in lieu of cash compensation were as follows: Mr. Buchanan - 1,632 shares, Mr. Cooper - 1,686 shares, Ms. Dicciani - 2,063 shares, Ms. Farley - 1,927 shares, Mr. Smith - 690 shares and Mr. Hanley - 513 shares.

(3) Includes $5,000 for each intercontinental trip taken for work performed for the Company. In 2020, Ms. Dicciani elected to receive the cash component of the travel fees in the form of shares of our stock. In 2019, Mr. Buchanan, Mr. Cooper, Ms. Dicciani, Ms. Farley, and Mr. Hanley elected to receive all or portion of the cash component of the travel fees in the form of shares of our stock. Also includes benefits in kind related to tax preparation and advice related to the Board members' UK and Dutch tax returns and payments. The Company provides these services, through a third party, to members of our Board because of our unique incorporation and tax domicile situation.

(4) Mr. Manifold was elected to the Board on 31 May 2019.

(5) Mr. van der Meer retired from the Board on 28 May 2020.

(6) Mr. Smith retired from the Board on 31 May 2019.

## 10 Other (Income) Expense, Net

| Millions of U.S. Dollars | 2020 | 2019 |
|---|---|---|
| (Gains)/losses on financial derivatives | $ 128 | $ (109) |
| (Gains)/losses on foreign exchange | 33 | 115 |
| (Gains)/losses on sale of investment | (12) | (5) |
| Other | (75) | 25 |
| Other (income) expense, net | $ 74 | $ 26 |

*(Gains)/losses on financial derivatives*—The amounts reported as losses on financial derivatives in 2020 and 2019 are related to our cross-currency swaps.

## 11 Finance Costs

| Millions of U.S. Dollars | 2020 | 2019 |
|---|---|---|
| Interest expense on borrowings | $ 529 | $ 367 |
| Provisions for unwinding of discount | 1 | 1 |
| Foreign exchange (gain) loss from borrowings and cash | (204) | (85) |
| Interest expense on leases | 63 | 68 |
| Other | 21 | 9 |
| Total finance costs | $ 410 | $ 360 |

## 12 Income Tax Expense

LyondellBasell Industries N.V. is tax resident in the United Kingdom pursuant to a mutual agreement procedure determination ruling between the Dutch and United Kingdom competent authorities and therefore subject solely to the United Kingdom corporate income tax system.

LyondellBasell Industries N.V. has little or no taxable income of its own because, as a holding company, it does not conduct any operations. Through our subsidiaries, we have substantial operations world-wide. Taxes are paid on the earnings generated in various jurisdictions where our subsidiaries operate, including primarily the U.S., The Netherlands, Germany, France and Italy.

The Company operates in multiple jurisdictions with complex legal and tax regulatory environments and our tax returns are periodically audited or subjected to review by tax authorities. We monitor tax law changes and the potential impact to our results of operations including potential proposals in the U.S. as a result of a new administration.

On 27 March 2020, the U.S. enacted the Coronavirus Aid, Relief, and Economic Security Act, also known as the “CARES Act,” which contains numerous income tax provisions and other stimulus measures. Several of the tax measures favorably impact our income tax provision including the ability to carry back U.S. tax net operating losses (“NOL”) generated in 2018, 2019, or 2020 to tax years with a higher statutory tax rate and options for temporary elections that relax the limitation on deductible interest expense. Based on our analysis as of 31 December 2020, we recorded an overall tax benefit of approximately $300 million. The 2020 U.S. tax losses include the impact of lower earnings and immediate tax depreciation deductions of fixed assets including the Louisiana Joint Venture investment which was a deemed asset acquisition for U.S. tax purposes, as well as certain capital projects. We anticipate a cash refund of approximately $900 million as a result of the NOL carryback which, under normal U.S. IRS procedures would be expected to be received in 2021. However, because of U.S. IRS resource constraints, exacerbated by the impact of COVID-19, the refunds may be delayed.

There has been increased attention, both in the U.S. and globally, to the tax practices of multinational companies, including the European Union’s state aid investigations, proposals by the Organization for Economic Cooperation and Development with respect to base erosion and profit shifting, and European Union tax directives and their implementation. Management does not believe that recent changes in income tax laws, other than those disclosed and reflected in our financial statements, will have a material impact on our Consolidated Financial Statements, although new or proposed changes to tax laws could affect our tax liabilities in the future.

The significant components of the provision for income taxes are as follows:

| Millions of U.S. Dollars | Note | 2020 | 2019 |
|---|---|---|---|
| Current tax on profits for the year | | $ (421) | $ 536 |
| Deferred tax - origination and reversal of temporary difference | 26 | 270 | 127 |
| Income tax expense/(benefit) | | $ (151) | $ 663 |

The following table reconciles the expected tax expense (benefit) at the statutory rates applicable in the countries where the Company operates to the total income tax expense (benefit) as calculated:

| Millions of U.S. Dollars | 2020 | 2019 |
|---|---|---|
| Profit before tax | $ 1,199 | $ 3,765 |
| Tax calculated at domestic tax rates applicable to profits in the respective countries | 253 | 896 |
| Tax effects of: | | |
| Exempt income | (125) | (183) |
| Liquidation loss | — | (54) |
| Patent box ruling | — | (65) |
| Return to accrual | (50) | 9 |
| Uncertain tax positions | 15 | 38 |
| Changes in tax law | (295) | 1 |
| Other | 51 | 21 |
| Income tax expense /(benefit) | $ (151) | $ 663 |

The weighted average applicable tax rates for 2020 and 2019 were 21.1% and 23.8%, respectively. The decrease was primarily attributable to a change in the geographical mixture of the profit before tax. Our effective income tax rate of -12.6% in 2020 and 17.6% in 2019 resulted in tax provisions of -$151 million and $663million, respectively. Compared to 2019, the 2020 effective income tax rate decreased primarily due to a favorable impact in relation to the CARES Act, coupled with lower earnings increasing the relative impact of our tax rate drivers, primarily exempt income.

Our exempt income primarily includes interest income, export incentives, and equity earnings of joint ventures. Interest income earned by certain of our European subsidiaries through intercompany financings is taxed at rates substantially lower than the U.S. statutory rate. Export incentives relate to tax benefits derived from elections and structures available for U.S. exports. Equity earnings attributable to the earnings of our joint ventures, when paid through dividends to certain European subsidiaries, are exempt from all or portions of normal statutory income tax rates. We currently anticipate the favorable treatment for interest income, dividends, and export incentives to continue in the near term; however, this treatment is based on current law and tax rulings, which could change.

Current and deferred taxes related to items charged or (credited) directly to other comprehensive income during the period are as follows:

| Millions of U.S. Dollars | 2020 | 2019 |
|---|---|---|
| Current tax: | | |
| Currency translation differences | $ (25) | $ (1) |
| Derivatives | (54) | $ — |
| Deferred tax: | | |
| Retirement benefit obligation | (13) | (87) |
| Currency translation differences | (5) | 9 |
| Derivatives | $ (28) | $ (46) |
| | $ (125) | $ (125) |

Current and deferred taxes credited directly to equity are as follows:

| Millions of U.S. Dollars | Note | 2020 | 2019 |
|---|---|---|---|
| Current tax | | | |
| Share-based payments | | $ — | $ — |
| Deferred tax: | | | |
| Share-based payments | 26 | $ — | $ (5) |
| Step-up fixed asset basis | | $ (7) | $ — |
| | | $ (7) | $ (5) |

## 13 Earnings per Share

Our unvested restricted stock units contain non-forfeitable rights to dividend equivalents, and are considered participating securities. As such, we calculate basic and diluted earnings per share under the two-class method.

*Basic earnings per share*—Basic earnings per share is based upon the weighted average number of shares of common stock outstanding during the periods.

| Millions of U.S. Dollars, except per share data | 2020 | 2019 |
|---|---|---|
| Profit attributable to LyondellBasell N.V. | $ 1,350 | $ 3,102 |
| Dividends on preferred stock | (7) | (7) |
| Profit attributable to participating securities | (2) | (6) |
| Profit attributable to equity holders of the Company | 1,341 | 3,089 |
| Basic weighted average common stock outstanding | 334 | 353 |
| Basic earnings per share | $ 4.02 | $ 8.75 |

*Diluted earnings per share*—Diluted earnings per share includes the effect of certain stock options awards and other equity-based compensation awards to assume conversion of all dilutive potential ordinary shares.

| Millions of U.S. Dollars, except per share data | 2020 | 2019 |
|---|---|---|
| Profit attributable to LyondellBasell N.V. | $ 1,350 | $ 3,102 |
| Dividends on preferred stock | (7) | (7) |
| Profit attributable to participating securities | (2) | (6) |
| Profit attributable to equity holders of the Company | 1,341 | 3,089 |
| Basic weighted average common stock outstanding | 334 | 353 |
| Effect of dilutive securities: | | |
| Stock options | — | — |
| Dilutive potential shares | 334 | 353 |
| Diluted earnings per share | $ 4.02 | $ 8.75 |

## 14 Intangible Assets

| Millions of U.S. Dollars | Capitalized Developments Projects | Know-how | Technology Patent and Licenses | Goodwill | Emission Allowances | Customer Relationships | Favorable Contracts and Other Intangibles | Total |
|---|---|---|---|---|---|---|---|---|
| **Balance at 1 January 2019** | $ 85 | $ 79 | $ 96 | $ 1,599 | $ 276 | $ 292 | $ 186 | $ 2,613 |
| Additions | 3 | — | — | 86 | 82 | — | 9 | 180 |
| Retirements | — | — | (9) | — | (13) | — | — | (22) |
| Amortization | (10) | (12) | (21) | — | (63) | (25) | (32) | (163) |
| Transfers | — | — | — | — | — | — | — | — |
| Exchange differences | (2) | 1 | (1) | (5) | (1) | — | (3) | (11) |
| **At 31 December 2019** | $ 76 | $ 68 | $ 65 | $ 1,680 | $ 281 | $ 267 | $ 160 | $ 2,597 |
| | | | | | | | | |
| **At 31 December 2019** | | | | | | | | |
| Cost | $ 164 | $ 84 | $ 102 | $ 1,680 | $ 874 | $ 299 | $ 580 | $ 3,783 |
| Accumulated amortization and impairment | (88) | (16) | (37) | — | (593) | (32) | (420) | $ (1,186) |
| **Closing balance** | $ 76 | $ 68 | $ 65 | $ 1,680 | $ 281 | $ 267 | $ 160 | $ 2,597 |
| | | | | | | | | |
| **Balance at 1 January 2020** | $ 76 | $ 68 | $ 65 | $ 1,680 | $ 281 | $ 267 | $ 160 | $ 2,597 |
| Additions | 3 | — | — | 7 | 23 | — | 48 | 81 |
| Retirements | — | — | — | — | (18) | — | — | (18) |
| Amortization | (12) | (11) | (45) | — | (57) | (20) | (28) | (173) |
| Exchange differences | 6 | 1 | — | 45 | 6 | 10 | (9) | 59 |
| Transfers | — | — | — | — | — | — | — | — |
| Impairments | — | — | — | — | — | — | (12) | (12) |
| **At 31 December 2020** | $ 73 | $ 58 | $ 20 | $ 1,732 | $ 235 | $ 257 | $ 159 | $ 2,534 |
| | | | | | | | | |
| **At 31 December 2020** | | | | | | | | |
| Cost | $ 173 | $ 85 | $ 102 | $ 1,732 | $ 917 | $ 307 | $ 621 | $ 3,937 |
| Accumulated amortization and impairment | (100) | (27) | (82) | — | (682) | (50) | (462) | (1,403) |
| **Closing balance** | $ 73 | $ 58 | $ 20 | $ 1,732 | $ 235 | $ 257 | $ 159 | $ 2,534 |

*Research and development*—Amortization expense is generally recorded as part of Cost of sales. Research and development expenditures recognized as expense for 2020 and 2019 were $101 million and $97 million, respectively.

*Goodwill*—Goodwill is allocated and monitored by management into the following groups of cash generating units ("CGU"):

| Millions of U.S. Dollars | 2020 | 2019 |
|---|---|---|
| Intermediates and Derivatives | $ 193 | $ 178 |
| Olefins and Polyolefins - Americas | 131 | 131 |
| Olefins and Polyolefins - Europe, Asia, International | 26 | 24 |
| Technology | 10 | 8 |
| Advanced Polymers solutions | 1,372 | 1,339 |
| Total | $ 1,732 | $ 1,680 |

The recoverable amount of a CGU is determined based on value-in-use calculations. These calculations use pre-tax cash flow projections based on management approved financial budgets covering a five-year period. Cash flows beyond the five-year period are extrapolated using the estimated growth rates described in the "Growth rate estimates" section below. Based on this analysis, the recoverable amounts of each of our cash generating units or groups of cash generating units were substantially in excess of their carrying value. Accordingly, no goodwill impairment was recognized in 2020 or 2019.

The calculation of value is most sensitive to the following assumptions:

- Gross margin,
- Pre-tax discount rates,
- Market share assumptions, and
- Growth rate used to extrapolate cash flows beyond the budget period.

*Gross margins*—Gross margins are predicted in the planning period by using key hydrocarbon pricing estimates and product variable margins based on macroeconomic predictions and individual supply and demand balances.

*Pre-tax discount rates*—Pre-tax discount rates ("discount rates") represent the current market assessment of the risks specific to each cash generating unit, regarding the time value of money and individual risks of the underlying assets which have not been incorporated in the cash flow estimates. The discount rate calculation is based on the nature of the assets and activities of the Company's business and its operating segments and derived from its weighted average cost of capital ("WACC"). The WACC takes into account both debt and equity. The cost of equity is derived from the expected return on investment by the nature of the Company's assets and activities.

*Market share assumptions*—These assumptions are based on forecasts of demand for our products taking into consideration changes in global capacity.

*Growth rate estimates*—Rates are based upon managements' best estimates which are determined using published third party sources, internal knowledge and market insights based on macroeconomic predictions

With regard to the assessment of value in use, management believes that no reasonably possible change in any of the above key assumptions would cause the carrying value to materially exceed its recoverable amount.

The key assumptions used for value-in-use calculations are as follows:

| | **2020** | | **2019** | |
|---|---|---|---|---|
| | **Pre-tax Discount Rate** | **Growth Rate** | **Pre-tax Discount Rate** | **Growth Rate** |
| Intermediates and Derivatives | 7 % | 2 % | 9 % | 2 % |
| Olefins and Polyolefins - Americas | 6 % | 2 % | 9 % | 2 % |
| Olefins and Polyolefins - EAI | 8 % | 2 % | 9 % | 2 % |
| Technology | 9 % | 2 % | 10 % | 2 % |
| Advanced Polymers Solutions | 9 % | 2 % | 10 % | 2 % |

## 15 Property, Plant and Equipment

| Millions of U.S. Dollars | Land | Major Manufacturing Equipment | Buildings | Major Turnarounds | Light Equipment and Instrumentation | Furniture and Fixtures | Information Systems | Asset Under Construction | Joint Operations | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| **Balance at 1 January 2019** | $ 364 | $ 7,199 | $ 582 | $ 867 | $ 1,585 | $ 11 | $ 11 | $ 2,256 | $ 527 | $ 13,402 |
| Additions | — | 23 | — | — | — | — | — | 2,896 | 22 | 2,941 |
| Transfers | 5 | 1,006 | 140 | 222 | 352 | 42 | 9 | (1,835) | 59 | — |
| Disposals | — | (11) | — | — | (1) | — | (1) | — | — | (13) |
| Depreciation | — | (561) | (41) | (283) | (244) | — | (6) | — | (45) | (1,180) |
| Impairment | (1) | (4) | — | — | — | — | — | — | — | (5) |
| Exchange differences | (8) | (91) | 27 | (3) | 49 | (41) | 3 | (6) | (6) | (76) |
| **At 31 December 2019** | $ 360 | $ 7,561 | $ 708 | $ 803 | $ 1,741 | $ 12 | $ 16 | $ 3,311 | $ 557 | $ 15,069 |
| | | | | | | | | | | |
| **At 31 December 2019** | | | | | | | | | | |
| Cost | $ 360 | $ 12,215 | $ 1,089 | $ 1,866 | $ 2,968 | $ 26 | $ 69 | $ 3,311 | $ 1,026 | $ 22,930 |
| Accumulated depreciation and impairment | — | (4,654) | (381) | (1,063) | (1,227) | (14) | (53) | — | (469) | (7,861) |
| **Closing balance** | $ 360 | $ 7,561 | $ 708 | $ 803 | $ 1,741 | $ 12 | $ 16 | $ 3,311 | $ 557 | $ 15,069 |
| | | | | | | | | | | |
| **Balance at 1 January 2020** | $ 360 | $ 7,561 | $ 708 | $ 803 | $ 1,741 | $ 12 | $ 16 | $ 3,311 | $ 557 | $ 15,069 |
| Acquisition of Joint Operation | | | | | | | | | 2,955 | 2,955 |
| Additions | — | 12 | — | — | — | — | — | 1,736 | 99 | 1,847 |
| Transfers | — | 1,390 | 75 | 237 | 265 | — | 2 | (1,969) | — | — |
| Disposals | (1) | (8) | (8) | (1) | (8) | — | — | — | — | (26) |
| Depreciation | — | (573) | (51) | (280) | (274) | (1) | (7) | — | (83) | (1,269) |
| Impairment | — | (422) | (18) | (76) | (53) | — | (1) | — | — | (570) |
| Exchange differences | 17 | (128) | 115 | 9 | 225 | (3) | 3 | 25 | 58 | 321 |
| **At 31 December 2020** | $ 376 | $ 7,832 | $ 821 | $ 692 | $ 1,896 | $ 8 | $ 13 | $ 3,103 | $ 3,586 | $ 18,327 |
| | | | | | | | | | | |
| **At 31 December 2020** | | | | | | | | | | |
| Cost | $ 376 | $ 13,481 | $ 1,241 | $ 1,697 | $ 3,279 | $ 24 | $ 66 | $ 3,103 | $ 4,118 | $ 27,385 |
| Accumulated depreciation and impairment | — | (5,649) | (420) | (1,005) | (1,383) | (16) | (53) | — | (532) | (9,058) |
| **Closing balance** | $ 376 | $ 7,832 | $ 821 | $ 692 | $ 1,896 | $ 8 | $ 13 | $ 3,103 | $ 3,586 | $ 18,327 |

As part of our purchase of Bora LyondellBasell Petrochemical Co. Lt and Louisiana Integrated PolyEthylene JV LLC , we acquired property, plant and equipment amounting to $2,955 million during the year. Please refer to Note 17 for details. As at 31 December 2020, net book value of our share of property, plant and equipment of these joint operations was $2,975 million. The largest category was 'Major Manufacturing Equipment', amounting to a net book value of $2,570 million

*Impairment of Long-Lived Assets*—During the third quarter of 2020, we identified impairment triggers relating to our Houston refinery's Cash generating unit as a result of significant negative impacts to the Refining Cash generating unit forecasted cash flows. Expected prolonged reduction of travel and associated transportation fuels consumption resulting from the COVID-19 pandemic which created an oversupply in global fuel markets that will pressure refining profitability for an extended period of time. In addition, the refinery is expected to continue to be adversely affected by lower discounts for the heavy crude oil feedstocks that we utilize. Due to these trends, we assessed the Houston refinery for impairment and determined that the Cash generating unit carrying value exceeded its undiscounted estimated pre-tax cash flows. As of 30 September 2020, we estimated the fair value of the Houston refinery's property, plant and equipment to be $550 million, and fair value of intangible assets to be $10 million, which was less than the carrying value. As a result, we recognized a non-cash impairment charge in the third quarter of 2020 of $582 million, which includes a $570 million impairment of property, plant and equipment and a $12 million impairment of intangible assets. The fair value measurement for the asset group is a Level 3.

Depreciation of property, plant, equipment and ROU assets, amortization of intangible assets and impairment charges are recognized in Cost of sales, Selling costs and Administrative expenses as indicated in the following table:

| Millions of U.S. Dollars | 2020 | 2019 |
|---|---|---|
| Cost of sales | $ 1,733 | $ 1,605 |
| Selling costs | 18 | 37 |
| Administrative expenses | 41 | 43 |
| Impairment | $ 582 | $ — |
| Total | $ 2,374 | $ 1,685 |

## 16. Leases

We lease storage tanks, terminal facilities, land, office facilities, railcars, pipelines, barges, plant equipment and other equipment. As of 31 December 2020, our Right-of-use assets were $1,535 million. Lease liabilities totaled $1,579 million of which $320 million are current. These values were derived using a weighted average discount rate of 3.9%.

Our leases have remaining lease terms ranging from less than 1 year to 30 years and have a weighted-average remaining lease term of 7 years. While extension clauses included in our leases do not materially impact our Right-of-use assets or Lease liabilities, certain leases include options to extend the lease for up to 20 years.

| Millions of U.S. dollars | Storage | Railcars | Land | Offices | Pipelines | Other | Total |
|---|---|---|---|---|---|---|---|
| **Balance at 1 January 2019** | $ 1,007 | $ 230 | $ 65 | $ 127 | $ 53 | $ 43 | $ 1,525 |
| Additions | 146 | 80 | 5 | 11 | 41 | 7 | 290 |
| Depreciation | (177) | (85) | (5) | (28) | (14) | (19) | (328) |
| Terminations and other | (29) | — | — | — | — | — | (29) |
| **Balance at 31 December 2019** | $ 947 | $ 225 | $ 65 | $ 110 | $ 80 | $ 31 | $ 1,458 |
| | | | | | | | |
| **Balance at 1 January 2020** | $ 947 | $ 225 | $ 65 | $ 110 | $ 80 | $ 31 | $ 1,458 |
| Additions | 126 | 169 | 10 | 24 | 3 | 24 | 356 |
| Acquisitions | — | — | 47 | — | — | 7 | 54 |
| Depreciation | (191) | (82) | (6) | (30) | (14) | (27) | (350) |
| Terminations and other | 7 | 4 | 4 | — | — | 2 | 17 |
| **Balance at 31 December 2020** | $ 889 | $ 316 | $ 120 | $ 104 | $ 69 | $ 37 | $ 1,535 |

The following table sets out the cash and non-cash movements for the lease liability for the period:

| Millions of U.S. dollars | |
|---|---|
| **Balance as at 1 January 2019** | $ 1,545 |
| Cash Flows | (305) |
| Additions - Leases | 290 |
| Other non-cash movements | (23) |
| **Balance as at 31 December 2019** | $ 1,507 |
| | |
| **Balance as at 1 January 2020** | $ 1,507 |
| Cash Flows | (333) |
| Additions - Leases | 386 |
| Other non-cash movements | 19 |
| **Balance as at 31 December 2020** | $ 1,579 |

Maturities of Lease liabilities are as follows:

| Millions of U.S. dollars | 31 December 2020 |
|---|---|
| 2021 | $ 375 |
| 2022 | 302 |
| 2023 | 244 |
| 2024 | 204 |
| 2025 | 175 |
| Thereafter | 534 |
| Total lease payments | 1,834 |
| Less: Imputed interest | (255) |
| Total | $ 1,579 |

The following table presents the components of Lease cost:

| Millions of U.S. dollars | 31 December 2020 | 31 December 2019 |
|---|---|---|
| Lease costs | | |
| Depreciation of right-of-use assets | $ 350 | $ 328 |
| Interest on lease liabilities | 63 | 68 |
| Short-term lease costs | 154 | 152 |
| Variable lease costs | 50 | 61 |
| Net lease costs | $ 617 | $ 609 |

Cash paid for Lease liabilities for the year ended 31 December 2020 representing principal payments and interest totaled to $333 million and $63 million, respectively.

As of 31 December 2020, we have entered into additional finance leases, with an undiscounted value of $583 million, primarily for storage tanks related to our new PO/TBA plant at our facility in Houston, Texas. These leases, which will commence between the first quarter of 2021 and 2022, have lease terms ranging from 2 to 20 years.

## 17 Investments in Associates, Joint Ventures and Acquisition of Joint Operations

Summarized aggregate financial information of the joint ventures and associates are shown below.

The amounts recognized on our Consolidated Statement of Financial Position are as follows:

| | 31 December | |
|---|---|---|
| Millions of U.S. Dollars | 2020 | 2019 |
| Associates | $ 338 | $ 331 |
| Joint ventures | 937 | 872 |
| | $ 1,275 | $ 1,203 |

The amounts recognized on our Consolidated Statement of Income are as follows:

| Millions of U.S. Dollars | 2020 | 2019 |
|---|---|---|
| Associates | $ 12 | $ 8 |
| Joint ventures | 129 | 134 |
| | $ 141 | $ 142 |

## Associates

The changes in our Associates investments are as follows:

| Millions of U.S. Dollars | 2020 | 2019 |
|---|---|---|
| Opening balance | $ 331 | $ 328 |
| Share in profit of associates, net of tax | 12 | 8 |
| Business combinations | — | — |
| Dividends received | (11) | (24) |
| Divestitures | — | — |
| Currency exchange differences | 6 | 19 |
| Closing balance | $ 338 | $ 331 |

Currency exchange differences are reported in the Consolidated Statement of Other Comprehensive Income within Currency translation of foreign operations.

## Joint Ventures

The changes in our Joint Venture investments are as follows:

| Millions of U.S. Dollars | 2020 | 2019 |
|---|---|---|
| Opening balance | $ 872 | $ 864 |
| Share in profit of joint ventures, net of tax | 129 | 134 |
| Dividends received | (96) | (133) |
| Contributions | 10 | — |
| Purchase of joint ventures | — | — |
| Currency exchange differences | 15 | 7 |
| Other | 7 | — |
| Closing balance | $ 937 | $ 872 |

Currency exchange differences are reported in the Consolidated Statement of Other Comprehensive Income within Currency translation of foreign operations.

None of the associates and joint ventures is listed on a stock exchange.

## Purchase of Joint Operations (JO)

### Acquisition of Bora LyondellBasell Petrochemical Co. Ltd

On 1 September 2020 we acquired a 50% equity interest in Bora LyondellBasell Petrochemical Co. Ltd. (BLYB), located in China, a joint arrangement with Liaoning Bora Enterprise Group (Bora), for a cash consideration of RMB 3,250 million (US$ 472 million). Our interest in BLYB is classified as a joint operation and we proportionately consolidate our share of the jointly held assets, liabilities, revenues and expenses.

*Preliminary purchase price allocation* – Our share of the fair value of the assets acquired and liabilities at the acquisition date is summarized below:

| **Millions of U.S. dollars** | LYB's share of JO net assets |
|---|---|
| Plant and Equipment | 1,030 |
| Land Use Rights | 47 |
| Other current assets | 211 |
| Long term debt | (590) |
| Other Payables | (226) |
| Total net assets acquired | 472 |

The primary areas of the preliminary purchase price allocation, that have not been finalized, relate to the fair value of plant and equipment and assessment of collectability of the sales tax receivables, advances and other receivables.

*Plant and Equipment* – The fair value of the Plant and Equipment was estimated using the depreciated replacement cost approach by adjusting the cost to acquire or construct the assets for relevant price indices considering the nature and the country of origin of the asset and exchange rate changes.

*Land Use Rights*– The Government in China owns the land and grants the companies the right to use the land for a specified period of time in return for an agreed upon rent. The land use rights were fair valued using data from comparable land sales adjusted for differences in the location, size and date of transaction. The land use rights are considered a leasing arrangement under IFRS 16, leases and amortized on a straight line basis. There was no outstanding lease liability at the acquisition date.

*Other current assets*– These mainly include advances to affiliates under feedstock supply arrangements and sales tax receivables. The carrying amounts approximates their fair values.

*Long term debt* – The amortized cost of the debt (with commercial banks) equals fair value since the loan terms and interest rates are consistent with the market rates for similar projects in the industry. We have not provided a financial guarantee to the lenders.

*Other Payables* –This mainly includes amounts withheld from payments to suppliers pending completion of the warranty period and other payables to various suppliers. These payables are due within the next twelve months and represent their fair values.

Pro forma results of operations for BLYB have not been presented because the effects of the acquisition were not material to our pre-acquisition financial results.

**Acquisition of Louisiana Joint Venture**

On 1 December 2020, LyondellBasell Industries N.V. obtained 50% of the membership interests in Louisiana Integrated PolyEthylene JV LLC ("LIP JV") for total consideration of approximately $2 billion. Our interest in LIP JV is classified as a joint operation and we proportionately consolidate our share of the jointly held assets, liabilities, revenues and expenses.

Preliminary purchase price allocation- Our share of the fair value of the assets acquired and liabilities and the resulting goodwill at the acquisition date is summarized below:

| **Millions of U.S. dollars** | LYB's share of JO net assets |
|---|---|
| Inventory | 22 |
| Property plant and equipment | 1,925 |
| ROU Asset | 7 |
| Lease obligation | (7) |
| Other | (1) |
| Total Net Assets acquired | 1,946 |

Property, Plant and Equipment—Our share of the fair value of the components of property, plant and equipment acquired are represented in the table below:

| Millions of U.S. dollars | |
|---|---|
| Land | 21 |
| Major Manufacturing Equipment | 1,744 |
| Building | 68 |
| Light Equipment and instrumentation | 87 |
| Construction in Progress | 5 |
| Total | 1,925 |

Acquisition Costs—We incurred $23.3 million of acquisition related expenses for the acquisition of Louisiana Integrated PolyEthylene JV LLC during the year ended 31 December 2020. These costs were classified in our Consolidated income statement for the year ended 31 December 2020 under Administrative expenses.

**Principal Subsidiaries**

Information about principal subsidiaries at 31 December 2020 is set out in Appendix A.

## 18 Financial Assets and Liabilities by Category

| Millions of U.S. Dollars | 2020 Financial assets at amortized cost | 2020 Assets Held at Fair Value | 2020 Derivatives Used for Hedging | 2020 Total | 2019 Financial assets at amortized cost | 2019 Assets Held at Fair Value | 2019 Derivatives Used for Hedging | 2019 Total |
|---|---|---|---|---|---|---|---|---|
| **Financial assets at 31 December** | | | | | | | | |
| Trade and other receivables excluding prepayments | $ 3,939 | $ — | $ — | $ 3,939 | $ 3,698 | $ — | $ — | $ 3,698 |
| Derivative financial instruments | — | 22 | 253 | 275 | — | 244 | 65 | 309 |
| Financial Assets at FVOCI | — | 349 | — | 349 | — | 162 | — | 162 |
| Financial Assets at FVTPL | — | 353 | — | 353 | — | 34 | — | 34 |
| Cash and cash equivalents | 1,933 | — | — | 1,933 | 939 | — | — | 939 |
| Total | $ 5,872 | $ 724 | $ 253 | $ 6,849 | $ 4,637 | $ 440 | $ 65 | $ 5,142 |

| | 2020 Other Financial Liabilities at Amortized Cost | 2020 Liabilities at Fair Value through Profit and Loss | 2020 Derivatives Used for Hedging | 2020 Total | 2019 Other Financial Liabilities at Amortized Cost | 2019 Liabilities at Fair Value through Profit and Loss | 2019 Derivatives Used for Hedging | 2019 Total |
|---|---|---|---|---|---|---|---|---|
| **Financial liabilities at 31 December** | | | | | | | | |
| Borrowings | $ 16,779 | $ — | $ — | $ 16,779 | $ 12,212 | $ — | $ — | $ 12,212 |
| Lease liabilities | 1,579 | — | — | 1,579 | 1,507 | — | — | 1,507 |
| Derivative financial instruments | — | 291 | 516 | 807 | — | 60 | 275 | 335 |
| Trade and other payables | 4,421 | — | — | 4,421 | 4,109 | — | — | 4,109 |
| Total | $ 22,779 | $ 291 | $ 516 | $ 23,586 | $ 17,828 | $ 60 | $ 275 | $ 18,163 |

## 19 Credit Quality of Financial Assets

Investments in cash and cash equivalents and transactions involving derivative financial instruments are entered into with counterparties that have sound credit ratings and a good reputation. FVOCI investments consist of bonds with counterparties whose credit rating is investment grade and other high-quality instruments. FVTPL investments consists mainly of limited partnership investments, which include investments in, among other things, equities and equity related securities, debt securities, credit instruments, supply chain finance, global interest rate products, currencies, commodities, futures, options, warrants and swaps. These investments are with counterparties whose credit rating is investment grade and other high-quality instruments.

We have a global credit risk management policy to minimize credit losses due to non-performance of our customer base. We monitor our exposure to credit risk on an on-going basis through a team of credit professionals stationed in our key global markets. We have continued to manage our customer credit risk very closely by monitoring our aging analysis along with payment and financial performance. Where appropriate, additional security instruments, letters of credit or corporate guarantees, are secured. Due to our global breadth and scale, we do not have a significant concentration of customer risk. Our largest counterparty risk amounted to $65 million and $68 million at 31 December 2020 and 2019, respectively.

## 20 Derivative and Non-derivative Financial Instruments

The following table discloses fair value of financial instruments:

| | 31 December | | |
|---|---|---|---|
| Millions of U.S. Dollars | 2020 | 2019 | Statement of Financial position classification |
| **Assets** | | | |
| **Derivatives -** | | | |
| **Designated as hedges:** | | | |
| Commodities | $ 7 | $ — | Derivative financial instruments |
| Foreign currency | 6 | 2 | Derivative financial instruments |
| Interest rates | 240 | 63 | Derivative financial instruments |
| **Not designated as hedges:** | | | |
| Commodities | 1 | — | Derivative financial instruments |
| Foreign currency | 21 | 244 | Derivative financial instruments |
| **Non-derivatives:** | | | |
| Debt securities | 349 | 162 | Financial assets at fair value through other comprehensive income |
| Equity securities | 353 | 34 | Financial assets at fair value through profit or loss |
| Total | $ 977 | $ 505 | |
| **Liabilities** | | | |
| **Derivatives -** | | | |
| **Designated as hedges:** | | | |
| Foreign currency | $ 171 | $ 44 | Derivative financial instruments |
| Interest rates | 343 | 231 | Derivative financial instruments |
| Commodities | 2 | — | Derivative financial instruments |
| **Not designated as hedges:** | | | |
| Commodities | 14 | 34 | Derivative financial instruments |
| Foreign currency | 277 | 26 | Derivative financial instruments |
| Total | $ 807 | $ 335 | |

For further details on derivatives, reference is made to Note 4 Financial Risk Management.

## 21 Inventories

| | 31 December | |
|---|---|---|
| Millions of U.S. Dollars | 2020 | 2019 |
| Finished goods | $ 2,139 | $ 2,505 |
| Parts and materials | 785 | 630 |
| Raw materials and supplies | 954 | 1,143 |
| Total inventories | $ 3,878 | $ 4,278 |

Cost of inventories of $18,673 million and $23,708 million in 2020 and 2019, respectively, has been recognized as expense and included in Cost of sales.

## 22 Trade and Other Receivables

| Millions of U.S. Dollars | 31 December 2020 | 2019 |
|---|---|---|
| Trade receivables | $ 3,320 | $ 2,998 |
| Trade receivables on related parties | 168 | 121 |
| Less: provision for impairment of trade receivables | (18) | (18) |
| Trade receivables, net | 3,470 | 3,101 |
| | | |
| Social security and other taxes | 167 | 187 |
| Prepaid expenses | 196 | 137 |
| Other | 468 | 410 |
| Total | 4,301 | 3,835 |
| | | |
| Less: non-current portion | (139) | (141) |
| Current portion | $ 4,162 | $ 3,694 |

The carrying value of the trade and other receivables approximates their fair value. The maximum exposure to credit risk at the reporting date is the carrying value of each class of receivable mentioned above. We do not hold any collateral as security.

The provision for doubtful trade receivables is determined based on aging and reviewed periodically. The creation and release of provisions for impaired receivables have been included in Selling costs in the Consolidated Statement of Income.

The aging of the net trade receivables at 31 December was as follows:

| Millions of U.S. Dollars | 2020 | 2019 |
|---|---|---|
| Amounts undue | $ 3,416 | $ 2,970 |
| Past due 0-90 days | 39 | 129 |
| Past due 91-180 days | 15 | 2 |
| | $ 3,470 | $ 3,101 |

The aging of the gross trade receivables provided for at 31 December was as follows:

| | 2020 | | 2019 | |
|---|---|---|---|---|
| Millions of U.S. Dollars | Gross | Provision | Gross | Provision |
| Amounts undue | $ — | $ — | $ — | $ — |
| Past due 0-90 days | — | — | — | — |
| Past due 91-180 days | 18 | 18 | 18 | 18 |
| | $ 18 | $ 18 | $ 18 | $ 18 |

At 31 December 2020 and 2019, trade receivables of an initial value of $18 million were impaired and fully provided for. The movement in the provision for doubtful accounts is as follows:

| Millions of U.S. Dollars | 2020 | 2019 |
|---|---|---|
| Balance, 1 January | $ 18 | $ 18 |
| (Write off) additions, net | — | — |
| Balance, 31 December | $ 18 | $ 18 |

Trade receivables secured by letters of credit were $89 million and $102 million at 31 December 2020 and 2019, respectively. The carrying amounts of trade and other receivables are denominated in the following currencies at 31 December:

| Millions of U.S. Dollars | 2020 | 2019 |
|---|---|---|
| USD | $ 2,691 | $ 2,523 |
| EUR | 937 | 816 |
| Other | 673 | 496 |
| | $ 4,301 | $ 3,835 |

For further details on trade receivables, reference is made to Note 4 Financial Risk Management.

## 23 Cash and Cash Equivalents

For the purpose of the Consolidated Statement of Cash Flows, Cash and cash equivalents comprise the following at 31 December:

| Millions of U.S. Dollars | 2020 | 2019 |
|---|---|---|
| Cash at bank and on hand | $ 1,251 | $ 550 |
| Short-term deposits | 682 | 389 |
| | $ 1,933 | $ 939 |

Cash at banks earns interest at floating rates based on daily bank deposit rates. Short-term deposits are made for varying periods of between one day and three months, depending on the immediate cash requirements, and earn interest at the respective short-term deposit rates.

## 24 Equity Attributable to the Owners of the Company

The Company's authorized share capital totals €51 million divided into 1,275 million ordinary shares of €0.04 each.

For a breakdown of Equity attributable to equity holders, reference is made to the Consolidated Statement of Changes in Equity. For a detail of the non-distributable reserves, reference is made to the Corporate Financial Statements.

*Dividend distribution*—We declared and paid the following dividends for the following periods:

| Millions of U.S. Dollars, except per share amounts | Dividend Per Ordinary Share | Aggregate Dividends Paid | Date of Record |
|---|---|---|---|
| **For the year 2020:** | | | |
| March | $ 1.05 | $ 351 | 2 March 2020 |
| June | 1.05 | 350 | 8 June 2020 |
| September | 1.05 | 352 | 31 August 2020 |
| December | 1.05 | 352 | 30 November 2020 |
| | $ 4.20 | $ 1,405 | |
| **For the year 2019:** | | | |
| March | $ 1.00 | $ 372 | 4 March 2019 |
| June | 1.05 | 388 | 10 June 2019 |
| September | 1.05 | 351 | 4 September 2019 |
| December | 1.05 | 351 | 2 December 2019 |
| | $ 4.15 | $ 1,462 | |

In February, May, August and November 2020, we paid cash dividends of $15.00 per share to our redeemable non-controlling interest shareholders of record as of 15 January 2020, 15 April 2020, 15 July 2020, and 15 October 2020, respectively. In 2020 and 2019 these dividends totaled $7 million and $7 million respectively.

*Share Repurchase Authorization*—In May 2020, our shareholders approved a proposal to authorize us to repurchase up to 34.0 million ordinary shares through 29 November 2021 ("May 2020 Share Repurchase Authorization"), which superseded any prior repurchase authorization. The timing and amount of these repurchases, which are determined based on our evaluation of market and other factors, may be executed from time to time through open market or privately negotiated transactions. The repurchased shares, which are recorded at cost, are classified as Treasury stock and may be retired or used for general corporate purposes, including for various employer benefit and compensation plans. As of December 31, 2020, there were no repurchases under the May 2020 Share Repurchase Authorization.

Upon the completion of the tender offer in July 2019, we repurchased 35.1 million ordinary shares, under the May 2019 Share Repurchase Authorization, for a total of $3,099 million, including $6 million of fees and expenses related to the tender offer. The remaining 1.9 million shares under the May 2019 Share Repurchase Authorization were repurchased from the open market in August 2019.

In September 2019, our shareholders approved a proposal to authorize us to repurchase up to 33.3 million ordinary shares through March 12, 2021 ("September 2019 Share Repurchase Authorization"), which superseded any prior repurchase authorizations. As of December 31, 2020, we repurchased 51 thousand shares under the September 2019 Share Repurchase Authorization for a total of $4 million.

The following table summarizes our share repurchase activity for the periods presented:

| Millions of U.S. Dollars, except shares and per share amounts | Shares Repurchased | Average Purchase Price | Total Purchase Price, Including Commissions |
|---|---|---|---|
| **For the year 2020** | | | |
| September 2019 Share Repurchase Authorization | 50,685 | $ 78.93 | $ 4 |
| May 2020 Share Repurchase Authorization | — | — | — |
| | 50,685 | $ 78.93 | $ 4 |
| **For the year 2019:** | | | |
| 2018 Share Repurchase Authorization | 5,648,900 | $ 86.38 | $ 488 |
| May 2019 Share Repurchase Authorization | 37,032,594 | 87.50 | 3,240 |
| | 42,681,494 | $ 87.35 | $ 3,728 |

Due to the timing of settlements, total cash paid for share repurchases for the years ended 31 December 2020 and 2019 was $4 million and $3,752 million respectively.

*Ordinary Shares*—The changes in the outstanding amounts of ordinary shares are as follows:

| | 31 December | |
|---|---|---|
| | 2020 | 2019 |
| Ordinary shares outstanding: | | |
| Beginning balance | 333,476,883 | 375,696,661 |
| Share-based compensation | 263,786 | 295,984 |
| Employee stock purchase plan | 325,236 | 165,743 |
| Purchase of ordinary shares | (50,685) | (42,681,505) |
| Ending balance | 334,015,220 | 333,476,883 |

*Treasury Shares*—The changes in the amounts of treasury shares held by the Company are as follows:

| | 31 December | |
|---|---|---|
| | 2020 | 2019 |
| Ordinary shares held as Treasury shares: | | |
| Beginning balance | 6,568,745 | 24,513,619 |
| Share-based compensation | (263,786) | (295,984) |
| Employee stock purchase plan | (325,236) | (165,743) |
| Purchase of ordinary shares | 50,685 | 42,681,505 |
| Treasury shares canceled | — | (60,164,652) |
| Ending balance | 6,030,408 | 6,568,745 |

During 2019, following approval by our management and shareholders, we canceled (60,164,652) ordinary shares held in our treasury account in accordance with cancellation requirements under Dutch law.

Purchase of ordinary shares during 2019 includes 11 shares that were returned to us at no cost resulting from unclaimed distributions to creditors.

## 25 Non-Controlling Interests

Non-controlling interests primarily represent the interest of unaffiliated investors in a partnership that owns our PO/SM II plant at the Channelview, Texas complex and A. Schulman plastics.

In 2020 and 2019, we made payments of $30 million and $63 million related to the acquisition of additional non-controlling interests in our POSM II Limited Partnership joint venture and our subsidiary that holds our La Porte, Texas methanol facility, respectively

## 26 Borrowings

The carrying amounts of borrowings and the fair value of borrowings as of 31 December are as follows:

| | 2020 | | 2019 | |
|---|---|---|---|---|
| Millions of U.S. Dollars | Carrying Value | Fair Value | Carrying Value | Fair Value |
| **Non-current:** | | | | |
| Senior Notes due 2021, $1,000 million, 6.0% | $ — | $ — | $ 998 | $ 1,062 |
| Senior Notes due 2024, $1,000 million, 5.75% | 996 | 1,151 | 995 | 1,126 |
| Senior Notes due 2055, $1,000 million, 4.625% | 974 | 1,212 | 973 | 1,072 |
| Guaranteed Notes due 2022, €750 million 1.875% | — | — | 841 | 872 |
| Guaranteed Notes due 2023, $750 million, 4.0% | 745 | 815 | 744 | 795 |
| Guaranteed Notes Due 2023, $650 million Variable | 646 | 651 | — | — |
| Guaranteed Notes Due 2025, $500 million 2.875% | 496 | 543 | — | — |
| Guaranteed Notes due 2025, $500 million 1.250% | 495 | 509 | — | — |
| Guaranteed Notes due 2026 €500 million, 0.875% | 608 | 632 | 555 | 566 |
| Guaranteed Notes due 2027, $1,000 million, 3.5% | 1,090 | 1,123 | 1,023 | 1,050 |
| Guaranteed Notes due 2027, $300 million, 8.1% | 300 | 414 | 300 | 385 |
| Guaranteed Notes Due 2030, $500 million 3.375% | 495 | 559 | — | — |
| Guaranteed Notes Due 2030, $500 million 2.250% | 492 | 516 | — | — |
| Guaranteed Notes due 2031, €500 million 1.625% | 601 | 687 | 552 | 581 |
| Guaranteed Notes Due 2040, $750 million 3.375% | 740 | 807 | — | — |
| Guaranteed Notes due 2043, $750 million, 5.25% | 724 | 967 | 723 | 896 |
| Guaranteed Notes due 2044, $1,000 million, 4.875% | 981 | 1,255 | 980 | 1,127 |
| Guaranteed notes due 2049, $1,000 million, 4.2% | 975 | 1,173 | 975 | 1,053 |
| Guaranteed Notes Due 2050, $1000 million 4.20% | 984 | 1,174 | — | — |
| Guaranteed Notes Due 2051, $1000 million 3.625% | 986 | 1,092 | — | — |
| Guaranteed Notes Due 2060, $500 million 3.800% | 490 | 544 | — | — |
| Term Loan due 2022, $4,000 million | 1,449 | 1,466 | 1,950 | 1,976 |
| Term loan due 2027 $1,657 million 5.61% | 667 | 667 | — | — |
| Other | 114 | 111 | 131 | 131 |
| Total | 16,048 | 18,068 | 11,740 | 12,692 |
| | | | | |
| **Current:** | | | | |
| Commercial Paper | 500 | 500 | — | — |
| Other | 231 | 222 | 472 | 507 |
| Total | 731 | 722 | 472 | 507 |
| | | | | |
| Total borrowings | $ 16,779 | $ 18,790 | $ 12,212 | $ 13,199 |

The fair values of the senior notes and guaranteed notes are based on data obtained from well-established and recognized vendors of market data for debt valuations. The fair value of the finance payable to investees and the Other equals the carrying amount, as the impact of discounting is not significant.

The following table sets out an analysis of the cash movements in borrowings for the period.

| Millions of U.S. Dollars | Current Borrowings | Non-current Borrowings | Total |
|---|---|---|---|
| Balance as at 1 January 2019 | $ 1,901 | $ 7,662 | $ 9,563 |
| Net Cash Flows | (1,440) | 3,979 | 2,539 |
| Foreign Exchange Adjustments | 12 | 83 | 95 |
| Other Non-cash movements | (1) | 16 | 15 |
| Balance as at 31 December 2019 | 472 | 11,740 | 12,212 |
| Acquisitions of Joint Operations | 35 | 597 | 632 |
| Net Cash Flows | 221 | 3,539 | 3,760 |
| Foreign Exchange Adjustments | 3 | 239 | 242 |
| Other Non-cash movements | — | (67) | (67) |
| Balance as at 31 December 2020 | $ 731 | $ 16,048 | $ 16,779 |

Gains (losses) related to fair value adjustments associated with the fair value hedge accounting of our fixed-for-floating interest rate swaps for the applicable periods are as follows:

| | | Gains (Losses) | | Cumulative Fair Value Hedging Adjustments Included in Carrying Amount of Debt | |
|---|---|---|---|---|---|
| | | Year Ended 31 December | | Year Ended 31 December | |
| Millions of dollars | Inception Year | 2020 | 2019 | 2020 | 2019 |
| Senior Notes due 2019, 5.0% | 2014 | $ — | $ (11) | $ — | $ — |
| Senior Notes due 2021, 6.0% | 2016 | 1 | (21) | — | (1) |
| Guaranteed Notes due 2027, 3.5% | 2017 | (65) | (58) | (102) | (37) |
| Guaranteed Notes due 2022, 1.875% | 2018 | 2 | (1) | — | (2) |
| Guaranteed Notes due 2026, 0.875% | 2020 | (2) | — | (2) | — |
| Total | | $ (64) | $ (91) | $ (104) | $ (40) |

These fair values adjustments are recognized in finance cost in the Consolidated Statement of income.

The carrying amounts of our borrowings are denominated in the following currencies:

| | 31 December | |
|---|---|---|
| Millions of U.S. Dollars | 2020 | 2019 |
| USD | $ 14,716 | $ 10,107 |
| EUR | 1215 | 1950 |
| CNY | 667 | — |
| Other | 181 | 155 |
| | $ 16,779 | $ 12,212 |

*Long-term Debt*

*Senior Revolving Credit Facility*—Our $2,500 million Senior Revolving Credit Facility, which may be used for dollar and euro denominated borrowings, has a $500 million sub-limit for dollar and euro denominated letters of credit, a $1,000 million uncommitted accordion feature, and supports our commercial paper program. Borrowings under the facility bear interest at either a base rate or LIBOR rate, plus an applicable margin. Additional fees are incurred for the average daily unused commitments. The facility contains customary covenants and warranties, including specified restrictions on indebtedness and liens. See Credit Agreements section below for additional details regarding our leverage ratio covenant. At 31 December 2020, we had no borrowings or letters of credit outstanding and $2,020 million of unused availability under this facility.

In October 2020, we amended our Senior Revolving Credit Facility to extend the term of $2,440 million of the $2,500 million for one year until June 2023, the remainder expires in June 2022. The amendment also included customary LIBOR replacement language, which took effect in October 2020.

*Term Loan due 2022*—In March 2019, LYB Americas Finance Company LLC ("LYB Americas Finance"), a wholly owned subsidiary of LyondellBasell Industries N.V., entered into a three years $4,000 million senior unsecured delayed draw term loan credit facility that matures in March 2022. Borrowings under the credit agreement were available through December 31, 2019, subsequent to which no further borrowings may be made under the agreement. Outstanding borrowings bear interest at either a base rate or LIBOR rate, as defined, plus in each case, an applicable margin determined by reference to LyondellBasell N.V.'s current credit ratings. The credit agreement contains customary representations and warranties and contains certain restrictive covenants regarding, among other things, secured indebtedness, subsidiary indebtedness, mergers and sales of assets. See Credit Agreements section below for additional details regarding our leverage ratio covenant. In October 2020 we repaid $500 million of the indebtedness outstanding under this Term Loan, using the proceeds from the Floating Rate Notes, 1.25% 2025 Notes, 2.25% 2030 Notes, 2040 Notes, 2051 Notes and 2060 Notes (collectively, the "October Notes")

In January 2021, we repaid an additional $500 million outstanding under our Term Loan due 2022.

*Term loan due 2027*— On 1 September 2020 we acquired 50% equity interest in Bora Lyondellbasell Petrochemical Co. Ltd. (BYLYB), Our interest in BLYB is classified as a joint operation and we proportionately consolidate our share of the jointly held assets, liabilities, revenues and expenses. Th balance of the loan as at 31 December 2020 represents our share of the loan held in BYLYB of $667 Million.

In October 2020, LYB International Finance III, LLC ("LYB Finance III"), a wholly owned finance subsidiary of LyondellBasell Industries N.V., as defined in Rule 3-10(b) of Regulation S-X, issued the following:

*Guaranteed Floating Rate Notes due 2023*—LYB Finance III issued $650 million of guaranteed floating rate notes due 2023 (the "Floating Rate Notes"). The floating rate notes will bear interest equal to the three-month LIBOR rate, plus 1.000% per annum. These notes may be redeemed on or after the date that is two years prior to the scheduled maturity date of the notes at a redemption price equal to 100% of the principal amount of the notes redeemed plus accrued and unpaid interest.

*1.25% Guaranteed Notes due 2025*—LYB Finance III issued $500 million of 1.25% guaranteed notes due 2025 (the "1.25% 2025 Notes") at a discounted price of 99.683%. These notes may be redeemed before the date that is one month prior to the scheduled maturity date at a redemption price equal to the greater of (i) 100% of the principal amount of the notes redeemed and (ii) the sum of the present values of the remaining scheduled payments of principal and interest (discounted at the applicable treasury yield plus 15 basis points) on the notes to be redeemed. These notes may also be redeemed on or after the date that is one month prior to the final maturity date of the notes at a redemption price equal to 100% of the principal amount of the notes redeemed plus accrued and unpaid interest.

*2.25% Guaranteed Notes due 2030*—LYB Finance III issued $500 million of 2.25% guaranteed notes due 2030 (the "2.25% 2030 Notes") at a discounted price of 99.203%. These notes may be redeemed before the date that is three months prior to the scheduled maturity date at a redemption price equal to the greater of (i) 100% of the principal amount of the notes redeemed and (ii) the sum of the present values of the remaining scheduled payments of principal and interest (discounted at the applicable treasury yield plus 25 basis points) on the notes to be redeemed. These notes may also be redeemed on or after the date that is three months prior to the final maturity date of the notes at a redemption price equal to 100% of the principal amount of the notes redeemed plus accrued and unpaid interest.

*Guaranteed Notes due 2040*—LYB Finance III issued $750 million of 3.375% guaranteed notes due 2040 (the "2040 Notes") at a discounted price of 99.77%. These notes may be redeemed before the date that is six months prior to the scheduled maturity date at a redemption price equal to the greater of (i) 100% of the principal amount of the notes redeemed and (ii) the sum of the present values of the remaining scheduled payments of principal and interest (discounted at the applicable treasury yield plus 30 basis points) on the notes to be redeemed. These notes may also be redeemed on or after the date that is six months prior to the final maturity date of the notes at a redemption price equal to 100% of the principal amount of the notes redeemed plus accrued and unpaid interest.

*Guaranteed Notes due 2051*—LYB Finance III issued $1,000 million of 3.625% guaranteed notes due 2051 (the "2051 Notes") at a discounted price of 99.707%. These notes may be redeemed before the date that is six months prior to the scheduled maturity date at a redemption price equal to the greater of (i) 100% of the principal amount of the notes redeemed and (ii) the sum of the present values of the remaining scheduled payments of principal and interest (discounted at the applicable treasury yield plus 35 basis points) on the notes to be redeemed. These notes may also be redeemed on or after the date that is six months prior to the final maturity date of the notes at a redemption price equal to 100% of the principal amount of the notes redeemed plus accrued and unpaid interest.

*Guaranteed Notes due 2060*—LYB Finance III issued $500 million of 3.8% guaranteed notes due 2060 (the "2060 Notes") at a discounted price of 99.166%. These notes may be redeemed before the date that is six months prior to the scheduled maturity date at a redemption price equal to the greater of (i) 100% of the principal amount of the notes redeemed and (ii) the sum of the present values of the remaining scheduled payments of principal and interest (discounted at the applicable treasury yield plus 35 basis points) on the notes to be redeemed. These notes may also be redeemed on or after the date that is six months prior to the final maturity date of the notes at a redemption price equal to 100% of the principal amount of the notes redeemed plus accrued and unpaid interest.

The net proceeds of the October Notes was $3,848 million. In October 2020, we used $500 million of the net proceeds to repay a portion of the indebtedness outstanding under our Term Loan due 2022. In November 2020, we used $1.9 billion to redeem $1 billion aggregate principal amount of our 6.0% senior notes due 2021, and €750 million aggregate principal amount of our 1.875% guaranteed notes due 2022. In conjunction with the redemption of these notes, we recognized $69 million of debt extinguishment costs which are reflected in Interest expense in the Consolidated Statements of Income. The debt extinguishment costs include $77 million paid for make-whole premiums, fees and expenses related to the redemption of the notes and non-cash charges of $4 million for the write-off of unamortized debt discount and issuance costs and $12 million in gains resulting from the write-off of the cumulative fair value hedge accounting adjustments. The remaining proceeds were used to fund a portion of the purchase price for the Louisiana Joint Venture.

*Guaranteed Notes due 2025, 2030 and 2050*—In April 2020, LYB Finance III issued $500 million of 2.875% guaranteed notes due 2025 (the "2025 Notes") at a discounted price of 99.911%, $500 million of 3.375% guaranteed notes due 2030 (the "2030 Notes") at a discounted price of 99.813% and $1,000 million of 4.2% guaranteed notes due 2050 (the "2050 Notes") at a discounted price of 99.373%. Net proceeds from the sale of the notes totaled $1,974 million. We used the net proceeds from the sale of the notes for general corporate purposes, including to increase our liquidity and manage short-term debt maturities.

The 2025 Notes, 2030 Notes and 2050 Notes may be redeemed before the date that is one month, three months, or six months, respectively, prior to the scheduled maturity date at a redemption price equal to the greater of (i) 100% of the principal amount of the notes redeemed and (ii) the sum of the present values of the remaining scheduled payments of principal and interest (discounted at the applicable treasury yield plus 40 basis points in the case of the 2025 Notes or 45 basis points in the case of the 2030 Notes and 2050 Notes) on the notes to be redeemed. The 2025 Notes, 2030 Notes and 2050 Notes may also be redeemed on or after the date that is one month, three months, or six months, respectively, prior to the scheduled maturity date of the notes at a redemption price equal to 100% of the principal amount of the notes redeemed plus accrued and unpaid interest. The notes are also redeemable upon certain tax events.

*Guaranteed Notes due 2049*—In October 2019, LYB Finance III issued $1,000 million of 4.2% guaranteed notes due 2049 at a discounted price of 98.488%.

The notes may be redeemed before the date that is six months prior to the scheduled maturity date at a redemption price equal to the greater of (i) 100% of the principal amount of the notes redeemed and (ii) the sum of the present values of the remaining scheduled payments of principal and interest (discounted at the applicable treasury yield plus 35 basis points) on the notes to be redeemed. The notes may also be redeemed on or after the date that is six months prior to the final maturity date of the notes at a redemption price equal to 100% of the principal amount of the notes redeemed plus accrued and unpaid interest. The notes are also redeemable upon certain tax events.

*Guaranteed Notes due 2026 and 2031*—In September 2019, LYB International Finance II B.V. ("LYB Finance II"), a wholly owned finance subsidiary of LyondellBasell Industries N.V., as defined in Rule 3-10(b) of Regulation S-X, issued €500 million of 0.875% guaranteed notes due 2026 (the "2026 Notes") at a discounted price of 99.642%, and €500 million of 1.625% guaranteed notes due 2031 (the "2031 Notes") at a discounted price of 98.924%.

The notes may be redeemed before the date that is three months prior to the scheduled maturity date at a redemption price equal to the greater of (i) 100% of the principal amount of the notes redeemed and (ii) the sum of the present values of the remaining scheduled payments of principal and interest (discounted at the applicable comparable government bond rate plus 30 basis points in the case of the 2026 Notes and 35 basis points in the case of the 2031 Notes) on the notes to be redeemed. The notes may also be redeemed on or after the date that is three months prior to the scheduled maturity date of the notes at a redemption price equal to 100% of the principal amount of the notes redeemed plus accrued and unpaid interest. The notes are also redeemable upon certain tax events.

*Guaranteed Notes due 2027, $1,000 million*—In March 2017, LYB Finance II issued $1,000 million of 3.5% guaranteed notes due 2027 at a discounted price of 98.968%.

The notes may be redeemed before the date that is three months prior to the scheduled maturity date at a redemption price equal to the greater of (i) 100% of the principal amount of the notes redeemed and (ii) the sum of the present values of the remaining scheduled payments of principal and interest (discounted at the applicable treasury yield plus 20 basis points) on the notes to be redeemed. The notes may also be redeemed on or after the date that is three months prior to the scheduled maturity date of the notes at a redemption price equal to 100% of the principal amount of the notes redeemed plus accrued and unpaid interest.

*Guaranteed Notes due 2022*—In March 2016, LYB Finance II issued €750 million of 1.875% guaranteed notes due 2022 at a discounted price of 99.607%. In November 2020, proceeds from the October Notes were used to redeem €750 million aggregate principal amount of our 1.875% guaranteed notes due 2022. In conjunction with the redemption of these notes, we paid $22 million in make-whole premiums, fees and expenses related to the redemption. Additionally, non-cash charges of $2 million for the write-off of unamortized debt discount and issuance costs and $1 million in gains resulting from the write-off of the cumulative fair value hedge accounting adjustment were recognized.

*Senior Notes due 2055*—In March 2015, LyondellBasell Industries N.V. issued $1,000 million of 4.625% Notes due 2055 at a discounted price of 98.353%.

The notes may be redeemed before the date that is six months prior to the scheduled maturity date at a redemption price equal to the greater of (i) 100% of the principal amount of the notes redeemed and (ii) the sum of the present values of the remaining scheduled payments of principal and interest (discounted at the applicable treasury yield plus 35 basis points) on the notes to be redeemed. The notes may also be redeemed on or after the date that is six months prior to the final maturity date of the notes at a redemption price equal to 100% of the principal amount of the notes redeemed plus accrued and unpaid interest.

*Guaranteed Notes due 2044*—In February 2014, LYB International Finance B.V. (“LYB Finance”), a wholly owned finance subsidiary of LyondellBasell Industries N.V., as defined in Rule 3-10(b) of Regulation S-X, issued $1,000 million of 4.875% guaranteed notes due 2044 at a discounted price of 98.831%.

The notes may be redeemed before the date that is six months prior to the scheduled maturity date at a redemption price equal to the greater of (i) 100% of the principal amount of the notes redeemed and (ii) the sum of the present values of the remaining scheduled payments of principal and interest (discounted at the applicable treasury yield plus 20 basis points) on the notes to be redeemed. The notes may also be redeemed on or after the date that is six months prior to the final maturity date of the notes at a redemption price equal to 100% of the principal amount of the notes redeemed plus accrued and unpaid interest.

*Guaranteed Notes due 2023 and 2043*—In July 2013, LYB Finance issued $750 million of 4% guaranteed notes due 2023 and $750 million of 5.25% Notes due 2043 at discounted prices of 98.678% and 97.004%, respectively.

The notes may be redeemed and repaid, in whole or in part, at any time and from time to time prior to maturity at a redemption price equal to the greater of (i) 100% of the principal amount of the notes redeemed, and (ii) the sum of the present values of the remaining scheduled payments of principal and interest on the notes to be redeemed. Such interest will be discounted to the date of redemption on a semi-annual basis at the applicable treasury yield plus 25 basis points in the case of the 4% Notes due 2023 and plus 30 basis points in the case of the 5.25% Notes due 2043.

*Senior Notes due 2021 and 2024*—In November 2011 and April 2012, LyondellBasell Industries N.V. issued $1,000 million of 6% senior notes due 2021 and $1,000 million aggregate principal amount of 5.75% senior notes due 2024, respectively. In November 2020, proceeds from the October Notes were used to redeem $1,000 million aggregate principal amount of our 6% senior notes due 2021. In conjunction with the redemption of these notes, we paid $55 million for make-whole premiums, fees and expenses related to the redemption. Additionally, non-cash charges of $2 million for the write-off of unamortized debt discount and issuance costs and $11 million in gains resulting from the write-off of the cumulative fair value hedge accounting adjustment were recognized.

The Senior Notes due 2024 may be redeemed and repaid, in whole at any time or in part from time to time prior to the date that is 90 days prior to the scheduled maturity date of the notes at a redemption price equal to 100% of the principal amount of the notes redeemed plus a premium for each note redeemed equal to the greater of 1.00% of the then outstanding principal amount of the note and the excess of: (a) the present value at such redemption date of (i) the principal amount of the note at maturity plus (ii) all required interest payments due on the note through maturity (excluding accrued but unpaid interest), computed using a discount rate equal to the Treasury Rate as of such redemption date plus 50 basis points; over (b) the outstanding principal amount of the note. These notes may also be redeemed, in whole or in part, at any time on or after the date which is 90 days prior to the final maturity date of the notes, at a redemption price equal to 100% of the principal amount of the notes redeemed plus accrued and unpaid interest.

The indentures governing all of the above notes contains limited covenants, including those restricting our ability and the ability of our subsidiaries to incur indebtedness secured by significant property or by capital stock of subsidiaries that own significant property, enter into certain sale and lease-back transactions with respect to any significant property or enter into consolidations, mergers or sales of all or substantially all of our assets.

*Guaranteed Notes due 2027, $300 million*—We have outstanding $300 million aggregate principal amount of 8.1% Guaranteed Notes due 2027. These notes, which are guaranteed by LyondellBasell Industries Holdings B.V., a wholly owned subsidiary of LyondellBasell Industries N.V., contain certain restrictions with respect to the level of maximum debt that can be incurred and security that can be granted by certain operating companies that are direct or indirect wholly owned subsidiaries of LyondellBasell Industries Holdings B.V. These notes contain customary provisions for default, including, among others, the non-payment of principal and interest, certain failures to perform or observe obligations under the Agreement on the notes, the occurrence of certain defaults under other indebtedness, failure to pay certain indebtedness and the insolvency or bankruptcy of certain LyondellBasell Industries N.V. subsidiaries.

*Short-term Debt*

*U.S. Receivables Facility*—Our U.S. Receivables Facility, which expires in July 2021, has a purchase limit of $900 million in addition to a $300 million uncommitted accordion feature. This facility provides liquidity through the sale or contribution of trade receivables by certain of our U.S. subsidiaries to a wholly owned, bankruptcy-remote subsidiary on an ongoing basis and without recourse. The bankruptcy-remote subsidiary may then, at its option and subject to a borrowing base of eligible receivables, sell undivided interests in the pool of trade receivables to financial institutions participating in the facility ("Purchasers"). The sale of the undivided interest in the pool of trade receivables is accounted for as a secured borrowing in the Consolidated Balance Sheets. We are responsible for servicing the receivables. We pay variable interest rates on our secured borrowings. Additional fees are incurred for the average daily unused commitments. In the event of liquidation, the bankruptcy-remote subsidiary's assets will be used to satisfy the claims of the Purchasers prior to any assets or value in the bankruptcy-remote subsidiary becoming available to us. This facility also provides for the issuance of letters of credit up to $200 million. Performance obligations under the facility are guaranteed by LyondellBasell Industries N.V. The term of the facility may be extended in accordance with the terms of the agreement. The facility is also subject to customary warranties and covenants, including limits and reserves and the maintenance of specified financial ratios. See Credit Agreements section below for additional details regarding our leverage ratio covenant. At December 31, 2020, there were no borrowings or letters of credit outstanding and $757 million unused availability under the facility.

*Commercial Paper Program*—We have a commercial paper program under which we may issue up to $2,500 million of privately placed, unsecured, short-term promissory notes ("commercial paper"). This program is backed by our $2,500 million Senior Revolving Credit Facility. Proceeds from the issuance of commercial paper may be used for general corporate purposes, including dividends and share repurchases. Interest rates on the commercial paper outstanding at December 31, 2020 are based on the terms of the notes and range from 0.21% to 0.30%. At December 31, 2020, we had $500 million of outstanding commercial paper.

*Precious Metal Financings*—We enter into lease agreements for precious metals which are used in our production processes. All precious metal borrowings are classified as Short-term debt.

*Weighted Average Interest Rate*—At December 31, 2020 and 2019, our weighted average interest rates on outstanding Short-term debt were 0.9% and 3.3%, respectively.

***Additional Information***

*Debt Discount and Issuance Costs*—Amortization of debt discount and debt issuance costs resulted in amortization expense of $21 million and $11 million for the years ended 31 December 2020 and 2019, respectively, which is included in Interest expense in the Consolidated Statements of Income.

*Other Information*—LYB International Finance B.V., LYB International Finance II B.V. and LYB International Finance III, LLC, and LYB Americas Finance Company LLC are 100% owned finance subsidiaries of LyondellBasell Industries N.V., as defined in Rule 3-10(b) of Regulation S-X. Any debt securities issued by LYB International Finance B.V., LYB International Finance II B.V. and LYB International Finance III, LLC will be fully and unconditionally guaranteed by LyondellBasell Industries N.V. Our unsecured notes rank equally in right of payment to each respective finance subsidiary's existing and future unsecured indebtedness and to all of LyondellBasell Industries N.V.'s existing and future unsubordinated indebtedness. There are no significant restrictions that would impede LyondellBasell Industries N.V., as guarantor, from obtaining funds by dividend or loan from its subsidiaries.

*Credit Agreements*—In April 2020, we entered into amendments and related documents (collectively, the "Amendments") to our Senior Revolving Credit Facility, Term Loan due 2022, and U.S. Receivables Facility (collectively, as amended, the

“Credit Agreements”). The Amendments amended each Credit Agreement’s leverage ratio covenant to permit netting of unrestricted cash and cash equivalents in excess of $300 million (with certain restrictions on non-U.S. cash) and, in respect of the Senior Revolving Credit Facility and Term Loan due 2022, restrict certain dividends and other specified restricted payments.

In October 2020, we entered into amendments and related documents (collectively, the “October Amendments”) to our Credit Agreements. Among other things, the October Amendments amended each Credit Agreement’s maximum leverage ratio (calculated as the ratio of total net funded debt to consolidated earnings before interest, taxes and depreciation and amortization, both as defined in our Credit Agreements) financial covenant to (i) 5.00 to 1.00 for the fiscal quarters ending December 31, 2020 and March 31, 2021; (ii) 4.75 to 1.00 for the fiscal quarter ending June 30, 2021; (iii) 4.50 to 1.00 for the fiscal quarters ending September 30, 2021 and December 31, 2021; (iv) 4.00 to 1.00 for the fiscal quarter ending March 2022; and (v) 3.50 to 1.00 for the fiscal quarter ending June 30, 2022 and thereafter. In addition, with respect to the Senior Revolving Credit Facility and the Term Loan due 2022, the October Amendments further restrict certain dividends and other specified restricted payments.

As of 31 December 2020, we are in compliance with our debt covenants.

## 27 Deferred Income Tax

The gross movement in the deferred income tax account is as follows:

| Millions of U.S. Dollars | Note | 2020 | 2019 |
|---|---|---|---|
| Opening balance at 1 January | | $ 1,900 | $ 1,956 |
| Income statement charge | 12 | 270 | 127 |
| Tax charge/(credit) relating to components of other comprehensive income | 12 | (46) | (124) |
| Tax charge/(credit) directly relating to equity | 12 | (7) | (5) |
| Tax charge/(credit) relating to reclass from deferred tax liabilities | | (2) | (50) |
| Currency translation adjustment | | 26 | (4) |
| Deferred tax liabilities, net | | $ 2,141 | $ 1,900 |

The deferred tax movement of tax loss, credit and interest carryforwards ("tax attributes") and the tax effects of temporary differences between the tax basis of assets and liabilities and their reported amounts in the Consolidated Financial Statements are presented below.

| Millions of U.S. Dollars | Retirement Benefit Obligation | Tax Attributes | Other | Total |
|---|---|---|---|---|
| **Deferred income tax assets:** | | | | |
| Balance at 1 January 2019 | $ 348 | $ 61 | $ 90 | $ 499 |
| (Charged)/credited to the income statement | (13) | 16 | 30 | 33 |
| (Charged)/credited to other comprehensive income | 87 | — | 37 | 124 |
| (Charged)/credited to equity | — | — | — | — |
| (Charged)/credited for deferred tax liabilities and current tax liabilities reclassification | 1 | 7 | (50) | (42) |
| Currency translation adjustment | (3) | (1) | — | (4) |
| Balance at 31 December 2019 | $ 420 | $ 83 | $ 107 | $ 610 |
| Reclassification | | | | (529) |
| Net deferred taxes | | | | $ 81 |
| Balance at 1 January 2020 | $ 420 | $ 83 | $ 107 | $ 610 |
| (Charged)/credited to the income statement | 14 | 26 | 11 | 51 |
| (Charged)/credited to other comprehensive income | 13 | — | 33 | 46 |
| (Charged)/credited to equity | — | — | — | — |
| (Charged)/credited for deferred tax liabilities and current tax liabilities reclassification | (9) | (1) | (33) | (43) |
| Currency translation adjustment | 19 | 2 | (4) | 17 |
| Balance at 31 December 2020 | $ 457 | $ 110 | $ 114 | $ 681 |
| Reclassification | | | | (602) |
| Net deferred taxes | | | | $ 79 |

| Millions of U.S. Dollars | Intangible Assets | Accelerated Tax Depreciation | Inventory | Other | Total |
|---|---|---|---|---|---|
| **Deferred income tax liabilities** | | | | | |
| Balance at 1 January 2019 | $ 166 | $ 1,834 | $ 243 | $ 212 | $ 2,455 |
| Charged/(credited) to the Income statement | (31) | 189 | (42) | 44 | 160 |
| Reclass (to)/from deferred tax assets | — | 83 | 9 | (184) | (92) |
| (Charged)/credited to equity | — | — | — | (5) | (5) |
| Currency translation adjustment | — | (7) | (1) | — | (8) |
| Balance at 31 December 2019 | $ 135 | $ 2,099 | $ 209 | $ 67 | $ 2,510 |
| Reclassification | | | | | (529) |
| Net deferred taxes | | | | | $ 1,981 |
| Balance at 1 January 2020 | $ 135 | $ 2,099 | $ 209 | $ 67 | $ 2,510 |
| Charged/(credited) to the income statement | (44) | 385 | (70) | 50 | 321 |
| (Charged)/credited to equity | — | (7) | — | — | (7) |
| Reclass (to)/from deferred tax assets | — | (92) | 3 | 44 | (45) |
| Currency translation adjustment | — | 37 | 6 | — | 43 |
| Balance at 31 December 2020 | $ 91 | $ 2,422 | $ 148 | $ 161 | $ 2,822 |
| Reclassification | | | | | (602) |
| Net deferred taxes | | | | | $ 2,220 |

At 31 December 2020 and 2019, we had realizable tax attributes available in the amount of $ 520 million and $360 million, respectively, for which a deferred tax asset was recognized at 31 December 2020 and 2019 of $110 million and $83 million, respectively.

Deferred tax assets are recognized for tax attributes to the extent that the realization of the related tax benefit through future taxable profits is probable. Prior to the close of each reporting period, management considers the weight of all evidence, both positive and negative, to determine if the deferred tax assets for tax attributes and deductible temporary differences for each jurisdiction can be valued at full value. We place greater weight on historical evidence over future predictions of our ability to utilize net deferred tax assets. We consider future reversals of existing taxable temporary differences, future taxable income exclusive of reversing temporary differences, and taxable income in prior carryback year(s) if carryback is permitted under applicable law, as well as available prudent and feasible tax planning strategies that would, if necessary, be implemented to ensure realization of the net deferred tax asset.

The Company did not recognize deferred tax assets of $132 million and $85 million with respect to tax attributes amounting to $701 million and $516 million for the years ended 31 December 2020 and 2019, respectively, which can be carried forward against future taxable income.

The expiration periods of tax attributes for which no deferred tax assets are recognized as of 31 December 2020 are as follows:

| Millions of U.S. Dollars | Gross Tax Attributes | Deferred Tax on Tax Losses |
|---|---|---|
| In 2021 | 1 | — |
| In 2022 | 1 | 1 |
| In 2023 | 2 | — |
| In 2024 | — | — |
| In 2025 | 1 | 1 |
| Thereafter | 443 | 70 |
| Indefinite | 253 | 60 |
| | $ 701 | $ 132 |

As of 31 December 2020 and 2019, deferred taxes of $89 million and $95 million, respectively, have been provided on the unremitted earnings (to the extent such earnings are subject to taxation on their future remittance) of certain joint ventures, equity investments and subsidiaries. As of 31 December 2020 the Company intends to permanently reinvest approximately $590 million of our non-U.S. earnings. Repatriation of these earnings to the U.S. in the future could result in a tax impact of approximately $60 million. As it is no longer probable that this taxable temporary difference will reverse in the foreseeable future we have not recognized any deferred tax liabilities.

*Contingencies*— Certain income tax returns of LyondellBasell N.V. and its subsidiaries are under examination by tax authorities. These audits may result in proposed assessments by the tax authorities. The Company believes that its tax positions comply with applicable tax law and intends to defend its positions through appropriate administrative and judicial processes.

Our current income tax payable is expected to be settled within the next 12 months.

## 28 Retirement Benefit Obligations

| Millions of U.S. Dollars | Note | 2020 | 2019 |
|---|---|---|---|
| Asset in the Consolidated Statement of Financial Position: | | | |
| Defined benefit pension plans | | $ 7 | $ 10 |
| Liabilities in the Consolidated Statement of Financial Position: | | | |
| Defined benefit pension plans | | 1,547 | 1,331 |
| Other post-employment benefit plans | | 297 | 330 |
| Total liabilities | | 1,844 | 1,661 |
| Net defined benefit liabilities | | $ 1,837 | $ 1,651 |
| Income statement charge: | | | |
| Defined benefit pension plans | 7 | $ 121 | $ 134 |
| Other post-employment benefit plans | 7 | 12 | 14 |
| Total charges | | $ 133 | $ 148 |
| Remeasurements recognized in the Consolidated Statement of Other Comprehensive Income (loss) in the period (before tax): | | | |
| Defined benefit pension plans | | $ 87 | $ 271 |
| Other post-employment benefit plans | | (32) | 37 |
| Total recognized in Other Comprehensive Income in the period | | $ 55 | $ 308 |

We have defined benefit pension plans which cover employees in various countries. We also sponsor postretirement benefit plans other than pensions that provide medical benefits to certain of our U.S., Canadian, and French employees. In Italy and Germany, we provide other post-employment benefits such as early retirement and deferred compensation severance benefits. We use a measurement date of 31 December for all of our benefit plans.

The U.S. defined benefit pension plans are subject to the provisions of the Employee Retirement Income Security Act of 1974 ("ERISA"), including minimum funding requirements. The benefits under the U.S. defined benefit plans are determined either under a cash balance formula or another formula based on the participant's earnings history or service or both. The benefit payments are made from a trust or insurance contract. The plans are administered by the Company's Benefits Administrative Committee ("BAC") and investment of the trust assets is directed by external investment managers hired and monitored by the Company's Benefits Finance Committee ("BFC"). Both the BAC and BFC consist of individuals appointed by the Board of Directors of Lyondell Chemical Company, a wholly owned subsidiary of the Company.

The non-U.S. defined benefit pension plans are subject to the regulatory framework and minimum funding requirements of applicable jurisdictions in which the plans are operated. The benefits under the non-U.S. defined benefit pension plan are also generally calculated based on the participant's earnings history or service or both. The benefit payments from certain non-U.S. plans are made from a trust or insurance contract; however, there are also a number of unfunded plans under which the Company meets each benefit payment obligation as it falls due. Management of non-U.S. plan assets is governed by local regulations and practice in each applicable jurisdiction.

***Defined benefit pension plans***

The amounts recognized in the Statement of Financial Position are determined as follows:

| Millions of U.S. Dollars | 31 December 2020 | 31 December 2019 |
|---|---|---|
| Present value of benefit obligations | $ (4,173) | $ (3,957) |
| Fair value of plan assets | 2,640 | 2,648 |
| Deficit of defined benefit pension plans | (1,533) | (1,309) |
| Effect of asset limitation and minimum funding requirement | (7) | (12) |
| Net liability | $ (1,540) | $ (1,321) |

The changes in the net defined benefit liability over the year are as follows:

| Millions of U.S. Dollars | Present Value of Obligation | Fair value of plan assets | Total | Effect of asset limitation and minimum funding requirement | Total |
|---|---|---|---|---|---|
| At 1 January 2019 | $ 3,390 | $ (2,377) | $ 1,013 | $ 14 | $ 1,027 |
| Current service cost | 79 | — | 79 | — | 79 |
| Past service cost | 23 | — | 23 | — | 23 |
| Interest expense (income) | 102 | (75) | 27 | 1 | 28 |
| | 204 | (75) | 129 | 1 | 130 |
| Remeasurements: | | | | | |
| - Return on plan assets (excluding interest income) | — | (295) | (295) | — | (295) |
| - Effect of changes in demographic assumptions | (18) | — | (18) | — | (18) |
| - Effect of changes in financial assumptions | 577 | — | 577 | — | 577 |
| - Effect of changes in experience adjustments | 15 | — | 15 | — | 15 |
| - Effect of business combinations/divestitures/transfers | — | — | — | (4) | (4) |
| | 574 | (295) | 279 | (4) | 275 |
| Exchange differences | (13) | (2) | (15) | 1 | (14) |
| Contributions: | | | | | |
| - Employers | — | (97) | (97) | — | (97) |
| - Plan participants | 1 | (1) | — | — | — |
| Payments from plans: | | | | | |
| - Benefit payments | (199) | 199 | — | — | — |
| - Settlement payments | — | — | — | — | — |
| Effect of business combinations | — | — | — | — | — |
| At 31 December 2019 | $ 3,957 | $ (2,648) | $ 1,309 | $ 12 | $ 1,321 |

| Millions of U.S. Dollars | Present Value of Obligation | Fair value of plan assets | Total | Effect of asset limitation and minimum funding requirement | Total |
|---|---|---|---|---|---|
| At 1 January 2020 | $ 3,957 | $ (2,648) | $ 1,309 | $ 12 | $ 1,321 |
| Current service cost | 109 | — | 109 | — | 109 |
| Past service cost | (4) | — | (4) | — | (4) |
| Interest expense (income) | 73 | (57) | 16 | (5) | 11 |
| | 178 | (57) | 121 | (5) | 116 |
| Remeasurements: | | | | | |
| - Return on plan assets (excluding interest income) | — | (23) | (23) | — | (23) |
| - Effect of changes in demographic assumptions | (31) | — | (31) | — | (31) |
| - Effect of changes in financial assumptions | 130 | — | 130 | — | 130 |
| - Effect of changes in experience adjustments | 15 | — | 15 | — | 15 |
| - Effect of changes in asset ceiling | — | — | — | — | — |
| | 114 | (23) | 91 | — | 91 |
| Exchange differences | 155 | (70) | 85 | — | 85 |
| Contributions: | | | | | |
| - Employers | — | (73) | (73) | — | (73) |
| - Plan participants | 2 | (2) | — | — | — |
| Payments from plans: | | | | | |
| - Benefit payments | (209) | 209 | — | — | — |
| - Settlement payments | (24) | 24 | — | — | — |
| At 31 December 2020 | $ 4,173 | $ (2,640) | $ 1,533 | $ 7 | $ 1,540 |

The defined benefit obligation and plan assets are composed by country as follows:

| | 2020 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Millions of U.S. Dollars | U.S. | Canada | France | Germany | Netherlands | U.K. | Other | Total |
| Present value of obligation | $ 2,039 | $ 91 | $ 241 | $ 690 | $ 819 | $ 250 | $ 43 | $ 4,173 |
| Fair value of plan assets | (1,548) | (100) | (10) | — | (728) | (242) | (12) | (2,640) |
| Effect of asset limitation and minimum funding requirement | — | 7 | — | — | — | — | — | 7 |
| Total | $ 491 | $ (2) | $ 231 | $ 690 | $ 91 | $ 8 | $ 31 | $ 1,540 |

| Millions of U.S. Dollars | 2019 U.S. | Canada | France | Germany | Netherlands | U.K. | Other | Total |
|---|---|---|---|---|---|---|---|---|
| Present value of obligation | $ 1,965 | $ 88 | $ 198 | $ 671 | $ 750 | $ 243 | $ 42 | $ 3,957 |
| Fair value of plan assets | (1,637) | (100) | (8) | — | (657) | (235) | (11) | (2,648) |
| Effect of asset limitation and minimum funding requirement | — | 12 | — | — | — | — | — | 12 |
| Total | $ 328 | $ — | $ 190 | $ 671 | $ 93 | $ 8 | $ 31 | $ 1,321 |

As of 31 December 2020, the present value of the defined benefit obligation was comprised of approximately $2,081 million relating to active employees, $621 million relating to vested deferred members and $1,471 million relating to members in retirement. As of 31 December 2019, the present value of the defined benefit obligation was comprised of approximately $1,891 million relating to active employees, $638 million relating to vested deferred members and $1,428 million relating to members in retirement.

The expected contributions to be paid to the defined benefit pension plans and the multi-employer plan during 2021 are $98 million and $7 million, respectively.

Our goal is to manage pension investments over the longer term to achieve optimal returns with an acceptable level of risk and volatility. The assets are externally managed by professional investment firms and performance is evaluated continuously against specific benchmarks. The Company or other oversight bodies actively monitor investment results.

The actual return on plan assets was a gain of $80 million (gain of $370 million in 2019).

The major categories of plan assets as a percentage of total plan assets are:

| | 2020 | 2019 |
|---|---|---|
| Equity securities | 25 % | 25 % |
| Fixed income securities | 20 % | 25 % |
| U.S. government securities | 12 % | 6 % |
| Alternatives [a] | 13 % | 17 % |
| Insurance arrangements | 30 % | 27 % |

[a] Include investments in real estate, hedge funds, private equity and insurance annuity contracts.

The plan assets are summarized as follows at 31 December:

| | 2020 | | | 2019 | | |
|---|---|---|---|---|---|---|
| **Millions of U.S. Dollars** | Quoted | Unquoted | Total | Quoted | Unquoted | Total |
| Common and preferred stock | | | | | | |
| Domestic | $ 156 | $ — | $ 156 | $ 177 | $ — | $ 177 |
| International | 125 | — | 125 | 161 | — | 161 |
| Fixed income securities | | | | | | |
| Corporate bonds | — | — | — | 202 | — | 202 |
| Municipal bonds | — | — | — | 11 | — | 11 |
| Foreign government issued bonds | — | — | — | 5 | — | 5 |
| Commingled funds | | | | | | |
| Domestic equity | 203 | — | 203 | 168 | — | 168 |
| International equity | 186 | — | 186 | 175 | — | 175 |
| Fixed income | 505 | — | 505 | 435 | — | 435 |
| Real estate | — | 100 | 100 | — | 106 | 106 |
| Hedge funds | — | 114 | 114 | — | 219 | 219 |
| Private equity | — | 137 | 137 | — | 130 | 130 |
| U.S. government securities | | | | | | |
| U.S. Treasury securities | 339 | — | 339 | 149 | — | 149 |
| Cash and cash equivalents | 45 | — | 45 | 36 | — | 36 |
| Insurance arrangements | — | 825 | 825 | — | 722 | 722 |
| Total Pension Assets | $ 1,559 | $ 1,176 | $ 2,735 | $ 1,519 | $ 1,177 | $ 2,696 |

Our pension plans have not directly invested in securities of LyondellBasell Industries N.V. and there have been no significant transactions between any of the pension plans and the Company or related parties thereof.

The weighted average assumptions used to determine benefit obligations were as follows:

| | 2020 | 2019 |
|---|---|---|
| Discount rate | 1.75 % | 2.07 % |
| Rate of salary increase | 3.57 % | 3.59 % |
| Rate of price inflation | 1.97 % | 2.27 % |
| Rate of pension increase | 1.48 % | 1.77 % |

The weighted average assumptions used to determine net pension cost were as follows:

| | 2020 | 2019 |
|---|---|---|
| Discount rate | 2.07 % | 3.30 % |
| Rate of salary increase | 3.59 % | 3.60 % |
| Rate of price inflation | 2.27 % | 2.30 % |
| Rate of pension increase | 1.77 % | 2.00 % |

The sensitivity analysis presented in the following table is based on a change in an assumption while holding all other assumptions constant. In practice, this is unlikely to occur, and changes in some of the assumptions may be correlated.

The sensitivity of the benefit obligations to changes in the discount rate is as follows:

| Millions of U.S. Dollars | Effects on benefit obligations in 2020 | Change % | Effects on benefit obligations in 2019 | Change % |
|---|---|---|---|---|
| Present value of obligations | $ 4,173 | | $ 3,957 | |
| Discount rate increases by 50 basis points | (281) | (6.7)% | (267) | (6.8)% |
| Discount rate decreases by 50 basis points | 317 | 7.6 % | 308 | 7.8 % |

Reasonably foreseeable changes to the other principal assumptions would not result in a material impact to the benefit obligations and the benefit costs of our pension plans.

The defined benefit pension plans and the other post-employment benefit plans are subject to a number of risks, the most significant of which are discussed below:

Market price risk—Significant changes in investment performance may result in corresponding increases and decreases in the value of the plan assets.

Changes in bond yields—A decrease in corporate bond yields will increase plan liabilities, although this will be partially offset by an increase in the value of the plan's bond holdings.

Inflation risk-Some of the pension plans' benefit arrangements are directly related to the salary levels so that a significant increase in salaries could lead to an increase in the pension obligations of the plans.

Life expectancy-Some plan obligations provide benefits for the lifetime of the member and so increases in life expectancy could result in an increase in the plans' liabilities.

*Multi-employer Plan*—The Company participates in a multi-employer pension arrangement Pensionskasse der BASF WaG V.VaG (Pensionskasse), which provides for benefits to the majority of our employees in Germany. The plan provides fixed, monthly retirement payments on the basis of the credits earned by the participating employees. The Company-specific plan information for the Pensionskasse is not publicly available and the plan is not subject to a collective-bargaining agreement. Up to a certain salary level, the benefit obligations are covered by contributions of the Company and the employees to the Pensionskasse. To the extent that the Pensionskasse is underfunded or for benefits owed but not subject to the Pensionskasse arrangement, the Company's future contributions to the plan or payments to retirees may increase. To the extent that benefit obligations under the plan are funded by Pensionskasse, the related Company contributions are expensed as incurred. The amounts accrued for expected future benefits payable which are not funded by Pensionskasse was $80 million and $79 million at 31 December 2020 and 2019, respectively. The re-measurements recognized in the Consolidated Statement of Other Comprehensive Income are a gain of $5 million and loss of $16 million at 31 December 2020 and 2019, respectively.

The amounts recognized in the Consolidated Statement of Income are as follows:

| Millions of U.S. Dollars | 31 December 2020 | 31 December 2019 |
|---|---|---|
| Company contributions to Pensionskasse | $ 7 | $ 8 |

***Other post-employment benefits plans***

The amounts recognized in the Consolidated Statement of Financial Position are determined as follows:

| Millions of U.S. Dollars | 31 December 2020 | 31 December 2019 |
|---|---|---|
| Present value of benefit obligations | $ 297 | $ 330 |
| Fair value of plan assets | — | — |
| Net liability | $ 297 | $ 330 |

The changes in the net defined benefit liability over the year are as follows:

| Millions of U.S. Dollars | Present value of obligation | Fair value of plan assets | Total |
|---|---|---|---|
| At 1 January 2019 | $ 293 | $ — | $ 293 |
| Current service cost | 3 | — | 3 |
| Interest expense | 11 | — | 11 |
| | 14 | — | 14 |
| Remeasurements: | | | |
| - Effect of changes in demographic assumptions | (4) | — | (4) |
| - Effect of changes in financial assumptions | 50 | — | 50 |
| - Effect of changes in experience adjustments | (9) | — | (9) |
| | 37 | — | 37 |
| Exchange differences | — | — | — |
| Contributions: | | | |
| - Employers | — | (14) | (14) |
| - Plan participants | 6 | (6) | — |
| Payments from plans: | | | |
| - Benefit payments | (20) | 20 | — |
| At 31 December 2019 | $ 330 | $ — | $ 330 |

| Millions of U.S. Dollars | Present value of obligation | Fair value of plan assets | Total |
|---|---|---|---|
| At 1 January 2020 | $ 330 | $ — | $ 330 |
| Current service cost | 4 | — | 4 |
| Interest expense | 8 | — | 8 |
| | 12 | — | 12 |
| Remeasurements: | | | |
| - Effect of changes in demographic assumptions | (42) | — | (42) |
| - Effect of changes in financial assumptions | 14 | — | 14 |
| - Effect of changes in experience adjustments | (5) | — | (5) |
| | (33) | — | (33) |
| Exchange differences | 6 | — | 6 |
| Contributions: | | | |
| - Employers | — | (18) | (18) |
| - Plan participants | 7 | (7) | — |
| Payments from plans: | | | |
| - Benefit payments | (25) | 25 | — |
| At 31 December 2020 | $ 297 | $ — | $ 297 |

The weighted average assumptions used to determine benefit obligations were as follows:

| | 2020 | 2019 |
|---|---|---|
| Discount rate | 2.08 % | 2.66 % |
| Rate of salary increase | 4.83 % | 4.50 % |
| Rate of price inflation | 1.90 % | 1.80 % |

The weighted average assumptions used to determine net benefit cost were as follows:

| | 2020 | 2019 |
|---|---|---|
| Discount rate | 2.66 % | 4.03 % |
| Rate of salary increase | 4.50 % | 4.50 % |
| Rate of price inflation | 1.80 % | 1.80 % |

The following table reflects the sensitivity of the benefit obligations of our other post-employment benefit plans to changes in the discount rate:

| Millions of U.S. Dollars | Effects on benefit obligations in 2020 | Change % | Effects on benefit obligations in 2019 | Change % |
|---|---|---|---|---|
| Present value of obligations | $ 297 | | $ 330 | |
| Discount rate increases by 50 basis points | (21) | (7.1)% | (22) | (6.7)% |
| Discount rate decreases by 50 basis points | 25 | 8.3 % | 26 | 7.9 % |

Reasonably foreseeable changes to the other principal assumptions would not result in a material impact to the benefit obligations and the benefit costs of our other post-employment benefit plans.

The weighted average duration of the defined benefit obligation for the defined benefit pension plans and other post-employment benefit plans is 14.3 years and 15.3 years, respectively.

As of 31 December 2020, future expected benefit payments by our defined benefit pension plans and other post-employment benefit plans which reflect expected future service, as appropriate, are as follows:

| Millions of U.S. Dollars | 2021 | 2022 | 2023 | 2024 | 2025 | Thereafter | Total |
|---|---|---|---|---|---|---|---|
| Defined benefit pension plans | $ 218 | $ 218 | $ 218 | $ 215 | $ 211 | $ 1,015 | $ 2,095 |
| Other post-employment benefit plans | 15 | 15 | 15 | 15 | 15 | 74 | 149 |
| Total | $ 233 | $ 233 | $ 233 | $ 230 | $ 226 | $ 1,089 | $ 2,244 |

## 29 Trade and Other Payables

| Millions of U.S. Dollars | 31 December 2020 | 31 December 2019 |
|---|---|---|
| Trade payables | $ 2,557 | $ 2,516 |
| Amounts due to related parties | 591 | 412 |
| Social securities and other taxes | 38 | 27 |
| Accrued expenses | 1,235 | 1,154 |
| | $ 4,421 | $ 4,109 |

## 30 Provisions

| Millions of U.S. Dollars | Asset Retirement Obligation | Environmental | Restructuring | Other | Total |
|---|---|---|---|---|---|
| **Balance at 1 January 2019** | $ 71 | $ 90 | $ 20 | $ 30 | $ 211 |
| Charged/(credited) to the income statement: | | | | | |
| Additional provisions | — | 44 | 30 | 5 | 79 |
| Unused amounts reversed | — | — | — | — | — |
| Unwinding of discount | — | — | — | — | — |
| Changes in estimate | 7 | 15 | — | 2 | 24 |
| Used during the period | — | (16) | (17) | (8) | (41) |
| Exchange differences | (1) | (1) | — | — | (2) |
| Other | — | — | — | — | — |
| **At 31 December 2019** | $ 77 | $ 132 | $ 33 | $ 29 | $ 271 |
| **Of which:** | | | | | |
| Non-current | $ 62 | $ 115 | $ 5 | $ 19 | $ 201 |
| Current | 15 | 17 | 28 | 10 | 70 |
| **Closing balance** | $ 77 | $ 132 | $ 33 | $ 29 | $ 271 |
| **Balance at 1 January 2020** | $ 77 | $ 132 | $ 33 | $ 29 | $ 271 |
| Charged/(credited) to the income statement: | | | | | |
| Additional provisions | — | — | — | 2 | 2 |
| Unused amounts reversed | — | — | — | — | — |
| Unwinding of discount | — | — | — | — | — |
| Changes in estimate | (1) | 3 | 13 | 6 | 21 |
| Used during the period | (6) | (7) | (26) | (2) | (41) |
| Exchange differences | 6 | 5 | — | 5 | 16 |
| Other | — | — | — | — | — |
| **At 31 December 2020** | $ 76 | $ 133 | $ 20 | $ 40 | $ 269 |
| **Of which:** | | | | | |
| Non-current | $ 69 | $ 117 | $ 3 | $ 31 | $ 220 |
| Current | 7 | 16 | 17 | 9 | 49 |
| **Closing balance** | $ 76 | $ 133 | $ 20 | $ 40 | $ 269 |

*Asset retirement obligations*—At some locations, we are contractually obligated to decommission our plants upon site exit. We have provided for the net present value of the estimated costs. Typically such costs are incurred within three years of a plant's closure.

*Environmental Remediation*—Our accrued liability for future environmental remediation costs at current and former plant sites and other remediation sites totaled $133 million and $132 million as of 31 December 2020 and 2019, respectively. At 31 December 2020, the accrued liabilities for individual sites range from less than $1 million to $17 million . The remediation expenditures are expected to occur over a number of years, and not concentrated in any single year. In our opinion, it is reasonably possible that losses in excess of the liabilities recorded may have been incurred. However, we cannot estimate any amount or range of such possible additional losses. New information about sites, new technology or future developments such as involvement in investigations by regulatory agencies, could require us to reassess our potential exposure related to environmental matters.

## 31 Contingencies and Commitments

### Contingencies-Litigation and Other Matters

*Indemnification*—We are parties to various indemnification arrangements, including arrangements entered into in connection with acquisitions, divestitures and the formation and dissolution of joint ventures. Pursuant to these arrangements, we provide indemnification to and/or receive indemnification from other parties in connection with liabilities that may arise in connection with the transactions and in connection with activities prior to completion of the transactions. These indemnification arrangements typically include provisions pertaining to third party claims relating to environmental and tax matters and various types of litigation. As of 31 December 2020, we had not accrued any significant amounts for our indemnification obligations, and we are not aware of other circumstances that would likely lead to significant future indemnification obligations. We cannot determine with certainty the potential amount of future payments under the indemnification arrangements until events arise that would trigger a liability under the arrangements.

As part of our technology licensing contracts, we give indemnifications to our licensees for liabilities arising from possible patent infringement claims with respect to certain proprietary licensed technologies. Such indemnifications have a stated maximum amount and generally cover a period of 5 to 10 years.

*Legal Proceedings*—We are subject to various lawsuits and claims, including but not limited to, matters involving contract disputes, environmental damages, personal injury and property damage. We vigorously defend ourselves and prosecute these matters as appropriate.

Our legal organization applies its knowledge, experience and professional judgment to the specific characteristics of our cases, employing a litigation management process to manage and monitor legal proceedings in which we are a party. Our process facilitates the early evaluation and quantification of potential exposures in individual cases. This process also enables us to track those cases that have been scheduled for trial, mediation or other resolution. We regularly assess the adequacy of legal accruals based on our professional judgment, experience and the information available regarding our cases.

Based on a consideration of all relevant facts and circumstances, we do not believe the ultimate outcome of any currently pending lawsuit against us will have a material adverse effect upon our operations, financial condition or Consolidated Financial Statements.

### Commitments

*Purchase commitments*—We have various purchase commitments for materials, supplies and services incidental to the ordinary conduct of business, generally for quantities required for our businesses and at prevailing market prices. These commitments are designed to assure sources of supply and are not expected to be in excess of normal requirements. As of 31 December 2020, we had capital expenditure commitments, which we incurred in our normal course of business, including commitments of approximately $305 million related to building our new PO/TBA plant in Houston, Texas.

The aggregate future estimated purchase obligations are as follows:

| | As of 31 December 2020 | |
|---|---|---|
| | Purchase Obligation | |
| **Millions of U.S. Dollars** | **Joint Ventures** | **Consolidated Entities** |
| No later than 1 year | $ 410 | $ 6,545 |
| Later than 1 year and no later than 5 years | 1,862 | 8,202 |
| Later than 5 years | 598 | 12,351 |
| Total | $ 2,870 | $ 27,098 |

| | As of 31 December 2019 | | | |
|---|---|---|---|---|
| | Purchase Obligation | | | |
| Millions of U.S. Dollars | Joint Ventures | | Consolidated Entities | |
| No later than 1 year | $ | 481 | $ | 8,431 |
| Later than 1 year and no later than 5 years | | 1,983 | | 15,010 |
| Later than 5 years | | 501 | | 12,857 |
| Total | $ | 2,965 | $ | 36,298 |

*Financial Assurance Instruments*—We have obtained letters of credit, performance and surety bonds and have issued financial and performance guarantees to support trade payables, potential liabilities and other obligations. Considering the frequency of claims made against the financial instruments we use to support our obligations, and the magnitude of those financial instruments in light of our current financial position, management does not expect that any claims against or draws on these instruments would have a material adverse effect on our Consolidated Financial Statements. We have not experienced any unmanageable difficulty in obtaining the required financial assurance instruments for our current operations.

## 32 Related Parties

The Company has related party transactions with its associates and joint ventures. These related party transactions include the sales and purchases of goods in the normal course of business as well as certain financing arrangements and are at arm's length basis. In addition, under contractual arrangements with certain of the Company's equity investees, we receive certain services, utilities and materials at some of our manufacturing sites and we provide certain services to our associates and joint ventures.

We have guaranteed $40 million of the indebtedness of two of our joint ventures as of 31 December 2020.

The related party transactions are summarized as follows:

| Millions of U.S. Dollars | 2020 | | 2019 | |
|---|---|---|---|---|
| **The Company billed related parties for:** | | | | |
| Sale of products - | | | | |
| Joint Ventures | $ | 9 | $ | 11 |
| Associates | | 65 | | 43 |
| Shared services agreements - | | | | |
| Joint Ventures | | 1 | | — |
| Associates | | 1 | | 3 |
| **Related parties billed the Company for:** | | | | |
| Sale of products - | | | | |
| Joint Ventures | $ | 388 | $ | 858 |
| Associates | | 534 | | 680 |
| Shared services agreements - | | | | |
| Associates | | 74 | | 71 |
| **Year-end balances with related parties:** | | | | |
| Receivable from Joint Ventures | $ | 9 | $ | 4 |
| Loans to Associate and Joint Ventures | | 11 | | 7 |
| Loans from Associates and Joint Ventures | | 2 | | 1 |
| Payables to Joint Ventures | | 96 | | 156 |
| Payables to Associates | | 45 | | 57 |

## 33 Segment and Related Information

Our operations are managed by senior executives who report to our Chief Executive Officer, the chief operating decision maker. Discrete financial information is available for each of the segments, and our Chief Executive Officer uses the operating results of each of the operating segments for performance evaluation and resource allocation. The activities of each of our segments from which they earn revenues and incur expenses are described below:

- *Olefins and Polyolefins—Americas* ("O&P—Americas"). Our O&P–Americas segment produces and markets olefins and co-products, polyethylene and polypropylene.
- *Olefins and Polyolefins—Europe, Asia, International* ("O&P—EAI"). Our O&P—EAI segment produces and markets olefins and co-products, polyethylene, and polypropylene.
- *Intermediates and Derivatives* ("I&D"). Our I&D segment produces and markets propylene oxide and its derivatives; oxyfuels and related products; and intermediate chemicals such as styrene monomer, acetyls, ethylene oxide and ethylene glycol.
- *Advanced Polymer Solutions* ("APS"). Our APS segment produces and markets compounding and solutions, such as polypropylene compounds, engineered plastics, masterbatches, engineered composites, colors and powders, and advanced polymers, which includes *Catalloy* and polybutene-1.
- *Refining*. Our Refining segment refines heavy, high-sulfur crude oil and other crude oils of varied types and sources available on the U.S. Gulf Coast into refined products, including gasoline and distillates.
- *Technology*. Our Technology segment develops and licenses chemical and polyolefin process technologies and manufactures and sells polyolefin catalysts.

Our chief operating decision maker uses EBITDA as the primary measure for reviewing profitability of our segments, and therefore, we have presented EBITDA for all segments. We define EBITDA as earnings before interest, income taxes, and depreciation and amortization.

"Other" includes intersegment eliminations and items that are not directly related or allocated to business operations, such as foreign exchange gains or losses and components of pension and other postretirement benefit costs other than service costs. Sales between segments are made primarily at prices approximating prevailing market prices.

Accounting policies for internal reporting are based on U.S. GAAP and are materially similar to those described in Summary of Significant Accounting Policies (See Note 2) except for

*Inventories*-The Group measures its inventories in accordance with the Last In, First Out ("LIFO") method, which is permitted under U.S. GAAP. According to IAS 2, *Inventories,* the LIFO method is prohibited under IFRS. Therefore, the inventories are measured using the First In, First Out ("FIFO") method for the Consolidated Financial Statements. This inventory measurement difference between the reportable segments and the consolidated information results in different costs of sale and net profit for the period.

*Employee Benefits*-Under U.S. GAAP, ASC Topic 715, *Compensation-Retirement Benefits* ("ASC 715") requires the interest expense component of pension expense to be calculated as the product of the defined benefit liability and the discount rate. Such interest expense is netted against interest income resulting from the expected rate of return on plan assets applied to the market value of assets. The expected rate of return on plan assets is a longer term rate, and is expected to change less frequently that the discount rate, reflecting long-term market expectations, rather than current fluctuations in market conditions. Under IFRS, in accordance with *IAS 19, Employee Benefits,* the Company recognizes a net interest expense (income), which is the product of the net defined benefit liability (asset) and the discount rate, as a component of its pension expense on defined benefit plans.

Under ASC 715, past service cost and actual return on plan assets in excess of expected return are initially recorded in other comprehensive income and subsequently recognized in earnings over the average remaining service period of the participants to the extent it exceeds the "corridor". The corridor is defined as the greater of 10 percent of the accumulated projected benefit obligation or the fair value of the plan assets as of the beginning of the year. Under IFRS, the Company recognizes immediately past service cost and net interest expense (income) as discussed above in the Consolidated Statement of Income. Actual return of plan assets in excess of recognized interest income is permanently recorded in other comprehensive income.

*Other*-Amongst others, there are minor differences between IFRS and U.S. GAAP with respect to IFRS 11, *Joint Arrangements* as well as, leases, discontinued operations, the subsequent measurement of asset retirement obligations, capitalization of development costs related to Research and development and amortization of debt issuance costs. If material, these differences are separately disclosed in the Consolidated Financial Statements reconciliation.

Summarized financial information concerning reportable segments is shown in the following table for the periods presented:

| | Year Ended December 31, 2020 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Millions of dollars** | **O&P – Americas** | **O&P – EAI** | **I&D** | **APS** | **Refining** | **Technology** | **Other** | **Total** |
| Sales and other operating revenues: | | | | | | | | |
| Customers | $ 5,032 | $ 7,809 | $ 6,144 | $ 3,903 | $ 4,346 | $ 519 | $ — | $ 27,753 |
| Intersegment | 2,243 | 558 | 125 | 10 | 381 | 140 | (3,457) | — |
| | 7,275 | 8,367 | 6,269 | 3,913 | 4,727 | 659 | (3,457) | 27,753 |
| Depreciation and amortization expense | 525 | 214 | 305 | 152 | 152 | 37 | — | 1,385 |
| Other income, net | 70 | 14 | 1 | 1 | 1 | — | (2) | 85 |
| Income (loss) from equity investments | 45 | 186 | 26 | (1) | — | — | — | 256 |
| Capital expenditures | 543 | 166 | 880 | 63 | 63 | 111 | 121 | 1,947 |
| EBITDA | 1,810 | 826 | 833 | 378 | (871) | 324 | (15) | 3,285 |

| | Year Ended December 31, 2019 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Millions of dollars** | **O&P – Americas** | **O&P – EAI** | **I&D** | **APS** | **Refining** | **Technology** | **Other** | **Total** |
| Sales and other operating revenues: | | | | | | | | |
| Customers | $ 5,311 | $ 8,764 | $ 7,642 | $ 4,846 | $ 7,599 | $ 565 | $ — | $ 34,727 |
| Intersegment | 3,124 | 740 | 192 | 4 | 652 | 98 | (4,810) | — |
| | 8,435 | 9,504 | 7,834 | 4,850 | 8,251 | 663 | (4,810) | 34,727 |
| Depreciation and amortization expense | 470 | 208 | 295 | 133 | 169 | 37 | — | 1,312 |
| Other income, net | 9 | 9 | 6 | 1 | 6 | — | 8 | 39 |
| Income from equity investments | 46 | 172 | 7 | — | — | — | — | 225 |
| Capital expenditures | 1,099 | 213 | 1,064 | 59 | 149 | 94 | 16 | 2,694 |
| EBITDA | 2,302 | 1,062 | 1,557 | 424 | (65) | 411 | 1 | 5,692 |

The difference between sales reported and the IFRS income statement and the difference between capital expenditures reported and the IFRS statement of cash flows are caused by the difference in accounting for joint arrangements under IFRS and U.S. GAAP as explained in this note.

Reconciliation of EBITDA for reportable segments to the Company's Consolidated Statement of Income is summarized in the following table:

| Millions of U.S. Dollars | Note | 31 December 2020 | 2019 |
|---|---|---|---|
| EBITDA: | | | |
| Total segment EBITDA | | $ 3,300 | $ 5,691 |
| Other EBITDA | | (15) | 1 |
| | | 3,285 | 5,692 |
| **Less:** | | | |
| Depreciation and amortization expense | | (1,385) | (1,312) |
| Other income (expense), net | | (85) | (39) |
| Income from equity investments | | (256) | (225) |
| **U.S. GAAP operating income** | | 1,559 | 4,116 |
| **Measurement difference:** | | | |
| Inventory valuation | | (200) | (270) |
| **Classification difference:** | | | |
| Other income (expense), net | 10 | (74) | (26) |
| Joint Arrangements | | 168 | 107 |
| **Other** | | 3 | 35 |
| **Total Company's operating profit** | | $ 1,456 | $ 3,962 |

Long-lived assets include Property, plant and equipment, Right-of-use assets, Intangible assets excluding goodwill and Investments in associates and joint ventures. The following long-lived assets data is based upon the location of the assets:

| Millions of U.S. Dollars | Long-Lived Assets 2020 | 2019 |
|---|---|---|
| United States | $ 15,184 | $ 13,276 |
| Germany | 1,578 | 1,537 |
| The Netherlands | 1,079 | 934 |
| China | 1,221 | 144 |
| France | 630 | 578 |
| Italy | 369 | 357 |
| Mexico | 260 | 251 |
| Other | 1,583 | 1,570 |
| Total | $ 21,904 | $ 18,647 |

## 34 Subsequent Events

On 26 February 2021, the Company announced a dividend of $1.05 per share, which was paid on 15 March 2021 to shareholders on record 8 March 2021, with an ex-dividend date of 5 March 2021.

On 25 January 2021 we signed an agreement with China Petroleum & Chemical Corporation to form Ningbo ZRCC LyondellBasell New Material Company Limited, a 50/50 joint venture. The joint venture will construct a new PO/SM unit in Zhenhai Ningbo, China. The unit will use LyondellBasell's leading PO/SM technology and will have the capacity to produce 275 thousand tons of PO and 600 thousand tons of SM per year. Products produced by the joint venture will be marketed equally by both partners, expanding our respective participation in the Chinese market. The formation of the joint venture is subject to approvals by relevant government authorities, including antitrust review by the State Administration for Market Regulation. We expect to make an equity contribution of approximately $100 million to the joint venture during the first half of 2021 and startup is expected at the end of 2021. The joint venture will be included within our I&D segment.

In January 2021, we repaid an additional $500 million outstanding under our Term Loan due 2022 .

**Appendix - A**

| Entity Name | Jurisdiction of Formation |
|---|---|
| ***Subsidiaries*** | |
| A. Schulman AG | Switzerland |
| A. Schulman Belgium BV | Belgium |
| A. Schulman Canada Ltd. | Ontario |
| A. Schulman Castellon S.L. | Spain |
| A. Schulman de Mexico S.A. de C.V. | Mexico |
| A. Schulman del Peru S.A.C. | Peru |
| A. Schulman Europe GmbH & Co. KG | Germany |
| A. Schulman Europe International B.V. | Netherlands |
| A. Schulman Europe Verwaltungs GmbH | Germany |
| A. Schulman Gainsborough Ltd | United Kingdom |
| A. Schulman GmbH | Germany |
| A. Schulman GmbH (Austrian Branch) | Austria |
| A. Schulman Holdings (France) S.A.S. | France |
| A. Schulman Holdings S.à r.l. | Luxembourg |
| A. Schulman Inc. Limited | United Kingdom |
| A. Schulman International Inc. | Delaware |
| A. Schulman International Services BV | Belgium |
| A. Schulman Magyarország Kereskedelmi Korlátolt Felelősségű Társaság | Hungary |
| A. Schulman Nordic AB | Sweden |
| A. Schulman Plásticos do Brasil Ltda. | Brazil |
| A. Schulman Plastics (Branch) | United Arab Emirates |
| A. Schulman Plastics (Suzhou) Ltd. | China |
| A. Schulman Plastics BV | Belgium |
| A. Schulman Plastics India Private Limited | India |
| A. Schulman Plastics S.r.l. | Italy |
| A. Schulman Plastics SAS | France |
| A. Schulman Plastik Sanayi ve Ticaret Anonim Sirketi | Turkey |
| A. Schulman Polska Sp. z o.o. | Poland |
| A. Schulman Real Estate GmbH & Co. KG | Germany |
| A. Schulman S.à r.l. | Luxembourg |
| A. Schulman S.A.S. | France |
| A. Schulman 's-Gravendeel B.V. | Netherlands |
| A. Schulman Thermoplastic Compounds Limited | United Kingdom |
| A.Schulman Poznan Sp. Z o.o. | Poland |
| Al Waha Petrochemical Company | Saudi Arabia |
| AS Mex Hold S.A. de C.V. | Mexico |
| AS Worldwide LLC & Cie, S.C.S. | Luxembourg |
| AS Worldwide, LLC | Delaware |
| ASI Employment S.A. de C.V. | Mexico |
| ASI Investments Holding Co. | Delaware |
| Basell (Thailand) Holdings B.V. | Netherlands |
| Basell Advanced Polyolefins (Dalian) Co. Ltd. | China |
| Basell Advanced Polyolefins (Suzhou) Co. Ltd. | China |
| Basell Advanced Polyolefins (Thailand) Company Ltd. | Thailand |
| Basell Arabie Investissements SAS | France |
| Basell Asia Pacific Limited | Hong Kong |
| Basell Bayreuth Chemie GmbH | Germany |
| Basell Benelux B.V. | Netherlands |
| Basell Chemie Köln GmbH | Germany |
| Basell Germany Holdings GmbH | Germany |
| Basell Holdings Middle East GmbH | Germany |
| Basell Ibérica Poliolefinas Holdings S.L. | Spain |
| Basell International Holdings B.V. | Netherlands |
| Basell International Trading FZE | United Arab Emirates |
| Basell Italia S.r.l | Italy |

| | |
|---|---|
| Basell Mexico, S. de R.L. de C.V. | Mexico |
| Basell Moyen Orient Investissements SAS | France |
| Basell North America Inc. | Delaware |
| Basell Poliolefinas Comercial Espagnola S.L. | Spain |
| Basell Poliolefinas Iberica S.L. | Spain |
| Basell Poliolefinas Ltda. | Brazil |
| Basell Poliolefinas, S. de R.L. de C.V. | Mexico |
| Basell Poliolefine Italia S.r.l. | Italy |
| Basell Polyolefin Istanbul Ticaret Limited Sirketi | Turkey |
| Basell Polyolefine GmbH | Germany |
| Basell Polyolefines France S.A.S. | France |
| Basell Polyolefins India Private Limited | India |
| Basell Polyolefins Korea Ltd. | Korea |
| Basell Polyolefins UK Limited | United Kingdom |
| Basell Sales & Marketing Company B.V. | Netherlands |
| Basell Sales & Marketing Company B.V. | France |
| Basell Sales & Marketing Company B.V. | Italy |
| Basell Sales & Marketing Company B.V. | Netherlands |
| Basell Sales & Marketing Company B.V. | United Kingdom |
| Basell Sales & Marketing Company B.V. Magyarországi Fióktelepe | Hungary |
| Basell Sales & Marketing Company B.V. Sucursal en España | Spain |
| Basell Sales & Marketing Company B.V. Svensk Filial | Sweden |
| Basell Sales & Marketing Company B.V. Zweigniederlassung Österreich | Austria |
| Basell Sales & Marketing Company B.V., organizacná zložka | Slovakia |
| Basell Sales & Marketing Company BV Sp. z o.o. oddzial w Polsce | Poland |
| Basell Slovakia s.r.o. | Slovakia |
| Basell Trading (Shanghai) Co. Ltd. | Shanghai |
| Basell UK Holdings Limited | United Kingdom |
| Basell UK Ltd. | United Kingdom |
| BMC Deutschland GmbH | Germany |
| Bulk Molding Compounds do Brasil Industria de Plásticos Reforçados Ltda. | Brazil |
| Bulk Molding Compounds Mexico, S. de R.L. de C.V. | Mexico |
| Bulk Molding Compounds, Inc. | Illinois |
| Citadel Brazil Holdings LLC | Delaware |
| Citadel Intermediate Holdings, LLC | Delaware |
| Citadel Plastics Holdings Coöperatief U.A. | Netherlands |
| Citadel Plastics Holdings, Inc. | Delaware |
| Citadel Plastics Mexico Holdings, LLC | Delaware |
| Citadel Plastics Netherlands Holdings, LLC | Delaware |
| Compagnie de Distribution des Hydrocarbures SAS | France |
| Compagnie Petrochimique de Berre SAS | France |
| Elian S.A.S. | France |
| Equistar Bayport, LLC | Delaware |
| Equistar Chemicals, LP | Delaware |
| Equistar GP, LLC | Delaware |
| Equistar LP, LLC | Delaware |
| Equistar Mont Belvieu Corporation | Delaware |
| GuangZhou Basell Advanced Polyolefins Co., Ltd. | China |
| Hadlock Plastics, LLC | Delaware |
| HGGC Citadel Plastics Holdings, Inc. | Delaware |
| HGGC Citadel Plastics Intermediate Holdings, Inc. | Delaware |
| Houston Refining LP | Delaware |
| HPC Holdings, LLC | Delaware |
| ICO Holdings New Zealand Limited | New Zealand |
| ICO Petrochemical Cayman Islands | Cayman |
| ICO Polymers Cayman Islands | Cayman |
| Inmobiliaria Satchmo, S. de R.L. de C.V. | Mexico |
| Innovación Y Desarrollo en Materiales Avanzados, A.C. | Mexico |
| J.R. Courtenay (N.Z.) Limited | New Zealand |

| | |
|---|---|
| Limited Liability Company "LyondellBasell Polyolefins" | Russia |
| Limited Liability Company A. Schulman | Russia |
| LYB (Barbados) SRL | Barbados |
| LYB Advanced Polymer Solutions Ireland Limited | Ireland |
| LYB Americas Finance Company LLC | Delaware |
| LYB Brazil Holdings LLC | USA (Delaware) |
| LYB Equistar Holdings LLC | Delaware |
| LYB Export Holdings Limited | United Kingdom |
| LYB Exports Inc. | Delaware |
| LYB Finance Company B.V. | Netherlands |
| LYB International Finance B.V. | Netherlands |
| LYB International Finance II B.V. | Netherlands |
| LYB International Finance III, LLC | USA (Delaware) |
| LYB Ireland Limited | Ireland |
| LYB Luxembourg S.à r.l. | Luxembourg |
| LYB Matrixx Holdings Inc. | USA (Delaware) |
| LYB Premix Holding LLC | USA (Delaware) |
| LYB Premix LLC | USA (Ohio) |
| LYB Receivables LLC | Delaware |
| LYB Trading Company B.V. | Netherlands |
| LYB Treasury Services Ltd. | United Kingdom |
| Lyondell Asia Holdings Limited | Hong Kong |
| Lyondell Chemical Company | Delaware |
| Lyondell Chemical Europe, Inc. | Delaware |
| Lyondell Chemical Overseas Services, Inc. | Delaware |
| Lyondell Chemical Products Europe LLC | Delaware |
| Lyondell Chemical Properties, L.P. | Delaware |
| Lyondell Chemical Technology 1 Inc. | Delaware |
| Lyondell Chemical Technology Management, Inc. | Delaware |
| Lyondell Chemical Technology, L.P. | Delaware |
| Lyondell Chemie (PO-11) B.V. | Netherlands |
| Lyondell Chemie (POSM) B.V. | Netherlands |
| Lyondell Chemie Nederland B.V. | Netherlands |
| Lyondell Chimie France SAS | France |
| Lyondell China Holdings Limited | Hong Kong |
| Lyondell Greater China Holdings Limited | Hong Kong |
| Lyondell Greater China Trading Limited | China |
| Lyondell Japan, Inc. | Japan |
| Lyondell PO-11 C.V. | Netherlands |
| Lyondell POJVGP, LLC | Delaware |
| Lyondell POJVLP, LLC | Delaware |
| Lyondell POTechGP, Inc. | Delaware |
| Lyondell POTechLP, Inc. | Delaware |
| Lyondell Refining Company LLC | Delaware |
| Lyondell Refining I LLC | Delaware |
| Lyondell South Asia Pte Ltd | Singapore |
| LyondellBasell Acetyls Holdco, LLC | Delaware |
| LyondellBasell Acetyls, LLC | Delaware |
| LyondellBasell Advanced Polymer (Dongguan) Co. Ltd. | China |
| LyondellBasell Advanced Polymers (Malaysia) Sdn. Bhd. | Malaysia |
| LyondellBasell Advanced Polymers Inc. | USA (Delaware) |
| LyondellBasell Advanced Polyolefins (Malaysia) Sdn. Bhd. | Malaysia |
| LyondellBasell Advanced Polyolefins Mexico, S.A. de C.V. | Mexico |
| LyondellBasell Advanced Polyolefins Pty Ltd | Australia |
| LyondellBasell Australia (Holdings) Pty Ltd | Australia |
| LyondellBasell Australia Pty Ltd | Australia |
| LyondellBasell Brasil Ltda. | Brazil |
| LyondellBasell Canada Inc. | Canada |
| LyondellBasell Central Europe Kft. | Hungary |

| | |
|---|---|
| LyondellBasell China Holdings B.V. | Netherlands |
| LyondellBasell Circular Economy B.V. | Netherlands |
| LyondellBasell Egypt LLC | Egypt |
| LyondellBasell Finance Company | Delaware |
| LyondellBasell Holdings France SAS | France |
| LyondellBasell Hungary Kft | Hungary |
| LyondellBasell Industries Holdings B.V. | Netherlands |
| LyondellBasell Industries N.V. | Netherlands |
| LyondellBasell Investment LLC | Delaware |
| LyondellBasell LC Offtake LLC | USA (Delaware) |
| LyondellBasell Malaysia Sdn. Bhd. | Malaysia |
| LyondellBasell Polyolefin (Shanghai) Co., Ltd. | China |
| LyondellBasell Services France S.A.S. | France |
| LyondellBasell Subholdings B.V. | Netherlands |
| LyondellBasell Taiwan Co., Ltd. | Taiwan |
| LyondellBasell Transportation Company, LLC | USA (Delaware) |
| OE Insurance Ltd | Bermuda |
| PO JV, LP | Delaware |
| PO Offtake, LP | Delaware |
| PT LyondellBasell Advanced Polyolefins | Indonesia |
| PT LyondellBasell Advanced Polyolefins Commercial | Indonesia |
| Quantum Composites, Inc. | Ohio |
| Surplast S.A. | Argentina |
| Technology JV, LP | Delaware |
| tetra-DUR Kunststoff-Produktion GmbH | Germany |
| TRV Thermische Rückstandsverwertung GmbH & Co. KG | Germany |
| TRV Thermische Rückstandsverwertung Verwaltungs-GmbH | Germany |
| ULSAN PP Co., Ltd. | Korea |
| YNCORIS GmbH & Co. KG | Germany |

***Investments in Joint Arrangements***

| | |
|---|---|
| Basell Orlen Polyolefins Sp. Z.o.o. | Poland |
| Basell Orlen Polyolefins Sprzedaz Sp. Z.o.o. | Poland |
| BKV Beteiligungs- und Kunststoffverwertungs-gesellschaft mbH | Germany |
| BMC TetraDURTurkey Plastik Hammadde Kompozit Üretim Sanayi ve Ticaret Limted Şirketi | Turkey |
| Bora LyondellBasell Petrochemical Co., Ltd. | China |
| Brindisi Servizi Generali S.c.a.r.l. | Italy |
| EPS Ethylen-Pipeline-Süd Geschäftsführungs GmbH | Germany |
| EPS Ethylen-Pipeline-Süd GmbH & Co. KG | Germany |
| HMC Polymers Company Limited | Thailand |
| I.F.M. S.c.a.r.l. | Italy |
| Indelpro, S.A. de C.V. | Mexico |
| Infraserv GmbH & Co. Höchst KG | Germany |
| Louisiana Integrated PolyEthylene JV LLC | USA (Delaware) |
| LyondellBasell Covestro Manufacturing Maasvlakte V.O.F. | Netherlands |
| Natpet Schulman Specialty Plastic Compounds | Kingdom of Saudi Arabia |
| Ningbo ZRCC Lyondell Chemical Co. Ltd. | China |
| Ningbo ZRCC Lyondell Chemical Marketing Co. Ltd. | China |
| Oil Casualty Insurance, Ltd. | Bermuda |
| Oil Insurance Limited | Bermuda |
| PD Glycol LP | Texas |
| Poly Pacific Polymers Sdn. Bhd. | Malaysia |
| Poly Pacific Pty. Ltd. | Australia |
| PolyMirae Co., Ltd. | Korea, Republic Of |
| PTT Chemical PCL | Thailand |
| QCP B.V. | Netherlands |
| QCP Holding B.V. | Netherlands |
| QCP IP B.V. | Netherlands |
| Rayong Olefins Co., Ltd. | Thailand |

| | |
|---|---|
| RIGK GmbH Gesellschaft zur Rückführung industrieller and gewerblicher Kunstoffverpackungen mbH | Germany |
| San Jacinto Rail Limited | Delaware |
| Saudi Ethylene & Polyethylene Company | Saudi Arabia |
| Saudi Polyolefins Company | Kingdom of Saudi Arabia |
| SCG ICO Polymers Company Limited | Thailand |
| Sociedad Espanola De Materiales Plasticos, Semap, S.A. | Spain |
| Société des Stockages Petroliers du Rhône SA | France |

# Corporate Financial Statements

## CORPORATE STATEMENT OF INCOME

| Millions of U.S. Dollars | Year Ended 31 December 2020 | 2019 |
|---|---|---|
| Income from Group companies after tax | $ 1,430 | $ 2,882 |
| Other income (expense), net of tax | 290 | 220 |
| Profit attributable to the equity holders | $ 1,720 | $ 3,102 |

## CORPORATE STATEMENT OF FINANCIAL POSITION

**Before appropriation of profit**

| **Millions of U.S. Dollars** | **Note** | **31 December 2020** | **31 December 2019** |
|---|---|---|---|
| *Non-current assets* | | | |
| Goodwill | 2 | $ 327 | $ 321 |
| Investments in Group companies | 2 | 9,003 | 9,234 |
| Long-term loans to Group companies | 6 | 6,984 | 5,984 |
| Deferred tax assets | | 3 | 2 |
| Other Assets | | 4 | 2 |
| Total non-current assets | | 16,321 | 15,543 |
| *Current assets* | | | |
| Receivables from Group companies | | 41 | 125 |
| Prepaid expense and other current assets | | 4 | 1 |
| Short-term loans to Group companies | 6 | — | 4,000 |
| Cash and cash equivalents | 3 | 138 | 56 |
| Total current assets | | 183 | 4,182 |
| **Total assets** | | **$ 16,504** | **$ 19,725** |
| *Equity* | 4 | | |
| Share capital | | $ 19 | $ 19 |
| Share premium | | 35 | 6 |
| Legal reserves | | (1,282) | (1,146) |
| Other reserves | | 7,102 | 5,466 |
| Profit for the year | | 1,720 | 3,102 |
| Total equity attributable to equity holders | | 7,594 | 7,447 |
| *Non-current liabilities* | | | |
| Long-term debt | 5 | 1,971 | 2,966 |
| Deferred income | 7 | 5,572 | 5,572 |
| Other long-term liabilities | | 36 | 2 |
| Total non-current liabilities | | 7,579 | 8,540 |
| *Current liabilities* | | | |
| Bank overdraft | 3 | 1 | 2,432 |
| Short-term loans from Group companies | 6 | 1,284 | 1,226 |
| Current Maturities of long-term debt | 5 | — | — |
| Other liabilities | | 46 | 80 |
| Total current liabilities | | 1,331 | 3,738 |
| **Total equity and liabilities** | | **$ 16,504** | **$ 19,725** |

## Notes to the Corporate Financial Statements

### 1 General

LyondellBasell Industries N.V. (the "Company" or "LyondellBasell N.V."), together with its consolidated subsidiaries (collectively, the "Group") applies the option provided in Section 2:362 (8) of the Dutch Civil Code for the principles applicable to the recognition and measurement of assets and liabilities and the determination of results for its Corporate Financial Statements. Accordingly, the principles for recognition and measurement of assets and liabilities and determination of results (hereinafter referred to as "accounting policies") of the Company's Corporate Statement of Financial Position are the same as those applied for the Consolidated Financial Statements under International Financial Reporting Standards ("IFRS"), as adopted by the European Union, for the periods ended 31 December 2020 and 2019, except as noted below:

- Investments in subsidiaries and other companies in which the Company has control are measured at net asset value, which is based on the net book value of assets, provisions and liabilities, in accordance with the accounting policies applied in the Consolidated Financial Statements.
- Goodwill presented in the Corporate Statement of Financial Position reflects the goodwill of subsidiaries directly acquired by the Company and is measured in accordance with the accounting policies of the Consolidated Financial Statements. Goodwill of subsidiaries indirectly owned (via intermediate subsidiaries) is recognized as part of the net asset value of such intermediate subsidiary.

At 31 December 2020 and 2019, the Company had sixteen and respectively fourteen full-time employees all located outside of The Netherlands.

### 2 Goodwill and Investments

| Millions of U.S. Dollars | Goodwill | Investments |
|---|---|---|
| **Balance at 1 January 2019** | $ 322 | $ 10,909 |
| Income from investments, net of tax | — | 2,021 |
| Equity settled transactions | — | 74 |
| Dividends received | — | (3,375) |
| Additions to other reserves | (1) | (395) |
| **Balance at 31 December 2019** | $ 321 | $ 9,234 |
| **Balance at 1 January 2020** | $ 321 | $ 9,234 |
| Income from investments, net of tax | — | 1,430 |
| Equity settled transactions | — | 74 |
| Dividends received | — | (1,487) |
| Additions to other reserves | 6 | (248) |
| **Balance at 31 December 2020** | $ 327 | $ 9,003 |

*Equity settled transactions*- Equity settled transactions represent share-based compensation granted to directors and employees.

*Dividends received*—During 2020, the Company received the following dividends from direct subsidiaries:

- $830 million from LyondellBasell Subholdings B.V.;
- $343 million from LYB Export Holdings Limited; and
- $314 million from LyondellBaselll Hungary Kft.

*Additions to other reserves*— This mainly represents movements for currency translation differences and remeasurements of post-employment benefits obligations, which are non-distributable.

## 3 Cash and Cash Equivalents

The Company's cash and cash equivalents are held by its in-house banking unit, LYB Finance Company B.V. The interest rate on the account with LYB Finance Company B.V. is subject to a floating interest rate, based on current market rates. Cash at bank and in-hand are freely disposable. At 31 December 2020 and 2019 the rates were as follows:

| | 2020 | | 2019 | |
|---|---|---|---|---|
| | Borrowing | Lending | Borrowing | Lending |
| US Dollar | 1.4 % | — % | 2.96 % | 1.56 % |
| Great British pound | 1.29 % | — % | 1.97 % | 0.56 % |
| Euro | 1.25 % | — % | 1.25 % | — % |

## 4 Equity Attributable to Equity Holders

For a breakdown of Equity attributable to equity holders, see table below.

| | | | Legal Reserve | | Other reserves | | | |
|---|---|---|---|---|---|---|---|---|
| Millions of U.S. Dollars | Share Capital | Share premium | Currency translation differences | Group Companies | Retained earnings | Treasury Shares | Profit for the year | Total Equity Attributable to equity holders |
| **Balance as at 1 January 2019** | $ 22 | $ 10 | $ (831) | $ 180 | $ 8,030 | $ (2,206) | $ 4,652 | $ 9,857 |
| Opening balance adjustment | — | — | — | — | 93 | — | — | 93 |
| Previous year results | — | — | — | — | 4,652 | — | (4,652) | — |
| Employee share-based payments: | | | | | | | | |
| -Issuance of shares | — | 33 | — | — | (3) | 42 | — | 72 |
| -Tax credits related to share-based payments | — | — | — | — | 5 | — | — | 5 |
| Purchase of non-controlling interest | — | — | — | — | (64) | — | — | (64) |
| Shares purchased | — | — | — | — | — | (3,728) | — | (3,728) |
| Net current period change | — | — | (13) | (489) | 81 | — | — | (421) |
| Profit for the year | — | — | — | — | — | — | 3,102 | 3,102 |
| Additions to legal reserve | — | — | — | 7 | (7) | — | — | — |
| Common stock dividends paid | — | — | — | — | (1,462) | — | — | (1,462) |
| Preferred stock dividends paid | — | — | — | — | (7) | — | — | (7) |
| Cancellation of Treasury shares | (3) | (37) | — | — | (5,272) | 5,312 | — | — |
| **Balance as at 31 December 2019** | $ 19 | $ 6 | $ (844) | $ (302) | $ 6,046 | $ (580) | $ 3,102 | $ 7,447 |

| Millions of U.S. Dollars | Share Capital | Share premium | Legal Reserve: Currency translation differences | Legal Reserve: Group Companies | Other reserves: Retained earnings | Other reserves: Treasury Shares | Profit for the year | Total Equity Attributable to equity holders |
|---|---|---|---|---|---|---|---|---|
| **Balance as at 1 January 2020** | $ 19 | $ 6 | $ (844) | $ (302) | $ 6,046 | $ (580) | $ 3,102 | $ 7,447 |
| Previous year results | — | — | — | — | 3,102 | — | (3,102) | — |
| Employee share-based payments: | | | | | | | | |
| -Issuance of shares | — | 29 | — | — | (15) | 53 | — | 67 |
| -Tax credits related to share-based payments | — | — | — | — | — | — | — | — |
| Purchase of non-controlling interest | — | — | — | — | 7 | — | — | 7 |
| Shares purchased | — | — | — | — | — | (4) | — | (4) |
| Net current period change | — | — | 64 | (294) | (1) | — | — | (231) |
| Profit for the year | — | — | — | — | — | — | 1,720 | 1,720 |
| Additions to legal reserve | — | — | — | 94 | (94) | — | — | — |
| Common stock dividends paid | — | — | — | — | (1,405) | — | — | (1,405) |
| Preferred stock dividends paid | — | — | — | — | (7) | — | — | (7) |
| **Balance as at 31 December 2020** | $ 19 | $ 35 | $ (780) | $ (502) | $ 7,633 | $ (531) | $ 1,720 | $ 7,594 |

*Share capital*—The Company's authorized share capital totals €51 million divided into 1,275 million ordinary shares of €0.04 each. The issued and fully paid up share capital amounted to €15 million divided in 333 million ordinary shares.

The item "Group Companies" relates to the "*Wettelijke reserve deelnemingen,*" which is required by Dutch Law. This reserve relates to any legal or economic restrictions on the ability of group companies to transfer funds to the parent in the form of dividends.

Pursuant to Dutch Law, limitations exist relating to the distribution of share capital of $19 million ($19 million in 2019) and Legal reserves of ($1,282) million at 31 December 2020 (($1,146) million in 2019).

In general, gains related to currency translation differences cannot be distributed as part of shareholders' equity as they form part of the legal reserves protected under Dutch Law. By their nature, losses related to currency translation differences and "group companies" reduce shareholders' equity and thereby distributable amounts.

The reconciliation of the Company's retained earnings to those of the Group reflected in the Group's Consolidated Statement of Financial Position is as follows:

| Millions of U.S. Dollars | 31 December 2020 | 31 December 2019 |
|---|---|---|
| Retained earnings as per Consolidated Statement of Financial Position | $ 9,421 | $ 9,491 |
| Non-distributable reserves of Group companies | (438) | (343) |
| Profit for the year | (1,720) | (3,102) |
| LyondellBasell Finance Company net loss | 370 | — |
| Retained earnings as per Corporate Statement of Financial Position | $ 7,633 | $ 6,046 |

The Company is not liable for the losses incurred by LyondellBasell Finance Company in excess of its net asset value. Refer to Note 7 for additional information.

**Proposed Appropriation of Result**—The Board of Directors paid an aggregate dividend of $4.20 per share from its 2020 annual accounts. This included an interim dividend of $1.05 per share paid to shareholders of record on 2 March 2020 and $1.05 per share on 8 June 2020, 31 August 2020 and 30 November 2020. These dividend payments, totaling $1,405 million, have been charged to retained earnings.

The Board of Directors will propose that the general meeting approve the dividends already paid, as described above.

## 5 Long-term Debt

*Senior Notes due 2055*—In March 2015, we issued $1,000 million of 4.625% Notes due 2055 at a discounted price of 98.353%.

*5.75% Senior Notes*—In April 2012, the Company issued $1,000 million aggregate principal amount of 5.75% senior notes due 2024, at an issue price of 100%.

*6% Senior Notes*-In November 2011, the Company issued $1,000 million of 6% senior notes due 2021. In November 2020 this loan was redeemed.

## 6 Group Company Loans

The following table summarizes, as of 31 December 2020, the maturities of our Long-term Loan Receivable from our Subsidiary and Loans Payable to our Subsidiaries for the next five years and thereafter:

| Millions of U.S. Dollars | Total | 2021 | 2022 | 2023 | 2024 | 2025 | Thereafter |
|---|---|---|---|---|---|---|---|
| **Non-current receivables:** | | | | | | | |
| Subordinate note receivable due July 2025, $2,000 million | $ 2,000 | $ — | $ — | $ — | $ — | $ 2,000 | $ — |
| Subordinate note receivable due July 2026, $500 million | 500 | — | — | — | — | — | 500 |
| Note receivable due April 2024, $986 million | 510 | — | — | — | 510 | — | — |
| Note receivable due August 2022, $1,974 million | 1,974 | — | 1,974 | — | — | — | — |
| Senior note receivable due June 2023, $2,000 million | 2,000 | — | — | 2,000 | — | — | — |
| Total non-current receivables | $ 6,984 | $ — | $ 1,974 | $ 2,000 | $ 510 | $ 2,000 | $ 500 |
| | | | | | | | |
| **Current payables:** | | | | | | | |
| Loan payable due October 2021, $2,000 million | $ 784 | $ 784 | $ — | $ — | $ — | $ — | $ — |
| Loan payable due July 2021, $2,000 million | 500 | 500 | — | — | — | — | — |
| Total current payables | $ 1,284 | $ 1,284 | $ — | $ — | $ — | $ — | $ — |

*Long-term Loan Receivable from our Subsidiary*—In July 2014, we and our wholly owned subsidiary, LyondellBasell Finance Company, entered into five separate notes with an aggregate principal amount of $7,500 million in lieu of a $7,500 million inter-company dividend. These notes consist of; a $1,000 million 3.09% senior note due 30 December 2018. The loan has been settled in 2018; $2,000 million 3.75% senior note due 1 July 2018. In May 2018 the maturity of the loan was extended from 1 July 2018 to 30 June 2020. In June 2020 the loan was settled.; a $2,000 million 4.63% senior note due 1 July 2020. On 1 July 2020 the loan was extended to 30 June 2023. As at 31 December 2020 the fair value of the loan was 2,104 million,; a $2,000 million 6.14% senior note due 1 July 2025 with a fair value as at 31 December 2020 of $2,157 million and a fair value of 2,023 million at 31 December 2019 , and; a $500 million 6.30% senior note due 1 July 2026 with a fair value as at 31 December 2020 of $543 million and as at 31 December 2019 a fair value of $503 million.

In April 2012, we and our indirectly wholly owned subsidiary, Lyondell Chemical Company ("Lyondell Chemical"), entered into a $1,974 million note receivable. The note bears per annum interest at 5.23% and matures on 15 April 2022. Interest is due semi-annually on 15 April and 15 October. In April 2019, we amended the terms of the note to include early prepayment restrictions and reduce the applicable interest. Lyondell Chemical may prepay all or part of the note at a specified redemption premium plus accrued and unpaid interest on the redemption date. At 31 December 2020 and 2019, the outstanding balance was $1,974 million which approximates the fair value.

In April 2012, we and Lyondell Chemical entered into another $986 million note receivable. The note bears per annum interest at 6.14% and matures on 15 April 2024. Interest is due semi-annually on 15 April and 15 October. In July 2012, we amended the terms of the note to include early prepayment restrictions and reduce the applicable interest. Lyondell Chemical may prepay all or part of the note at a specified redemption premium plus accrued and unpaid interest on the redemption date. In December 2017 an amount of $476 million was repaid. As at 31 December 2020 and 2019 the balance remaining on the loan is $510 million which approximates the fair value, In November 2011, we and Lyondell Chemical entered into a $1,000 million note receivable. The note bears interest at 6.45% per annum and matures on 15 November 2021. Interest is due semi-annually on 15 May and 15 November. In July 2012, the terms of the note were amended to include early prepayment restrictions. Lyondell Chemical may prepay all or part of the note at a specified redemption premium plus accrued and unpaid interest on the redemption date. In October 2020 the loan was redeemed in full.

*Loans Payable to our Subsidiaries*—In October 2015, we and our indirect, wholly owned subsidiary, LYB Treasury Services Ltd., entered into a $2,000 million loan, which matures on 6 October 2018. The loan is repayable on demand. In October 2018 the repayment date was extended to 6 October 2021, all other terms of the loan remain unchanged. The loan bears interest at a variable rate, which is set for a period of 3 months, using the U.S. LIBOR rate, plus 125 basis points. At 31 December 2020, the outstanding balance was $784 million which approximates the fair value.

In July 2014, we and our indirect, wholly owned subsidiary, LYB Americas Finance Company, entered into a $2,000 million loan, which matures on 31 July 2018. In June 2018 the repayment date was extended to July 2021, all other terms and conditions of the loan remain the same. The loan is repayable on demand. The interest rate is equal to the Federal short-term rate determined under section 1274(d) of the Internal Revenue Code. At 31 December 2020, the outstanding balance was $500 million which approximates the fair value.

Movements in Group Company loans are presented below:

| Millions of U.S. Dollars | Receivables | Payables |
|---|---|---|
| **Balance at 1 January 2019** | $ 9,984 | $ 2,968 |
| Borrowings | — | — |
| Discharge and assignments | — | (1,742) |
| **Balance at 31 December 2019** | 9,984 | 1,226 |
| | | |
| Of which: | | |
| Non-current | 5,984 | — |
| Current | 4,000 | 1,226 |
| **Balance at 31 December 2019** | $ 9,984 | $ 1,226 |
| | | |
| **Balance at 1 January 2020** | $ 9,984 | $ 1,226 |
| Borrowings | — | 862 |
| Discharge and assignments | (3,000) | (804) |
| **Balance at 31 December 2020** | 6,984 | 1,284 |
| | | |
| Of which: | | |
| Non-current | 6,984 | — |
| Current | — | 1,284 |
| **Balance at 31 December 2020** | $ 6,984 | $ 1,284 |

## 7 Deferred Income

Deferred income represents the excess dividend paid by LyondellBasell Finance Company over its net asset value. This amount is reduced as the Company recognizes its share of LyondellBasell Finance Company's income. After the Deferred income is fully recognized, we will record our earnings from LyondellBasell Finance Company as additions to Investments in Group companies. LyondellBasell Finance Company incurred in a $370 million loss during the year ended 31 December 2020.

## 8 Commitments and Contingencies not included in the Balance Sheet

The Company has entered into guarantee agreements with counterparties on behalf of some of its subsidiaries for the supply of raw materials. At 31 December 2020 and 2019, the total guaranteed amount was $21.0 billion respectively.

The Company receives an annual fee of 0.13% for guarantees of aggregate $2 billion and an annual fee between 0.17% and 0.19% for all other outstanding guarantees as of 31 December 2020. Fee levels applied in 2019 were an annual fee of 0.13% for guarantees of aggregate $2 billion and an annual fee of 0.17% and 0.19% for all other outstanding guarantees.

The Company is jointly and severally liable, as intended in article 403, Book2, of the Dutch Civil Code for the following subsidiaries in the Consolidated Financial Statements:

- LyondellBasell Subholdings B.V.
- LyondellBasell Circular Economy B.V.
- LYB International Finance B.V.
- LYB International Finance II B.V.
- Basell International Holdings B.V.
- Basell Europe Holdings B.V.
- LyondellBasell Industries Holdings B.V.
- LYB Trading Company B.V.
- LyondellBasell China Holdings B.V.

## 9 Independent Auditor's Fees

The fees listed below relate to the procedures applied to the Company and its consolidated group entities by PricewaterhouseCoopers Accountants N.V., The Netherlands, the external independent auditor as referred to in section 1(1) of the Dutch Accounting Firms Oversight Act (Dutch acronym: Wta), as well as by other Dutch and foreign-based PricewaterhouseCoopers individual partnerships and legal entities, including their tax services and advisory groups.

| | Year Ended 31 December | |
|---|---|---|
| **Millions of U.S. Dollars** | **2020** | **2019** |
| Financial statements audit fees | $ 10.0 | $ 10.4 |
| Other assurance fees | 1.1 | 0.4 |
| All other fees | 0.5 | 0.8 |
| | $ 11.6 | $ 11.6 |

The total audit fees of PricewaterhouseCoopers Accountants N.V, The Netherlands, charged to the Company and its consolidated group entities amounted to $1.8 million and $1.7 million, respectively, in 2020 and 2019.

The financial statements audit fees above include the aggregate fees billed for professional services rendered for the audit of LyondellBasell Industries N.V.'s annual financial statements, annual statutory financial statements of subsidiaries and services that are normally provided by the independent auditor in connection with these audits. This category also includes services such as comfort letters, statutory audits, attest services, consents and assistance with and review of documents.

The other assurance fees include the aggregate fees billed for assurance and related services that are reasonably related to the performance of the audit or review of the Group's financial statements and are not reported under audit services. This category includes fees related to the performance of audits of benefit plans, agreed-upon or expanded audit procedures relating to accounting records required to respond to or comply with financial, accounting or regulatory reporting matters and consultations as to the accounting or disclosure treatment of transactions or events and/or the actual or potential impact of final or proposed rules, standards or interpretations by regulatory or standard setting bodies. Other fees relate to permitted services that are not included in the above categories.

## 10 Directors' Remuneration

Reference is made to Note 9, Directors' Remuneration of the Consolidated Financial Statements.

5 April 2021

**The Board of Directors**

| | |
|---|---|
| /s/ Bhavesh (Bob) V. Patel | /s/ Jacques Aigrain |
| Bhavesh (Bob) V. Patel | Jacques Aigrain |
| /s/ Lincoln Benet | /s/ Jagjeet S. Bindra |
| Lincoln Benet | Jagjeet S. Bindra |
| /s/ Robin W.T. Buchanan | /s/ Stephen F. Cooper |
| Robin W.T. Buchanan | Stephen F. Cooper |
| /s/ Nance K. Dicciani | /s/ Claire S. Farley |
| Nance K. Dicciani | Claire S. Farley |
| /s/ Isabella D. Goren | /s/ Michael S. Hanley |
| Isabella D. Goren | Michael S. Hanley |
| /s/ Albert J. Manifold | |
| Albert J. Manifold | |

## Other Information

### Proposed Appropriation of Result

Profit remaining after the appropriation to reserves shall be at the disposal of the general meeting (article 22 sub 3 Articles of Association). The Board of Directors may also appropriate the complete profit to the reserves.

### Legal Structure

The list of our subsidiaries and associates as of 31 December 2020 is included in Appendix A of this report.

# *Independent auditor's report*

To: the general meeting and the board of directors of LyondellBasell Industries N.V.

## *Report on the financial statements 2020*

### *Our opinion*

In our opinion:

- the consolidated financial statements of LyondellBasell Industries N.V. give a true and fair view of the financial position of the Group as at 31 December 2020 and of its result and cash flows for the year then ended in accordance with International Financial Reporting Standards as adopted by the European Union (EU-IFRS) and with Part 9 of Book 2 of the Dutch Civil Code;
- the corporate financial statements of LyondellBasell Industries N.V. give a true and fair view of the financial position of the Company as at 31 December 2020 and of its result for the year then ended in accordance with Part 9 of Book 2 of the Dutch Civil Code.

#### *What we have audited*

We have audited the accompanying financial statements 2020 of LyondellBasell Industries N.V., Rotterdam ('the Company'). The financial statements include the consolidated financial statements of LyondellBasell Industries N.V. together with its subsidiaries ('the Group') and the corporate financial statements.

The consolidated financial statements comprise:

- the consolidated statement of financial position as at 31 December 2020;
- the following statements for 2020: the consolidated statement of income, the consolidated statements of comprehensive income, changes in equity and cash flows; and
- the notes, comprising significant accounting policies and other explanatory information.

The corporate financial statements comprise:

- the corporate statement of financial position as at 31 December 2020;
- the corporate statement of income for the year then ended;
- the notes, comprising the accounting policies applied and other explanatory information.

The financial reporting framework applied in the preparation of the financial statements is EU-IFRS and the relevant provisions of Part 9 of Book 2 of the Dutch Civil Code for the consolidated financial statements and Part 9 of Book 2 of the Dutch Civil Code for the corporate financial statements.



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## *The basis for our opinion*

We conducted our audit in accordance with Dutch law, including the Dutch Standards on Auditing. We have further described our responsibilities under those standards in the section 'Our responsibilities for the audit of the financial statements' of our report.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

### *Independence*

We are independent of LyondellBasell Industries N.V. in accordance with the 'Wet toezicht accountantsorganisaties' (Wta, Audit firms supervision act), the 'Verordening inzake de onafhankelijkheid van accountants bij assuranceopdrachten' (ViO, Code of Ethics for Professional Accountants, a regulation with respect to independence) and other relevant independence requirements in the Netherlands. Furthermore, we have complied with the 'Verordening gedrags- en beroepsregels accountants' (VGBA, Dutch Code of Ethics).

## *Our audit approach*

### *Overview and context*

LyondellBasell Industries N.V. is a worldwide manufacturer of chemicals and polymers, a refiner of crude oil, a significant producer of gasoline blending components and a developer and licensor of technologies for production of polymers. The business operations are subject to the cyclical and volatile nature of the chemicals industry which causes fluctuations in the results from period to period and over business cycles.

The chemicals industry has historically experienced periods of capacity shortages, causing prices and profit margins to increase, followed by periods of excess capacity, resulting in oversupply and declining prices and profit margins. The volatility of results affected our determination of materiality as set out in the materiality section of our report.

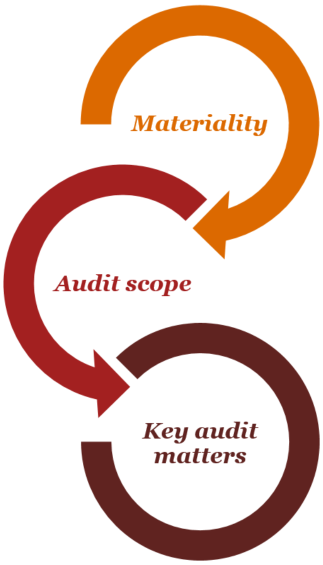
The Group is comprised of several components and therefore we considered our group audit scope and approach as set out in the section 'The scope of our group audit'. We paid specific attention to the areas of focus driven by the operations of the Group, as set out above.

As part of designing our audit, we determined materiality and assessed the risks of material misstatement in the financial statements. In particular, we considered where the board of directors made important judgements, for example, in respect of significant accounting estimates that involved making assumptions and considering future events that are inherently uncertain. In note 3 of the consolidated financial statements the Company describes the areas of judgement in applying accounting policies and the key sources of estimation uncertainty.

Given the significant estimation uncertainty, the related higher inherent risks of material misstatement and significant judgement by management in respect of the provisions for uncertain tax positions and the impairment of the Houston refinery, we considered these matters as key audit matters as set out in the section 'Key audit matters' of this report. Other areas of focus, that were not considered to be key audit matters, were capitalization of assets, inventory costing, revenue recognition and derivative financial instruments.

We ensured that the audit teams at both group and component level included the appropriate skills and competences which are needed for the audit. We therefore included experts and specialists in the areas of IT, actuarial, tax, valuation and financial instruments in our team.

The outline of our audit approach was as follows:




***Materiality***

- Overall materiality: USD 160 million.

***Audit scope***

- We conducted audit work in 5 geographical locations: the Netherlands, the United States of America, Germany, Italy and China.
- Within these 5 locations we performed an audit of the complete financial information of 4 components and specified audit procedures of 10 other components.
- Audit coverage: 81% of consolidated revenue, 81% of consolidated total assets and 73% of consolidated profit before tax.

***Key audit matters***

- Taxation - Provisions for uncertain tax positions.
- Impairment of Property, plant and Equipment – Houston Refinery.

## *Materiality*

The scope of our audit is influenced by the application of materiality, which is further explained in the section ‘Our responsibilities for the audit of the financial statements’.

Based on our professional judgement we determined certain quantitative thresholds for materiality, including the overall materiality for the financial statements as a whole as set out in the table below. These, together with qualitative considerations, helped us to determine the nature, timing and extent of our audit procedures on the individual financial statement line items and disclosures and to evaluate the effect of identified misstatements, both individually and in aggregate, on the financial statements as a whole and on our opinion.

| | |
|---|---|
| ***Overall group materiality*** | USD 160 million (2019: USD 240 million). |
| ***Basis for determining materiality*** | We used our professional judgement to determine overall materiality. As a basis for our judgement we used 5% of the three-year average of profit before income tax based on the US GAAP consolidated financial statements as filed through Form 10 K. |
| ***Rationale for benchmark applied*** | We used profit before income tax as the primary benchmark, a generally accepted auditing practice, based on our analysis of the common information needs of users of the financial statements. On this basis, we believe that profit before tax is an important metric for the financial performance of the Company. |

| | |
|---|---|
| | The Company uses two accounting frameworks for calculating profit before tax:<br>• The financial reporting frameworks that have been applied in the preparation of the financial statements are EU-IFRS and Part 9 of Book 2 of the Dutch Civil Code.<br>• The accounting principles generally accepted in the United States of America (US GAAP) have been applied for the quarterly and annual earnings releases, and the financial statements filed with the United States Securities and Exchange Commission.<br><br>Both US GAAP and EU-IFRS are applied in maintaining the daily operational accounting records. In addition, we believe that the users of financial information of the Company are primarily interested in the consolidated financial information based on US GAAP. Any user of these consolidated financial statements (EU-IFRS and Part 9 of Book 2 of the Dutch Civil Code) would likely not review this information in isolation; if users did review this information, we expect it would likely be in supplement to the US GAAP financial information. The result of the benchmark applied using US GAAP figures is materially consistent with the result had the EU-IFRS figures been applied as a benchmark. Therefore, for the audit of these consolidated financial statements (EU-IFRS and Part 9 of Book 2 of the Dutch Civil Code) we have applied a percentage on a generally accepted auditing practice benchmark on the profit before tax based on US GAAP.<br><br>We have applied a three-year average of the profit before income tax as the Company's operations are subject to the cyclicality and volatility of the chemicals industry, hence operating results may vary substantially over the years. |
| ***Component materiality*** | To each component in our audit scope, we, based on our judgement, allocate materiality that is less than our overall group materiality. The range of materiality allocated across components was between USD 24 million and USD 160 million. |

We also take misstatements and/or possible misstatements into account that, in our judgement, are material for qualitative reasons.

We agreed with the board of directors that we would report to them misstatements identified during our audit above USD 8 million (2019: USD 12 million) as well as misstatements below that amount that, in our view, warranted reporting for qualitative reasons.

## *The scope of our group audit*

LyondellBasell Industries N.V. is the parent company of a group of entities. The financial information of this group is included in the consolidated financial statements of LyondellBasell Industries N.V.

We tailored the scope of our audit to ensure that we, in aggregate, have sufficient coverage of the financial statements for us to be able to give an opinion on the financial statements as a whole, taking into account the management structure of the Group, the nature of operations of its components, the accounting processes and controls, and the markets in which the components of the Group operate.

In establishing the overall group audit strategy and plan, we determined the type of work required to be performed at component level by the Group engagement team and by each component auditor.

The group audit scoping primarily focussed on four individually significant components, located in the United States of America and the Netherlands. Ten components accounted for in the United States of America, Germany, Italy, China and the Netherlands, were subject to specified audit procedures relating to significant balances and transactions or higher risk areas. In total, in performing these procedures, we achieved the following coverage on the financial line items:

| | |
|---|---|
| ***Revenue*** | 81% |
| ***Total assets*** | 73% |
| ***Profit before tax*** | 66% |

None of the remaining components represented more than 3% of total group revenue or total group assets. For those remaining components we performed, among other things, analytical procedures to corroborate our assessment that there were no significant risks of material misstatements within those components.

For group entities located in the Netherlands the group engagement team performed the audit work. For components located in Germany, China, Italy and the United States of America, we used component auditors who are familiar with the local laws and regulations to perform the audit work.

Where component auditors performed the work, we determined the level of involvement we needed to have in their audit work to be able to conclude whether we had obtained sufficient and appropriate audit evidence as a basis for our opinion on the consolidated financial statements as a whole.

We issued instructions to the component audit teams in our audit scope. These instructions included amongst others our risk analysis, materiality and scope of the work. We explained to the component audit teams the structure of the Group, the main developments that are relevant for the component auditors, the risks identified, the materiality levels to be applied and our global audit approach. We liaised with the component teams in the United States of America, China, Italy, the Netherlands and Germany to review their audit work and reports about their findings. In addition, we had individual calls with each of the in-scope component audit teams during the year and upon conclusion of their work. During these calls, we discussed the significant accounting and audit issues identified by the component auditors, their reports, the findings of their procedures and other matters, which could be of relevance for the consolidated financial statements.

By performing the procedures above at components, combined with additional procedures at group level, we have been able to obtain sufficient and appropriate audit evidence on the Group's financial information, as a whole, to provide a basis for our opinion on the financial statements.

## *Our focus on the risk of fraud and non-compliance with laws and regulations*

### *Our objectives*

The objectives of our audit are:

In respect to fraud:

- to identify and assess the risks of material misstatement of the financial statements due to fraud;
- to obtain sufficient appropriate audit evidence regarding the assessed risks of material misstatement due to fraud, through designing and implementing appropriate audit responses; and
- to respond appropriately to fraud or suspected fraud identified during the audit.

In respect to non-compliance with laws and regulations:

- to identify and assess the risk of material misstatement of the financial statements due to non-compliance with laws and regulations; and
- to obtain reasonable assurance that the financial statements, taken as a whole, are free from material misstatement, whether due to fraud or error when considering the applicable legal and regulatory framework.

The primary responsibility for the prevention and detection of fraud and non-compliance with laws and regulations lies with management with the oversight of the board of birectors.

*Our risk assessment*

As part of our process of identifying fraud risks, we evaluated fraud risk factors with respect to financial reporting fraud, misappropriation of assets and bribery and corruption. We evaluated the fraud risk factors to consider whether those factors indicated a risk of material misstatement due to fraud.

In addition, we performed procedures to obtain an understanding of the legal and regulatory frameworks that are applicable for the Group. We identified provisions of those laws and regulations, generally recognized to have a direct effect on the determination of material amounts and disclosures in the financial statements such as the financial reporting framework, tax and pension laws and regulations.

As in all of our audits, we addressed the risk of management override of internal controls, including evaluating whether there was evidence of bias by management that may represent a risk of material misstatement due to fraud. We refer to the key audit matters "Provisions for uncertain tax positions" and "Impairment of Houston Refinery", that are examples of our approach related to areas of higher risk due to accounting estimates where management makes significant judgments.

*Our response to the risks identified*

We performed the following audit procedures to respond to the assessed risks:

- We evaluated the design and the implementation and, where considered appropriate, tested the operating effectiveness of internal controls that mitigate fraud risks.
- We performed data analysis of high-risk journal entries and evaluated key estimates and judgements for bias by management including retrospective reviews of prior year's estimates and by performing procedures as listed within the key audit matters section below. Where we identified instances of unexpected journal entries or other risks through our data analytics, we performed additional audit procedures to address each identified risk. These procedures also included testing of transactions back to source information.
- Assessment of matters reported on the Group's whistleblowing and complaints procedures with the entity and results of management's investigation of such matters.
- With respect to the risk of bribery and corruption across various countries, we inquired with management regarding their process of review of third-party vendors in various countries and reviewed underlying contracts to understand and evaluate the business rational behind these contracts. We considered the possibility of fraudulent or corrupt payments made through third parties and conducted detailed analytical testing on third party vendors in high-risk jurisdictions.
- We incorporated an element of unpredictability in our audit.

- We considered the outcome of our other audit procedures and evaluated whether any findings or misstatements were indicative of fraud. If so, we re-evaluated our assessment of fraud risk and its resulting impact on our audit procedures.
- We obtained audit evidence regarding compliance with the provisions of those laws and regulations generally recognized to have a direct effect on the determination of material amounts and disclosures in the financial statements.
- As to the other laws and regulations, we inquired with management and board of directors as to whether the entity is in compliance with such laws and regulations and inspected correspondence, if any, with relevant licensing and regulatory authorities.

## *Key audit matters*

Key audit matters are those matters that, in our professional judgement, were of most significance in the audit of the financial statements. We have communicated the key audit matters to the board of directors. The key audit matters are not a comprehensive reflection of all matters identified by our audit and that we discussed. In this section, we described the key audit matters and included a summary of the audit procedures we performed on those matters.

We addressed the key audit matters in the context of our audit of the financial statements as a whole, and in forming our opinion thereon. We do not provide separate opinions on these matters or on specific elements of the financial statements. Any comment or observation we made on the results of our procedures should be read in this context.

In the current year, based on considerations outlined in the overview and context section, the impairment of the Houston refinery is also determined as a key audit matter.

| ***Key audit matter*** | ***Our audit work and observations*** |
| --- | --- |
| ***Taxation - Provisions for uncertain tax positions***<br>*Note 12 and 27*<br>The Company has recorded income tax benefit from continuing operations of $151 million, income tax receivables of $818 million, income tax payables of $113 million, and net deferred tax liabilities of $2,141 million. The Company operates in multiple jurisdictions throughout the world, and their tax returns are periodically audited or subjected to review by tax authorities. As a result, there is an uncertainty in income taxes recognized in the financial statements.<br><br>Management recognized uncertain income tax positions when it is more likely than not, based on the technical merits, that the position or a portion thereof will be sustained upon examination. | We assessed and tested the design and operating effectiveness of controls over the accounting for uncertain tax positions, including:<br>• Identification and recognition of the liabilities for uncertain tax positions and.<br>• The completeness of the liabilities for uncertain tax positions.<br><br>We found the controls above to be properly designed and operating effectively to support our intended reliance.<br><br>In addition, we were supported by individuals with specialized skills and knowledge in taxation and performed the following substantive testing procedures:<br>Assessed management's analysis of the technical merits of tax positions and estimates of the amount of tax benefit expected to be sustained.<br><br>• Evaluated the status and results of tax audits by the relevant tax authorities. |

| Key audit matter | Our audit work and observations |
| --- | --- |
| As disclosed by management, there has been increased attention, both in the U.S. and globally, to the tax practices of multinational companies, including the European Union's state aid investigations, proposals by the Organization for Economic Cooperation and Development with respect to base erosion and profit shifting, and European Union tax directives and their implementation.<br><br>Significant judgements were made by management when determining provisions for tax uncertainties, including a high degree of estimation uncertainty due to the complexity of tax laws, frequency of tax audits and potential for adjustments as a result of such tax audits. Based on the above, we consider the provisions for uncertain tax provisions to be a key audit matter. | • Evaluated communication with tax authorities.<br>• Assessed the probability of tax positions of being sustained by evaluating and challenging management's key assumptions and the application of relevant tax laws, particularly in cases where there had been developments with tax authorities.<br><br>Considered and evaluated any evidence contrary to the assumptions used by management and;<br><br>Finally, we evaluated the adequacy of the related disclosures and found them to be appropriate and in line with the requirements of the accounting framework. |

| Key audit matter | Our audit work and observations |
| --- | --- |
| ***Impairment of Property, plant and equipment – Houston refinery***<br>*Note 15*<br>The Company's property, plant and equipment, net balance was $18,327 million as of December 31, 2020, and the impairment charge relating to the Houston refinery's asset group was $582 million.<br><br>Management identifies the need to test for impairment based on several indicators, including a significant reduction in prices of or demand for products produced, a weakened outlook for profitability, a significant reduction in margins, other changes to contracts or changes in the regulatory environment. If the recoverable amount (i.e. the higher of the asset's fair value less cost to sell or the value in use for an asset group) is less than the asset group's carrying value, then the cash generating unit's carrying value is written down to the calculated recoverable amount. Management concluded that in 2020, due to prolonged reduction of travel and associated transportation fuels consumption resulting from the COVID-19 pandemic, a triggering event existed related to the Company's Houston refinery's asset group. As a result, management assessed the Houston refinery for impairment and recognized a non-cash impairment charge of $582 million. | We assessed and tested the design and operating effectiveness of controls over the accounting for property, plant and equipment particularly focusing on:<br>• Impairment triggering events and Valuation of Houston refinery's asset group.<br><br>We found these controls above to be properly designed and operating effectively to support our intended reliance.<br><br>In addition, we were supported by individuals with specialized skills and knowledge in valuation and performed the following substantive testing procedures:<br>• Understood and evaluated management's process for developing the fair value estimate of the Houston refinery's asset group.<br>• Evaluated the appropriateness of the discounted cash flow models by reference to established valuation models and testing the mathematical accuracy.<br>• Tested the completeness and accuracy of underlying data used in the models and agreed them to management's approved long-range plan.<br>• Evaluated the reasonableness of the significant assumptions used by management related to the margins on refined products and operating rates by considering the current and past performance of the Houston refinery, the outlook of analysts with respect to projected spreads on refined products, and whether the assumptions were consistent with evidence obtained in other areas of the audit. |

| Key audit matter | Our audit work and observations |
|---|---|
| Fair value less cost to sell is estimated using a discounted cash flow model including market participant assumptions. Management applied significant judgment in estimating the expected future cash flows for the Houston refinery's asset group including the use of significant assumptions with respect to the margins on refined products and operating rates.<br><br>Significant judgements were made by management when developing the recoverable amount measurement of the asset group, including use of significant assumptions related to the margins on refined products and operating rates.<br>Based on the above, we consider the impairment of Houston refinery to be a key audit matter. | • Professionals with specialized skill and knowledge were used to assist in the evaluation of the Company's discounted cash flow models, the terminal growth rate and discount rate assumptions.<br><br>Finally, we evaluated the adequacy of the related disclosures and found them to be appropriate and in line with the requirements of the accounting framework. |

## Report on the other information included in the annual report

In addition to the financial statements and our auditor's report thereon, the annual report contains other information that consists of:

- the report of the board of directors;
- governance and compliance paragraph, including the report by the doard of directors;
- the other information pursuant to Part 9 of Book 2 of the Dutch Civil Code.

Based on the procedures performed as set out below, we conclude that the other information:

- is consistent with the financial statements and does not contain material misstatements;
- contains the information that is required by Part 9 of Book 2 of the Dutch Civil Code.

We have read the other information. Based on our knowledge and understanding obtained in our audit of the financial statements or otherwise, we have considered whether the other information contains material misstatements.

By performing our procedures, we comply with the requirements of Part 9 of Book 2 of the Dutch Civil Code and the Dutch Standard 720. The scope of such procedures was substantially less than the scope of those performed in our audit of the financial statements.

The board of directors is responsible for the preparation of the other information, including the board of directors' report and the other information in accordance with Part 9 of Book 2 of the Dutch Civil Code.

## Report on other legal and regulatory requirements

### Our appointment

We were appointed as auditors of LyondellBasell Industries N.V. following the passing of a resolution by the shareholders at the annual meeting held on 29 May 2020. Our appointment has been renewed annually by shareholders representing a total period of uninterrupted engagement appointment of eleven years.

## Responsibilities for the financial statements and the audit

### Responsibilities of the Board of Directors

The board ofdirectors is responsible for:

- the preparation and fair presentation of the financial statements in accordance with EU-IFRS and with Part 9 of Book 2 of the Dutch Civil Code; and for
- such internal control as the board of directors determines is necessary to enable the preparation of the financial statements that are free from material misstatement, whether due to fraud or error.

As part of the preparation of the financial statements, the board of directors is responsible for assessing the Company's ability to continue as a going concern. Based on the financial reporting frameworks mentioned, the board of directors should prepare the financial statements using the going-concern basis of accounting unless the board of directors either intends to liquidate the Company or to cease operations or has no realistic alternative but to do so. The board of irdectors should disclose events and circumstances that may cast significant doubt on the Company's ability to continue as a going concern in the financial statements.

The board of directors is responsible for overseeing the company's financial reporting process.

### Our responsibilities for the audit of the financial statements

Our responsibility is to plan and perform an audit engagement in a manner that allows us to obtain sufficient and appropriate audit evidence to provide a basis for our opinion. Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error and to issue an auditor's report that includes our opinion. Reasonable assurance is a high but not absolute level of assurance, which makes it possible that we may not detect all material misstatements. Misstatements may arise due to fraud or error. They are considered to be material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements.

Materiality affects the nature, timing and extent of our audit procedures and the evaluation of the effect of identified misstatements on our opinion.

A more detailed description of our responsibilities is set out in the appendix to our report.

Rotterdam, 5 April 2021
PricewaterhouseCoopers Accountants N.V.

Original has been signed by I.J.C. Lefebure RA

## Appendix to our auditor's report on the financial statements 2020 of LyondellBasell Industries N.V.

In addition to what is included in our auditor's report, we have further set out in this appendix our responsibilities for the audit of the financial statements and explained what an audit involves.

### The auditor's responsibilities for the audit of the financial statements

We have exercised professional judgement and have maintained professional scepticism throughout the audit in accordance with Dutch Standards on Auditing, ethical requirements and independence requirements. Our audit consisted, among other things of the following:

- Identifying and assessing the risks of material misstatement of the financial statements, whether due to fraud or error, designing and performing audit procedures responsive to those risks, and obtaining audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the intentional override of internal control.
- Obtaining an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control.
- Evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Concluding on the appropriateness of management's use of the going concern basis of accounting, and based on the audit evidence obtained, concluding whether a material uncertainty exists related to events and/or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report and are made in the context of our opinion on the financial statements as a whole. However, future events or conditions may cause the Company to cease to continue as a going concern.
- Evaluating the overall presentation, structure and content of the financial statements, including the disclosures, and evaluating whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

Considering our ultimate responsibility for the opinion on the consolidated financial statements, we are responsible for the direction, supervision and performance of the group audit. In this context, we have determined the nature and extent of the audit procedures for components of the Group to ensure that we performed enough work to be able to give an opinion on the financial statements as a whole. Determining factors are the geographic structure of the Group, the significance and/or risk profile of group entities or activities, the accounting processes and controls, and the industry in which the Group operates. On this basis, we selected group entities for which an audit or review of financial information or specific balances was considered necessary.

We communicate with the board of directors regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We provide the board of directors with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related actions taken to eliminate threats or safeguards applied.

From the matters communicated with the board of directors, we determine those matters that were of most significance in the audit of the financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, not communicating the matter is in the public interest.