# UNITED STATES
# SECURITIES AND EXCHANGE COMMISSION
**Washington, D.C. 20549**

# Form 10-Q

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

**For the quarterly period ended September 30, 2022**

**or**

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

**For the transition period from__________to________**

**Commission file number: 001-34726**

# LYONDELLBASELL INDUSTRIES N.V.

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

| | |
|---|---|
| **Netherlands** | **98-0646235** |
| (State or other jurisdiction of incorporation or organization) | (I.R.S. Employer Identification No.) |

| | | |
|---|---|---|
| **1221 McKinney St., Suite 300 Houston, Texas USA 77010** | **4th Floor, One Vine Street London W1J0AH United Kingdom** | **Delftseplein 27E 3013AA Rotterdam Netherlands** |
| | (Addresses of registrant's principal executive offices) | |
| **(713) 309-7200** | **+44 (0) 207 220 2600** | **+31 (0) 10 2755 500** |
| | (Registrant's telephone numbers, including area codes) | |

**(Former name, former address and former fiscal year, if changed since last report)**

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

| Title of Each Class | Trading Symbol | Name of Each Exchange On Which Registered |
|---|---|---|
| **Ordinary Shares, €0.04 Par Value** | **LYB** | **New York Stock Exchange** |

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

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

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

| | | | |
|---|---|---|---|
| Large accelerated filer | x | Accelerated filer | ☐ |
| Non-accelerated filer | ☐ | Smaller reporting company | ☐ |
| Emerging growth company | ☐ | | |

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

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

The registrant had 325,624,433 ordinary shares, €0.04 par value, outstanding at October 26, 2022 (excluding 14,798,065 treasury shares).

**LYONDELLBASELL INDUSTRIES N.V.**

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## PART I. FINANCIAL INFORMATION

## ITEM 1. CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

### LYONDELLBASELL INDUSTRIES N.V.
### CONSOLIDATED STATEMENTS OF INCOME

| Millions of dollars, except earnings per share | Three Months Ended September 30, 2022 | Three Months Ended September 30, 2021 | Nine Months Ended September 30, 2022 | Nine Months Ended September 30, 2021 |
|---|---|---|---|---|
| **Sales and other operating revenues:** | | | | |
| Trade | $ 12,044 | $ 12,401 | $ 39,443 | $ 32,586 |
| Related parties | 206 | 299 | 802 | 757 |
| | 12,250 | 12,700 | 40,245 | 33,343 |
| **Operating costs and expenses:** | | | | |
| Cost of sales | 11,088 | 10,109 | 34,491 | 26,463 |
| Impairments | — | — | 69 | — |
| Selling, general and administrative expenses | 319 | 313 | 976 | 927 |
| Research and development expenses | 31 | 30 | 95 | 91 |
| | 11,438 | 10,452 | 35,631 | 27,481 |
| **Operating income** | 812 | 2,248 | 4,614 | 5,862 |
| Interest expense | (70) | (126) | (202) | (366) |
| Interest income | 7 | 1 | 13 | 8 |
| Other income (expense), net | 4 | (12) | (63) | 27 |
| Income from continuing operations before equity investments and income taxes | 753 | 2,111 | 4,362 | 5,531 |
| (Loss) income from equity investments | (26) | 104 | 25 | 389 |
| Income from continuing operations before income taxes | 727 | 2,215 | 4,387 | 5,920 |
| Provision for income taxes | 154 | 452 | 848 | 1,028 |
| Income from continuing operations | 573 | 1,763 | 3,539 | 4,892 |
| Loss from discontinued operations, net of tax | (1) | (1) | (3) | (1) |
| **Net income** | 572 | 1,762 | 3,536 | 4,891 |
| Dividends on redeemable non-controlling interests | (2) | (2) | (5) | (5) |
| Net income attributable to the Company shareholders | $ 570 | $ 1,760 | $ 3,531 | $ 4,886 |
| | | | | |
| **Earnings per share:** | | | | |
| **Net income (loss) attributable to the Company shareholders —** | | | | |
| Basic | | | | |
| Continuing operations | $ 1.75 | $ 5.25 | $ 10.77 | $ 14.58 |
| Discontinued operations | — | — | (0.01) | — |
| | $ 1.75 | $ 5.25 | $ 10.76 | $ 14.58 |
| Diluted | | | | |
| Continuing operations | $ 1.75 | $ 5.25 | $ 10.75 | $ 14.57 |
| Discontinued operations | — | — | (0.01) | — |
| | $ 1.75 | $ 5.25 | $ 10.74 | $ 14.57 |

See Notes to the Consolidated Financial Statements.

**LYONDELLBASELL INDUSTRIES N.V.**

**CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME**

| | Three Months Ended September 30, | | Nine Months Ended September 30, | |
|---|---|---|---|---|
| **Millions of dollars** | **2022** | **2021** | **2022** | **2021** |
| Net income | $ 572 | $ 1,762 | $ 3,536 | $ 4,891 |
| Other comprehensive income (loss), net of tax – | | | | |
| Financial derivatives | 23 | 35 | 213 | 132 |
| Unrealized losses on available-for-sale debt securities | — | — | — | (1) |
| Defined benefit pension and other postretirement benefit plans | 51 | 28 | 134 | 56 |
| Foreign currency translations | (169) | (97) | (355) | (127) |
| Total other comprehensive (loss) income, net of tax | (95) | (34) | (8) | 60 |
| Comprehensive income | 477 | 1,728 | 3,528 | 4,951 |
| Dividends on redeemable non-controlling interests | (2) | (2) | (5) | (5) |
| Comprehensive income attributable to the Company shareholders | $ 475 | $ 1,726 | $ 3,523 | $ 4,946 |

See Notes to the Consolidated Financial Statements.

## LYONDELLBASELL INDUSTRIES N.V.

## CONSOLIDATED BALANCE SHEETS

| Millions of dollars | September 30, 2022 | December 31, 2021 |
|---|---|---|
| **ASSETS** | | |
| Current assets: | | |
| Cash and cash equivalents | $ 1,480 | $ 1,472 |
| Restricted cash | 6 | 5 |
| Short-term investments | — | 9 |
| Accounts receivable: | | |
| Trade, net | 4,149 | 4,565 |
| Related parties | 180 | 243 |
| Inventories | 5,153 | 4,901 |
| Prepaid expenses and other current assets | 1,360 | 1,022 |
| Total current assets | 12,328 | 12,217 |
| Operating lease assets | 1,769 | 1,946 |
| Property, plant and equipment | 22,640 | 22,382 |
| Less: Accumulated depreciation | (7,817) | (7,826) |
| Property, plant and equipment, net | 14,823 | 14,556 |
| Equity investments | 4,386 | 4,786 |
| Goodwill | 1,746 | 1,875 |
| Intangible assets, net | 594 | 695 |
| Other assets | 845 | 667 |
| Total assets | $ 36,491 | $ 36,742 |

See Notes to the Consolidated Financial Statements.

**LYONDELLBASELL INDUSTRIES N.V.**

**CONSOLIDATED BALANCE SHEETS**

| Millions of dollars, except shares and par value data | September 30, 2022 | December 31, 2021 |
|---|---|---|
| **LIABILITIES, REDEEMABLE NON-CONTROLLING INTERESTS AND EQUITY** | | |
| Current liabilities: | | |
| Current maturities of long-term debt | $ 432 | $ 6 |
| Short-term debt | 439 | 362 |
| Accounts payable: | | |
| Trade | 3,508 | 3,460 |
| Related parties | 622 | 831 |
| Accrued liabilities | 2,633 | 2,571 |
| Total current liabilities | 7,634 | 7,230 |
| Long-term debt | 10,445 | 11,246 |
| Operating lease liabilities | 1,514 | 1,649 |
| Other liabilities | 2,106 | 2,295 |
| Deferred income taxes | 2,473 | 2,334 |
| Commitments and contingencies | | |
| Redeemable non-controlling interests | 114 | 116 |
| Shareholders’ equity: | | |
| Ordinary shares, €0.04 par value, 1,275 million shares authorized, 325,623,082 and 329,536,389 shares outstanding, respectively | 19 | 19 |
| Additional paid-in capital | 6,099 | 6,044 |
| Retained earnings | 9,232 | 8,563 |
| Accumulated other comprehensive loss | (1,811) | (1,803) |
| Treasury stock, at cost, 14,799,416 and 10,675,605 ordinary shares, respectively | (1,348) | (965) |
| Total Company share of shareholders’ equity | 12,191 | 11,858 |
| Non-controlling interests | 14 | 14 |
| Total equity | 12,205 | 11,872 |
| Total liabilities, redeemable non-controlling interests and equity | $ 36,491 | $ 36,742 |

See Notes to the Consolidated Financial Statements.

**LYONDELLBASELL INDUSTRIES N.V.**

**CONSOLIDATED STATEMENTS OF CASH FLOWS**

| Millions of dollars | Nine Months Ended September 30, 2022 | 2021 |
|---|---|---|
| **Cash flows from operating activities:** | | |
| Net income | 3,536 | $ 4,891 |
| Adjustments to reconcile net income to net cash provided by operating activities: | | |
| Depreciation and amortization | 933 | 1,016 |
| Impairments | 69 | — |
| Amortization of debt-related costs | 11 | 21 |
| Share-based compensation | 54 | 50 |
| Equity investments— | | |
| Equity income | (25) | (389) |
| Distributions of earnings, net of tax | 219 | 169 |
| Deferred income tax provision | 83 | 7 |
| Changes in assets and liabilities that provided (used) cash: | | |
| Accounts receivable | 134 | (1,915) |
| Inventories | (601) | (741) |
| Accounts payable | 200 | 1,139 |
| Other, net | (98) | 368 |
| Net cash provided by operating activities | 4,515 | 4,616 |
| **Cash flows from investing activities:** | | |
| Expenditures for property, plant and equipment | (1,417) | (1,285) |
| Proceeds from maturities of available-for-sale debt securities | — | 346 |
| Proceeds from equity securities | 8 | 309 |
| Acquisition of equity method investment | (14) | (104) |
| Proceeds from settlement of net investment hedges | 614 | 358 |
| Payments for settlement of net investment hedges | (501) | (355) |
| Other, net | (123) | (66) |
| Net cash used in investing activities | (1,433) | (797) |
| **Cash flows from financing activities:** | | |
| Repurchases of Company ordinary shares | (420) | (78) |
| Dividends paid - common stock | (2,859) | (1,110) |
| Repayments of long-term debt | — | (2,275) |
| Debt extinguishment costs | — | (57) |
| Net proceeds from (repayments of) commercial paper | 96 | (103) |
| Collateral received from interest rate derivatives | 238 | — |
| Other, net | 16 | (4) |
| Net cash used in financing activities | (2,929) | (3,627) |
| Effect of exchange rate changes on cash | (144) | (59) |
| **Increase in cash and cash equivalents and restricted cash** | 9 | 133 |
| Cash and cash equivalents and restricted cash at beginning of period | 1,477 | 1,765 |
| Cash and cash equivalents and restricted cash at end of period | $ 1,486 | $ 1,898 |

See Notes to the Consolidated Financial Statements.

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## LYONDELLBASELL INDUSTRIES N.V.

## CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY

| Millions of dollars | Ordinary Shares Issued | Ordinary Shares Treasury | Additional Paid-in Capital | Retained Earnings | Accumulated Other Comprehensive Loss | Company Share of Shareholders' Equity | Non-Controlling Interests |
|---|---|---|---|---|---|---|---|
| Balance, June 30, 2022 | $ 19 | $ (1,200) | $ 6,077 | $ 9,050 | $ (1,716) | $ 12,230 | $ 14 |
| Net income | — | — | — | 572 | — | 572 | — |
| Other comprehensive loss | — | — | — | — | (95) | (95) | — |
| Share-based compensation | — | 2 | 22 | 7 | — | 31 | — |
| Dividends - common stock ($1.19 per share) | — | — | — | (395) | — | (395) | — |
| Dividends - redeemable non-controlling interests ($15.00 per share) | — | — | — | (2) | — | (2) | — |
| Repurchases of Company ordinary shares | — | (150) | — | — | — | (150) | — |
| Balance, September 30, 2022 | $ 19 | $ (1,348) | $ 6,099 | $ 9,232 | $ (1,811) | $ 12,191 | $ 14 |

| Millions of dollars | Ordinary Shares Issued | Ordinary Shares Treasury | Additional Paid-in Capital | Retained Earnings | Accumulated Other Comprehensive Loss | Company Share of Shareholders' Equity | Non-Controlling Interests |
|---|---|---|---|---|---|---|---|
| Balance, June 30, 2021 | $ 19 | $ (494) | $ 6,011 | $ 6,837 | $ (1,849) | $ 10,524 | $ 14 |
| Net income | — | — | — | 1,762 | — | 1,762 | — |
| Other comprehensive loss | — | — | — | — | (34) | (34) | — |
| Share-based compensation | — | 2 | 18 | (1) | — | 19 | — |
| Dividends - common stock ($1.13 per share) | — | — | — | (380) | — | (380) | — |
| Dividends - redeemable non-controlling interests ($15.00 per share) | — | — | — | (2) | — | (2) | — |
| Repurchases of Company ordinary shares | — | (89) | — | — | — | (89) | — |
| Balance, September 30, 2021 | $ 19 | $ (581) | $ 6,029 | $ 8,216 | $ (1,883) | $ 11,800 | $ 14 |

See Notes to the Consolidated Financial Statements.

**LYONDELLBASELL INDUSTRIES N.V.**

**CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY**

| Millions of dollars | Ordinary Shares Issued | Ordinary Shares Treasury | Additional Paid-in Capital | Retained Earnings | Accumulated Other Comprehensive Loss | Company Share of Shareholders' Equity | Non-Controlling Interests |
|---|---|---|---|---|---|---|---|
| Balance, December 31, 2021 | $ 19 | $ (965) | $ 6,044 | $ 8,563 | $ (1,803) | $ 11,858 | $ 14 |
| Net income | — | — | — | 3,536 | — | 3,536 | — |
| Other comprehensive loss | — | — | — | — | (8) | (8) | — |
| Share-based compensation | — | 23 | 55 | (3) | — | 75 | — |
| Dividends - common stock ($3.51 per share) | — | — | — | (1,155) | — | (1,155) | — |
| Special dividends - common stock ($5.20 per share) | — | — | — | (1,704) | — | (1,704) | — |
| Dividends - redeemable non-controlling interests ($45.00 per share) | — | — | — | (5) | — | (5) | — |
| Repurchases of Company ordinary shares | — | (406) | — | — | — | (406) | — |
| Balance, September 30, 2022 | $ 19 | $ (1,348) | $ 6,099 | $ 9,232 | $ (1,811) | $ 12,191 | $ 14 |

| Millions of dollars | Ordinary Shares Issued | Ordinary Shares Treasury | Additional Paid-in Capital | Retained Earnings | Accumulated Other Comprehensive Loss | Company Share of Shareholders' Equity | Non-Controlling Interests |
|---|---|---|---|---|---|---|---|
| Balance, December 31, 2020 | $ 19 | $ (531) | $ 5,986 | $ 4,440 | $ (1,943) | $ 7,971 | $ 17 |
| Net income | — | — | — | 4,891 | — | 4,891 | — |
| Other comprehensive income | — | — | — | — | 60 | 60 | — |
| Share-based compensation | — | 39 | 43 | — | — | 82 | — |
| Dividends - common stock ($3.31 per share) | — | — | — | (1,110) | — | (1,110) | — |
| Dividends - redeemable non-controlling interests ($45.00 per share) | — | — | — | (5) | — | (5) | — |
| Repurchases of Company ordinary shares | — | (89) | — | — | — | (89) | — |
| Sales of non-controlling interest | — | — | — | — | — | — | (3) |
| Balance, September 30, 2021 | $ 19 | $ (581) | $ 6,029 | $ 8,216 | $ (1,883) | $ 11,800 | $ 14 |

See Notes to the Consolidated Financial Statements.

LYONDELLBASELL INDUSTRIES N.V.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

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**LYONDELLBASELL INDUSTRIES N.V.**

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

## 1. Basis of Presentation

LyondellBasell Industries N.V. is a limited liability company (Naamloze Vennootschap) incorporated under Dutch law by deed of incorporation dated October 15, 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 the production of polymers.

The accompanying unaudited Consolidated Financial Statements have been prepared from the books and records of LyondellBasell N.V. in accordance with the instructions to Form 10-Q and Rule 10-01 of Regulation S-X for interim financial information. Certain notes and other information have been condensed or omitted from the interim financial statements included in this report. Accordingly, they do not include all of the information and notes required by accounting principles generally accepted in the United States ("U.S. GAAP") for complete financial statements. These Consolidated Financial Statements should be read in conjunction with the Consolidated Financial Statements and notes thereto included in the Company's Annual Report on Form 10-K for the year ended December 31, 2021. In the opinion of management, all adjustments, including normal recurring adjustments, considered necessary for a fair statement have been included. These statements contain some amounts that are based upon management estimates and judgments. Future actual results could differ from such current estimates. The results for interim periods are not necessarily indicative of results for the entire year.

## 2. Accounting and Reporting Changes

### Recently Adopted Guidance

There were no new standards or Accounting Standard Updates ("ASU") adopted during the nine months ended September 30, 2022 that had a material impact on our Consolidated Financial Statements.

### Accounting Guidance Issued But Not Adopted as of September 30, 2022

Government Assistance—In November 2021, the Financial Accounting Standards Board ("FASB") issued ASU 2021-10, Government Assistance (Topic 832): Disclosures by Business Entities about Government Assistance. The guidance requires disclosures about assistance received from the government that have been accounted for by analogizing to a grant or contribution accounting model including the nature and form of assistance, the accounting policies used to account for the assistance and its impact on the entity's financial statements. The guidance is effective for annual periods beginning after December 15, 2021, with early adoption permitted. The adoption of this guidance will not have a material impact on our Consolidated Financial Statements.

Fair Value Measurement—In June 2022, the FASB issued ASU 2022-03, Fair Value Measurement (Topic 820): Fair Value Measurement of Equity Securities Subject to Contractual Sale Restrictions. The guidance clarifies that a contractual restriction on the sale of an equity security is not considered part of the unit of account of the equity security because it is a characteristic of the entity holding the equity security rather than a characteristic of the security and is not considered in measuring its fair value. The guidance is effective prospectively for the year ending December 31, 2024 including the interim periods, with the impact of adoption reflected in earnings. Early adoption is permitted. The adoption of this guidance will not have a material impact on our Consolidated Financial Statements.

Supplier Finance Program—In September 2022, the FASB issued ASU 2022-04, Liabilities—Supplier Finance Programs (Subtopic 405-50): Disclosure of Supplier Finance Program Obligations. The guidance requires an entity that uses supplier finance programs in connection with the purchase of goods and services to disclose certain qualitative and quantitative information about its programs including the key terms and conditions, activity during the period, and potential magnitude. The guidance is effective retrospectively for the year ending December 31, 2023, including interim periods, with disclosures required for each period for which a balance sheet is presented, except for the disclosure of roll forward information, which is effective for fiscal years beginning after December 15, 2023. We are in the process of the assessing the impact of the new guidance on our Consolidated Financial Statements.

### 3. Revenues

*Contract Balances*—Contract liabilities were $179 million and $169 million at September 30, 2022 and December 31, 2021, respectively. Revenue recognized in each reporting period, included in the contract liability balance at the beginning of the period, was immaterial.

*Disaggregation of Revenues*—The following table presents our revenues disaggregated by key products:

| | Three Months Ended September 30, | | Nine Months Ended September 30, | |
|---|---|---|---|---|
| **Millions of dollars** | **2022** | **2021** | **2022** | **2021** |
| Sales and other operating revenues: | | | | |
| Olefins and co-products | $ 1,281 | $ 1,453 | $ 3,835 | $ 3,729 |
| Polyethylene | 2,306 | 2,705 | 7,714 | 7,469 |
| Polypropylene | 1,466 | 2,162 | 5,383 | 5,876 |
| Propylene oxide and derivatives | 721 | 832 | 2,537 | 2,059 |
| Oxyfuels and related products | 1,563 | 1,088 | 4,370 | 2,533 |
| Intermediate chemicals | 917 | 910 | 3,228 | 2,436 |
| Compounding and solutions | 1,049 | 1,019 | 3,297 | 3,134 |
| Advanced polymers | 245 | 261 | 827 | 748 |
| Refined products | 2,506 | 2,050 | 8,467 | 4,784 |
| Other | 196 | 220 | 587 | 575 |
| Total | $ 12,250 | $ 12,700 | $ 40,245 | $ 33,343 |

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

| | Three Months Ended September 30, | | Nine Months Ended September 30, | |
|---|---|---|---|---|
| **Millions of dollars** | **2022** | **2021** | **2022** | **2021** |
| Sales and other operating revenues: | | | | |
| United States | $ 5,966 | $ 6,387 | $ 19,465 | $ 16,089 |
| Germany | 822 | 886 | 2,892 | 2,585 |
| China | 647 | 572 | 1,989 | 1,693 |
| Japan | 800 | 432 | 1,684 | 993 |
| Mexico | 482 | 496 | 1,522 | 1,133 |
| Italy | 387 | 489 | 1,426 | 1,339 |
| France | 312 | 384 | 1,145 | 1,040 |
| Poland | 270 | 300 | 1,039 | 841 |
| The Netherlands | 261 | 423 | 995 | 1,039 |
| Other | 2,303 | 2,331 | 8,088 | 6,591 |
| Total | $ 12,250 | $ 12,700 | $ 40,245 | $ 33,343 |

## 4. Accounts Receivable

Our accounts receivable are reflected in the Consolidated Balance Sheets, net of allowance for credit losses of $5 million and $6 million as of September 30, 2022 and December 31, 2021, respectively.

## 5. Inventories

Inventories consisted of the following components:

| Millions of dollars | September 30, 2022 | December 31, 2021 |
|---|---|---|
| Finished goods | $ 3,287 | $ 3,329 |
| Work-in-process | 184 | 178 |
| Raw materials and supplies | 1,682 | 1,394 |
| Total inventories | $ 5,153 | $ 4,901 |

## 6. Debt

Long-term loans, notes and other debt, net of unamortized discount and debt issuance cost, consisted of the following:

| Millions of dollars | September 30, 2022 | December 31, 2021 |
|---|---|---|
| Senior Notes due 2024, $1,000 million, 5.75% ($1 million of debt issuance cost) | $ 774 | $ 773 |
| Senior Notes due 2055, $1,000 million, 4.625% ($15 million of discount; $11 million of debt issuance cost) | 974 | 974 |
| Guaranteed Notes due 2027, $300 million, 8.1% | 300 | 300 |
| **Issued by LYB International Finance B.V.:** | | |
| Guaranteed Notes due 2023, $750 million, 4.0% ($1 million of discount) | 424 | 423 |
| Guaranteed Notes due 2043, $750 million, 5.25% ($19 million of discount; $6 million of debt issuance cost) | 725 | 724 |
| Guaranteed Notes due 2044, $1,000 million, 4.875% ($10 million of discount; $9 million of debt issuance cost) | 981 | 981 |
| **Issued by LYB International Finance II B.V.:** | | |
| Guaranteed Notes due 2026, €500 million, 0.875% ($1 million of discount; $2 million of debt issuance cost) | 474 | 562 |
| Guaranteed Notes due 2027, $1,000 million, 3.5% ($3 million of discount; $2 million of debt issuance cost) | 588 | 631 |
| Guaranteed Notes due 2031, €500 million, 1.625% ($4 million of discount; $3 million of debt issuance cost) | 471 | 558 |
| **Issued by LYB International Finance III LLC:** | | |
| Guaranteed Notes due 2025, $500 million, 1.25% ($1 million of discount; $2 million of debt issuance cost) | 475 | 486 |
| Guaranteed Notes due 2030, $500 million, 3.375% ($1 million of debt issuance cost) | 119 | 143 |
| Guaranteed Notes due 2030, $500 million, 2.25% ($3 million of discount; $4 million of debt issuance cost) | 468 | 490 |
| Guaranteed Notes due 2040, $750 million, 3.375% ($2 million of discount; $7 million of debt issuance cost) | 741 | 741 |
| Guaranteed Notes due 2049, $1,000 million, 4.2% ($14 million of discount; $10 million of debt issuance cost) | 976 | 975 |
| Guaranteed Notes due 2050, $1,000 million, 4.2% ($6 million of discount; $10 million of debt issuance cost) | 971 | 981 |
| Guaranteed Notes due 2051, $1,000 million, 3.625% ($2 million of discount; $11 million of debt issuance cost) | 892 | 986 |
| Guaranteed Notes due 2060, $500 million, 3.8% ($4 million of discount; $6 million of debt issuance cost) | 480 | 490 |
| Other | 44 | 34 |
| Total | 10,877 | 11,252 |
| Less current maturities | (432) | (6) |
| Long-term debt | $ 10,445 | $ 11,246 |

Fair value hedging adjustments associated with the fair value hedge accounting of our fixed-for-floating interest rate swaps for the applicable periods are as follows:

| Millions of dollars | Gains (Losses) Three Months Ended September 30, 2022 | Gains (Losses) Three Months Ended September 30, 2021 | Gains (Losses) Nine Months Ended September 30, 2022 | Gains (Losses) Nine Months Ended September 30, 2021 | Cumulative Fair Value Hedging Adjustments Included in Carrying Amount of Debt September 30, 2022 | Cumulative Fair Value Hedging Adjustments Included in Carrying Amount of Debt December 31, 2021 |
|---|---|---|---|---|---|---|
| Guaranteed Notes due 2025, 1.25% | $ 3 | $ 1 | $ 12 | $ 1 | $ 14 | $ 2 |
| Guaranteed Notes due 2026, 0.875% | 3 | 1 | 10 | 2 | 11 | 1 |
| Guaranteed Notes due 2027, 3.5% | 15 | 5 | 44 | 12 | (2) | (46) |
| Guaranteed Notes due 2030, 3.375% | 8 | 1 | 24 | (3) | 22 | (2) |
| Guaranteed Notes due 2030, 2.25% | 7 | 1 | 23 | 1 | 25 | 2 |
| Guaranteed Notes due 2031, 1.625% | 7 | — | 10 | — | 10 | — |
| Guaranteed Notes due 2050, 4.2% | 5 | 1 | 10 | 1 | 13 | 3 |
| Guaranteed Notes due 2051, 3.625% | 41 | — | 95 | — | 95 | — |
| Guaranteed Notes due 2060, 3.8% | 8 | — | 10 | — | 10 | — |
| Total | $ 97 | $ 10 | $ 238 | $ 14 | $ 198 | $ (40) |

Fair value adjustments are recognized in Interest expense in the Consolidated Statements of Income.

Short-term loans, notes and other debt consisted of the following:

| Millions of dollars | September 30, 2022 | December 31, 2021 |
|---|---|---|
| U.S. Receivables Facility | $ — | $ — |
| Commercial paper | 300 | 204 |
| Precious metal financings | 131 | 155 |
| Other | 8 | 3 |
| Total Short-term debt | $ 439 | $ 362 |

***Long-Term Debt***

*Senior Revolving Credit Facility*—Our $3,250 million Senior Revolving Credit Facility, which expires in November 2026, may be used for dollar and euro denominated borrowings. The facility has a $200 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, LIBOR rate or EURIBOR rate, plus an applicable margin. Additional fees are incurred for the average daily unused commitments. At September 30, 2022, we had no borrowings or letters of credit outstanding and $2,950 million of unused availability under this facility.

***Short-Term Debt***

*U.S. Receivables Facility*—Our U.S. Receivables Facility, which expires in June 2024, 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. We pay variable interest rates on our secured borrowings. Additional fees are incurred for the average daily unused commitments. This facility also provides for the issuance of letters of credit up to $200 million. At September 30, 2022, we had no borrowings or letters of credit outstanding and $900 million unused availability under this 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"). Interest rates on commercial paper outstanding are based on the terms of the notes and was 3.35% at September 30, 2022. At September 30, 2022, we had $300 million of outstanding commercial paper.

*Weighted Average Interest Rate*—At September 30, 2022 and December 31, 2021, our weighted average interest rates on outstanding Short-term debt were 3.0% and 0.9%, respectively.

***Additional Information***

*Debt Discount and Issuance Costs*—Amortization of debt discounts and debt issuance costs resulted in amortization expense of $11 million and $21 million for the nine months ended September 30, 2022 and 2021, respectively, which is included in Interest expense in the Consolidated Statements of Income.

As of September 30, 2022, we are in compliance with our debt covenants.

## 7. Financial Instruments and Fair Value Measurements

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

*Financial Instruments Measured at Fair Value on a Recurring Basis*—The following table summarizes financial instruments outstanding for the periods presented that are measured at fair value on a recurring basis:

| | September 30, 2022 | | December 31, 2021 | | |
|---|---|---|---|---|---|
| **Millions of dollars** | **Notional Amount** | **Fair Value** | **Notional Amount** | **Fair Value** | **Balance Sheet Classification** |
| **Assets–** | | | | | |
| Derivatives designated as hedges: | | | | | |
| Commodities | $ 35 | $ 15 | $ 41 | $ 24 | Prepaid expenses and other current assets |
| Foreign currency | 612 | 144 | 614 | 63 | Prepaid expenses and other current assets |
| Foreign currency | 3,666 | 396 | 1,785 | 43 | Other assets |
| Interest rates | — | 26 | — | 7 | Prepaid expenses and other current assets |
| Interest rates | 400 | 16 | 300 | 1 | Other assets |
| Derivatives not designated as hedges: | | | | | |
| Commodities | 160 | 14 | 221 | 30 | Prepaid expenses and other current assets |
| Commodities | 2 | — | — | — | Other assets |
| Foreign currency | 318 | 5 | 34 | 1 | Prepaid expenses and other current assets |
| Non-derivatives: | | | | | |
| Equity securities | — | — | 9 | 8 | Short-term investments |
| Total | $ 5,193 | $ 616 | $ 3,004 | $ 177 | |
| **Liabilities–** | | | | | |
| Derivatives designated as hedges: | | | | | |
| Commodities | $ 43 | $ 4 | $ — | $ — | Accrued liabilities |
| Foreign currency | — | 23 | — | 14 | Accrued liabilities |
| Foreign currency | — | — | 1,800 | 99 | Other liabilities |
| Interest rates | — | 15 | — | 3 | Accrued liabilities |
| Interest rates | 2,145 | 237 | 1,863 | 280 | Other liabilities |
| Derivatives not designated as hedges: | | | | | |
| Commodities | 101 | 19 | 24 | 1 | Accrued liabilities |
| Commodities | 7 | — | — | — | Other liabilities |
| Foreign currency | 87 | 1 | 188 | 2 | Accrued liabilities |
| Total | $ 2,383 | $ 299 | $ 3,875 | $ 399 | |

The financial instruments in the table above are classified as Level 2. We present the gross assets and liabilities of our derivative financial instruments on the Consolidated Balance Sheets.

*Financial Instruments Not Measured at Fair Value on a Recurring Basis*—The following table presents the carrying value and estimated fair value of our Short-term precious metal financings and Long-term debt:

| | September 30, 2022 | | December 31, 2021 | |
|---|---|---|---|---|
| Millions of dollars | Carrying Value | Fair Value | Carrying Value | Fair Value |
| Precious metal financings | $ 131 | $ 126 | $ 155 | $ 130 |
| Long-term debt | 10,420 | 9,025 | 11,218 | 12,756 |
| Total | $ 10,551 | $ 9,151 | $ 11,373 | $ 12,886 |

The financial instruments in the table above are classified as Level 2. Our other financial instruments classified within Current assets and Current liabilities have a short maturity and their carrying value generally approximates fair value.

*Derivative Instruments:*

*Commodity Prices*—The following table presents the notional amounts of our outstanding commodity derivative instruments:

| | September 30, 2022 | December 31, 2021 | |
|---|---|---|---|
| Millions of dollars | Notional Amount | Notional Amount | Maturity Date |
| Derivatives designated as hedges: | | | |
| Cash flow hedges | $ 78 | $ 41 | 2022 to 2023 |
| Derivatives not designated as hedges: | | | |
| Commodity contracts | 270 | 245 | 2022 to 2024 |

*Interest Rates*—The following table presents the notional amounts of our outstanding interest rate derivative instruments:

| | September 30, 2022 | December 31, 2021 | |
|---|---|---|---|
| Millions of dollars | Notional Amount | Notional Amount | Maturity Date |
| Cash flow hedges | $ 400 | $ 1,000 | 2024 |
| Fair value hedges | 2,145 | 1,163 | 2025 to 2031 |

As of December 31, 2021, Other assets included $238 million of collateral related to forward-starting interest swaps. As of September 30, 2022, there was no collateral remaining as it had been returned.

*Foreign Currency Rates*—The following table presents the notional amounts of our outstanding foreign currency derivative instruments:

| | September 30, 2022 | December 31, 2021 | |
|---|---|---|---|
| Millions of dollars | Notional Amount | Notional Amount | Maturity Date |
| Net investment hedges | $ 3,128 | $ 3,048 | 2023 to 2030 |
| Cash flow hedges | 1,150 | 1,150 | 2024 to 2027 |
| Not designated | 405 | 222 | 2022 to 2023 |

*Impact on Earnings and Other Comprehensive Income*—The following tables summarize the pre-tax effect of derivative instruments recorded in Accumulated other comprehensive loss (“AOCI”), the gains (losses) reclassified from AOCI to earnings and additional gains (losses) recognized directly in earnings:

| | Effects of Financial Instruments | | | | | | |
|---|---|---|---|---|---|---|---|
| | Three Months Ended September 30, | | | | | | |
| | Balance Sheet | | | | Income Statement | | |
| | Gain (Loss) Recognized in AOCI | | Gain (Loss) Reclassified to Income from AOCI | | Additional Gain (Loss) Recognized in Income | | |
| **Millions of dollars** | 2022 | 2021 | 2022 | 2021 | 2022 | 2021 | Income Statement Classification |
| Derivatives designated as hedges: | | | | | | | |
| Commodities | $ 10 | $ 38 | $ (22) | $ (14) | $ — | $ — | Cost of sales |
| Foreign currency | 285 | 135 | (67) | (60) | 20 | 9 | Interest expense |
| Interest rates | 29 | 17 | 1 | 1 | (94) | (5) | Interest expense |
| Derivatives not designated as hedges: | | | | | | | |
| Commodities | — | — | — | — | (16) | 6 | Sales and other operating revenues |
| Commodities | — | — | — | — | (28) | 49 | Cost of sales |
| Foreign currency | — | — | — | — | (15) | (32) | Other income (expense), net |
| Total | $ 324 | $ 190 | $ (88) | $ (73) | $ (133) | $ 27 | |

| | Effects of Financial Instruments | | | | | | |
|---|---|---|---|---|---|---|---|
| | Nine Months Ended September 30, | | | | | | |
| | Balance Sheet | | | | Income Statement | | |
| | Gain (Loss) Recognized in AOCI | | Gain (Loss) Reclassified to Income from AOCI | | Additional Gain (Loss) Recognized in Income | | |
| **Millions of dollars** | 2022 | 2021 | 2022 | 2021 | 2022 | 2021 | Income Statement Classification |
| Derivatives designated as hedges: | | | | | | | |
| Commodities | $ 40 | $ 67 | $ (54) | $ (18) | $ — | $ — | Cost of sales |
| Foreign currency | 607 | 274 | (169) | (128) | 51 | 34 | Interest expense |
| Interest rates | 287 | 117 | 4 | 4 | (221) | — | Interest expense |
| Derivatives not designated as hedges: | | | | | | | |
| Commodities | — | — | — | — | 66 | 18 | Sales and other operating revenues |
| Commodities | — | — | — | — | (17) | 72 | Cost of sales |
| Foreign currency | — | — | — | — | (54) | (61) | Other income (expense), net |
| Total | $ 934 | $ 458 | $ (219) | $ (142) | $ (175) | $ 63 | |

As of September 30, 2022, on a pre-tax basis, $6 million is scheduled to be reclassified from Accumulated other comprehensive loss as an increase to Interest expense over the next twelve months.

*Other Financial Instruments:*

*Cash and Cash Equivalents*—At September 30, 2022 and December 31, 2021, we had marketable securities classified as Cash and cash equivalents of $1,075 million and $438 million, respectively.

**8. Pension Benefits**

Components of net periodic pension costs for our U.S. and non-U.S. plans are as follows:

| | U.S. Plans | | | |
|---|---|---|---|---|
| | Three Months Ended September 30, | | Nine Months Ended September 30, | |
| **Millions of dollars** | **2022** | **2021** | **2022** | **2021** |
| Service cost | $ 11 | $ 15 | $ 37 | $ 45 |
| Interest cost | 13 | 9 | 34 | 26 |
| Expected return on plan assets | (20) | (28) | (77) | (82) |
| Settlement loss | 6 | 20 | 100 | 24 |
| Actuarial loss amortization | 4 | 8 | 16 | 29 |
| Net periodic benefit costs | $ 14 | $ 24 | $ 110 | $ 42 |

| | Non-U.S. Plans | | | |
|---|---|---|---|---|
| | Three Months Ended September 30, | | Nine Months Ended September 30, | |
| **Millions of dollars** | **2022** | **2021** | **2022** | **2021** |
| Service cost | $ 9 | $ 11 | $ 28 | $ 33 |
| Interest cost | 7 | 5 | 21 | 16 |
| Expected return on plan assets | (5) | (4) | (15) | (12) |
| Prior service amortization | 2 | 1 | 3 | 2 |
| Actuarial loss amortization | 2 | 4 | 6 | 12 |
| Net periodic benefit costs | $ 15 | $ 17 | $ 43 | $ 51 |

The components of net periodic benefit cost other than the service cost component are included in Other income (expense), net in the Consolidated Statements of Income.

In May 2022, a LyondellBasell sponsored pension plan purchased a group annuity contract from an insurance company to transfer $361 million of our outstanding pension benefit obligations related to certain U.S. retirees and beneficiaries. The purchase of the group annuity contract was funded with pension plan assets. The insurance company is now required to pay and administer the retirement benefits owed to approximately 9,000 U.S. retirees and beneficiaries with no change to their monthly retirement benefit payment amounts. In connection with this transaction, in the second quarter of 2022, we recognized a non-cash pension settlement loss of $80 million, reflected in Other income (expense), net, primarily related to the accelerated recognition of actuarial losses included in Accumulated other comprehensive loss.

## 9. Income Taxes

For interim tax reporting, we estimate an annual effective tax rate which is applied to the year-to-date ordinary income. Tax effects of significant unusual or infrequently occurring items are excluded from the estimated annual effective tax rate calculation and recognized in the interim period in which they occur. 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 valuation allowances, changes in foreign exchange gains or losses, the amount of exempt income, changes in unrecognized tax benefits associated with uncertain tax positions and changes in tax laws.

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 if certain legislative changes are enacted, including Pillar Two proposals by the Organization for Economic Cooperation and Development (“OECD”).

On August 16, 2022, the U.S. enacted the Inflation Reduction Act (“IRA”) which is intended to address climate change, lower health-care costs and reduce the federal deficit. We are continuing to analyze the provisions included in the IRA; however we do not expect it to have a material impact on our Consolidated Financial Statements.

Our effective income tax rate for the third quarter of 2022 was 21.2% compared with 20.4% for the third quarter of 2021. The higher effective tax rate for the third quarter of 2022 is primarily attributable to return to accrual adjustments and decreased exempt income of 1.9% and 0.3% respectively, offset by changes in pre-tax income in countries with varying statutory tax rates of 1.6%.

Our effective income tax rate for the first nine months of 2022 was 19.3% compared with 17.4% for the first nine months of 2021. In the first nine months of 2021, we benefited from return to accrual adjustments primarily associated with a step-up of certain Italian assets to fair market value and benefits resulting from the Coronavirus Aid, Relief, and Economic Security Act, also known as “CARES Act” of 2.0% and 1.1%, respectively; such benefits did not impact our effective tax rate in the first nine months of 2022. These increases were partially offset by 1.4% decrease in our effective income tax rate due to changes in pre-tax income in countries with varying statutory tax rates.

## 10. Commitments and Contingencies

*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 September 30, 2022, we had capital expenditure commitments, which we incurred in our normal course of business, including commitments of approximately $137 million related to building our new PO/TBA plant in Houston, Texas.

*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 difficulties in obtaining the required financial assurance instruments for our current operations.

*Environmental Remediation*—Our accrued liability for future environmental remediation costs at current and former plant sites and other remediation sites totaled $122 million and $138 million as of September 30, 2022 and December 31, 2021, respectively. At September 30, 2022, the accrued liabilities for individual sites range from less than $1 million to $26 million. The remediation expenditures are expected to occur over a number of years and are 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.

*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 September 30, 2022, 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 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.

## 11. Shareholders' Equity and Redeemable Non-controlling Interests

### *Shareholders' Equity*

*Dividend Distributions*—The following table summarizes the dividends paid in the periods presented, including the special dividend that our board of directors declared in May 2022:

| Millions of dollars, except per share amounts | Dividend Per Ordinary Share | Aggregate Dividends Paid | Date of Record |
|---|---|---|---|
| March 2022 - Quarterly dividend | $ 1.13 | $ 371 | March 7, 2022 |
| June 2022 - Quarterly dividend | 1.19 | 389 | June 6, 2022 |
| June 2022 - Special dividend | 5.20 | 1,704 | June 6, 2022 |
| September 2022 - Quarterly dividend | 1.19 | 388 | August 29, 2022 |
| | $ 8.71 | $ 2,852 | |

In addition to the dividends paid to ordinary shareholders above, we paid $7 million of dividend equivalents to holders of restricted stock unit awards during the first nine months of 2022, which are recognized as dividends in Retained earnings.

*Share Repurchase Authorization*—In May 2022, our shareholders approved a proposal to authorize us to repurchase up to 34.0 million ordinary shares, through November 27, 2023 ("2022 Share Repurchase Authorization"), which superseded any prior repurchase authorizations. The timing and amount of these repurchases, which are determined based on our evaluation of market conditions 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 employee benefit and compensation plans.

The following table summarizes our share repurchase activity for the periods presented:

| Millions of dollars, except shares and per share amounts | Shares Repurchased | Average Purchase Price | Total Purchase Price, Including Commissions and Fees |
|---|---|---|---|
| For nine months ended September 30, 2022: | | | |
| 2021 Share Repurchase Authorization | 2,111,538 | $ 97.72 | $ 206 |
| 2022 Share Repurchase Authorization | 2,286,216 | 87.50 | 200 |
| | 4,397,754 | $ 92.41 | $ 406 |
| | | | |
| For nine months ended September 30, 2021: | | | |
| 2021 Share Repurchase Authorization | 953,681 | $ 93.34 | $ 89 |

Total cash paid for share repurchases for the nine months ended September 30, 2022 and 2021 was $420 million and $78 million, respectively. Cash payments made during the reporting period may differ from the total purchase price, including commissions and fees, due to the timing of payments.

*Ordinary Shares*—The changes in the outstanding amounts of ordinary shares are as follows:

| | Nine Months Ended September 30, | |
|---|---|---|
| | 2022 | 2021 |
| Ordinary shares outstanding: | | |
| Beginning balance | 329,536,389 | 334,015,220 |
| Share-based compensation | 273,943 | 415,857 |
| Employee stock purchase plan | 210,504 | 149,956 |
| Purchase of ordinary shares | (4,397,754) | (953,681) |
| Ending balance | 325,623,082 | 333,627,352 |

*Treasury Shares*—The changes in the amounts of treasury shares held by the Company are as follows:

| | Nine Months Ended September 30, | |
|---|---|---|
| | 2022 | 2021 |
| Ordinary shares held as treasury shares: | | |
| Beginning balance | 10,675,605 | 6,030,408 |
| Share-based compensation | (273,943) | (415,857) |
| Employee stock purchase plan | — | (50,006) |
| Purchase of ordinary shares | 4,397,754 | 953,681 |
| Ending balance | 14,799,416 | 6,518,226 |

*Accumulated Other Comprehensive Loss*—The components of, and after-tax changes in, Accumulated other comprehensive loss as of and for the nine months ended September 30, 2022 and 2021 are presented in the following tables:

| Millions of dollars | Financial Derivatives | Defined Benefit Pension and Other Postretirement Benefit Plans | Foreign Currency Translation Adjustments | Total |
|---|---|---|---|---|
| Balance – December 31, 2021 | $ (354) | $ (528) | $ (921) | $ (1,803) |
| Other comprehensive income (loss) before reclassifications | 490 | 53 | (236) | 307 |
| Tax expense before reclassifications | (113) | (12) | (119) | (244) |
| Amounts reclassified from accumulated other comprehensive loss | (219) | 121 | — | (98) |
| Tax (expense) benefit | 55 | (28) | — | 27 |
| Net other comprehensive income (loss) | 213 | 134 | (355) | (8) |
| Balance – September 30, 2022 | $ (141) | $ (394) | $ (1,276) | $ (1,811) |

| Millions of dollars | Financial Derivatives | Unrealized Gains (Losses) on Available -for-Sale Debt Securities | Defined Benefit Pension and Other Postretirement Benefit Plans | Foreign Currency Translation Adjustments | Total |
|---|---|---|---|---|---|
| Balance – December 31, 2020 | $ (426) | $ 1 | $ (752) | $ (766) | $ (1,943) |
| Other comprehensive income (loss) before reclassifications | 311 | (1) | — | (92) | 218 |
| Tax expense before reclassifications | (69) | — | — | (35) | (104) |
| Amounts reclassified from accumulated other comprehensive loss | (142) | — | 66 | — | (76) |
| Tax (expense) benefit | 32 | — | (10) | — | 22 |
| Net other comprehensive income (loss) | 132 | (1) | 56 | (127) | 60 |
| Balance – September 30, 2021 | $ (294) | $ — | $ (696) | $ (893) | $ (1,883) |

The amounts reclassified out of each component of Accumulated other comprehensive loss are as follows:

| Millions of dollars | Three Months Ended September 30, 2022 | Three Months Ended September 30, 2021 | Nine Months Ended September 30, 2022 | Nine Months Ended September 30, 2021 | Affected Line Item on the Consolidated Statements of Income |
|---|---|---|---|---|---|
| Reclassification adjustments for: | | | | | |
| Financial derivatives: | | | | | |
| Commodities | $ (22) | $ (14) | $ (54) | $ (18) | Cost of sales |
| Foreign currency | (67) | (60) | (169) | (128) | Interest expense |
| Interest rates | 1 | 1 | 4 | 4 | Interest expense |
| Income tax benefit | 22 | 17 | 55 | 32 | Provision for income taxes |
| Financial derivatives, net of tax | (66) | (56) | (164) | (110) | |
| Amortization of defined pension items: | | | | | |
| Settlement loss | 6 | 20 | 100 | 24 | Other income (expense), net |
| Actuarial loss | 5 | 14 | 18 | 40 | Other income (expense), net |
| Prior service cost | 1 | — | 3 | 2 | Other income (expense), net |
| Income tax expense | (2) | (6) | (28) | (10) | Provision for income taxes |
| Defined pension items, net of tax | 10 | 28 | 93 | 56 | |
| Total reclassifications, before tax | (76) | (39) | (98) | (76) | |
| Income tax benefit | 20 | 11 | 27 | 22 | Provision for income taxes |
| Total reclassifications, after tax | $ (56) | $ (28) | $ (71) | $ (54) | Amount included in net income |

***Redeemable Non-controlling Interests***

Our redeemable non-controlling interests relate to shares of cumulative perpetual special stock ("redeemable non-controlling interest stock") issued by a consolidated subsidiary. As of September 30, 2022 and December 31, 2021, we had 113,471 and 115,374 shares of redeemable non-controlling interest stock outstanding, respectively. These shares may be redeemed at any time at the discretion of the holders. During the three and nine months ended September 30, 2022, 1,903 shares were redeemed for approximately $2 million.

In February, May and August 2022, we paid cash dividends of $15.00 per share to our redeemable non-controlling interest shareholders of record as of January 15, 2022, April 15, 2022 and July 15, 2022, respectively. Dividends totaled $5 million for each of the nine months ended September 30, 2022 and 2021.

## 12. Per Share Data

Basic earnings per share is based upon the weighted average number of shares of common stock outstanding during the period. Diluted earnings per share includes the effect of certain stock option and other equity-based compensation awards. Our unvested restricted stock units contain non-forfeitable rights to dividend equivalents and are considered participating securities. We calculate basic and diluted earnings per share under the two-class method.

Earnings per share data is as follows:

| | Three Months Ended September 30, | | | |
|---|---|---|---|---|
| | 2022 | | 2021 | |
| Millions of dollars | Continuing Operations | Discontinued Operations | Continuing Operations | Discontinued Operations |
| Net income (loss) | $ 573 | $ (1) | $ 1,763 | $ (1) |
| Dividends on redeemable non-controlling interests | (2) | — | (2) | — |
| Net income attributable to participating securities | — | — | (4) | — |
| Net income (loss) attributable to ordinary shareholders – basic and diluted | $ 571 | $ (1) | $ 1,757 | $ (1) |
| | | | | |
| **Millions of shares, except per share amounts** | | | | |
| Basic weighted average common stock outstanding | 326 | 326 | 334 | 334 |
| Effect of dilutive securities | 1 | 1 | — | — |
| Potential dilutive shares | 327 | 327 | 334 | 334 |
| | | | | |
| Earnings per share: | | | | |
| Basic | $ 1.75 | $ — | $ 5.25 | $ — |
| Diluted | $ 1.75 | $ — | $ 5.25 | $ — |

LYONDELLBASELL INDUSTRIES N.V.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS-(Continued)

| | Nine Months Ended September 30, | | | |
|---|---|---|---|---|
| | 2022 | | 2021 | |
| **Millions of dollars** | Continuing Operations | Discontinued Operations | Continuing Operations | Discontinued Operations |
| Net income (loss) | $ 3,539 | $ (3) | $ 4,892 | $ (1) |
| Dividends on redeemable non-controlling interests | (5) | — | (5) | — |
| Net income attributable to participating securities | (9) | — | (12) | — |
| Net income (loss) attributable to ordinary shareholders – basic and diluted | $ 3,525 | $ (3) | $ 4,875 | $ (1) |
| | | | | |
| **Millions of shares, except per share amounts** | | | | |
| Basic weighted average common stock outstanding | 327 | 327 | 334 | 334 |
| Effect of dilutive securities | 1 | 1 | — | — |
| Potential dilutive shares | 328 | 328 | 334 | 334 |
| | | | | |
| Earnings per share: | | | | |
| Basic | $ 10.77 | $ (0.01) | $ 14.58 | $ — |
| Diluted | $ 10.75 | $ (0.01) | $ 14.57 | $ — |

## 13. 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 from continuing operations 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.

Summarized financial information concerning reportable segments is shown in the following tables for the periods presented:

| | Three Months Ended September 30, 2022 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Millions of dollars** | **O&P–Americas** | **O&P–EAI** | **I&D** | **APS** | **Refining** | **Technology** | **Other** | **Total** |
| Sales and other operating revenues: | | | | | | | | |
| Customers | $ 2,300 | $ 2,767 | $ 3,229 | $ 1,294 | $ 2,506 | $ 154 | $ — | $ 12,250 |
| Intersegment | 1,266 | 181 | 54 | — | 246 | 19 | (1,766) | — |
| | 3,566 | 2,948 | 3,283 | 1,294 | 2,752 | 173 | (1,766) | 12,250 |
| Income (loss) from equity investments | 19 | (39) | (6) | — | — | — | — | (26) |
| EBITDA | 559 | (83) | 360 | 66 | 106 | 92 | 8 | 1,108 |
| Capital expenditures | 69 | 52 | 245 | 20 | 22 | 25 | 6 | 439 |

LYONDELLBASELL INDUSTRIES N.V.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS-(Continued)

| | Three Months Ended September 30, 2021 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Millions of dollars | O&P–Americas | O&P–EAI | I&D | APS | Refining | Technology | Other | Total |
| Sales and other operating revenues: | | | | | | | | |
| Customers | $ 3,071 | $ 3,262 | $ 2,851 | $ 1,280 | $ 2,050 | $ 186 | $ — | $ 12,700 |
| Intersegment | 1,337 | 196 | 43 | 6 | 238 | 52 | (1,872) | — |
| | 4,408 | 3,458 | 2,894 | 1,286 | 2,288 | 238 | (1,872) | 12,700 |
| Income from equity investments | 29 | 66 | 9 | — | — | — | — | 104 |
| EBITDA | 1,568 | 474 | 348 | 121 | 41 | 155 | (16) | 2,691 |
| Capital expenditures | 72 | 54 | 327 | 20 | 17 | 22 | 2 | 514 |

| | Nine Months Ended September 30, 2022 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Millions of dollars | O&P–Americas | O&P–EAI | I&D | APS | Refining | Technology | Other | Total |
| Sales and other operating revenues: | | | | | | | | |
| Customers | $ 7,184 | $ 9,786 | $ 10,219 | $ 4,124 | $ 8,467 | $ 465 | $ — | $ 40,245 |
| Intersegment | 4,046 | 638 | 169 | 3 | 793 | 83 | (5,732) | — |
| | 11,230 | 10,424 | 10,388 | 4,127 | 9,260 | 548 | (5,732) | 40,245 |
| Income (loss) from equity investments | 81 | (39) | (17) | — | — | — | — | 25 |
| EBITDA | 2,375 | 264 | 1,581 | 309 | 672 | 307 | 1 | 5,509 |
| Capital expenditures | 305 | 250 | 673 | 50 | 48 | 81 | 10 | 1,417 |

| | Nine Months Ended September 30, 2021 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Millions of dollars | O&P–Americas | O&P–EAI | I&D | APS | Refining | Technology | Other | Total |
| Sales and other operating revenues: | | | | | | | | |
| Customers | $ 7,770 | $ 9,342 | $ 7,086 | $ 3,882 | $ 4,784 | $ 479 | $ — | $ 33,343 |
| Intersegment | 3,220 | 618 | 160 | 10 | 575 | 107 | (4,690) | — |
| | 10,990 | 9,960 | 7,246 | 3,892 | 5,359 | 586 | (4,690) | 33,343 |
| Income from equity investments | 94 | 263 | 32 | — | — | — | — | 389 |
| EBITDA | 4,011 | 1,594 | 1,126 | 385 | (150) | 341 | (13) | 7,294 |
| Capital expenditures | 219 | 141 | 717 | 55 | 62 | 64 | 27 | 1,285 |

In April 2022 we announced our decision to cease operation of our Houston Refinery no later than the end of 2023. We determined that exiting the refining business by the end of next year is the best strategic and financial path forward for the company. Our exit of the refining business progresses our decarbonization goals, and the site's prime location gives us more options for advancing our future strategic objectives, including circularity. In the interim, we will continue serving the fuels market and consider potential alternatives for the site.

In connection with the planned exit from the refinery business, we expensed accelerated lease amortization costs and personnel costs of $36 million and $48 million, respectively, during the third quarter of 2022. We also recorded liabilities for asset retirement obligations of $121 million at September 30, 2022. We expect to expense additional costs primarily consisting of accelerated amortization of operating lease assets of approximately $200 million to $300 million, personnel costs of approximately $50 million to $80 million, and other charges of approximately $50 million to $100 million. We intend to proceed with an orderly shut-down and do not expect to recognize these charges all at once, but rather over time.

As of September 30, 2022, we had $473 million and $533 million of renewable identification numbers reflected in Prepaid expenses and other current assets and Accrued liabilities, respectively, for our refinery business.

In the second quarter of 2022 we sold our ownership interest in our polypropylene manufacturing facility located in Geelong, Australia, LyondellBasell Australia (Holdings) Pty Ltd, for consideration of $38 million. In connection with this sale, we assessed the net assets of the disposal group for impairment and determined that the carrying value exceeded the fair value less costs to sell. As a result, we recognized a non-cash impairment charge in the second quarter of 2022 of $69 million in the operating results of our O&P—EAI segment. The fair value measurement for the disposal group is based on expected consideration and classified as Level 3 within the fair value hierarchy. The charge is reflected as Impairments in our Consolidated Statements of Income.

A reconciliation of EBITDA to Income from continuing operations before income taxes is shown in the following table for each of the periods presented:

| | Three Months Ended September 30, | | Nine Months Ended September 30, | |
|---|---|---|---|---|
| **Millions of dollars** | **2022** | **2021** | **2022** | **2021** |
| EBITDA: | | | | |
| Total segment EBITDA | $ 1,100 | $ 2,707 | $ 5,508 | $ 7,307 |
| Other EBITDA | 8 | (16) | 1 | (13) |
| Less: | | | | |
| Depreciation and amortization expense | (318) | (351) | (933) | (1,016) |
| Interest expense | (70) | (126) | (202) | (366) |
| Add: | | | | |
| Interest income | 7 | 1 | 13 | 8 |
| Income from continuing operations before income taxes | $ 727 | $ 2,215 | $ 4,387 | $ 5,920 |

## Item 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

### GENERAL

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

### OVERVIEW

During the third quarter of 2022 our results declined compared to the second quarter of 2022. Higher energy costs, new supply and weaker markets pressured global petrochemical margins. Global demand for our products utilized in consumer packaging remained stable, but demand from durable goods markets softened. In Europe, olefins, polyolefins and intermediate chemicals markets encountered significantly higher energy costs and weak demand. In response to these challenging conditions, we postponed the restart of our ethylene cracker in France until the first quarter of 2023 and reduced operating rates across our global asset base to match lower demand. In China, markets remained weak due to zero-COVID measures and tepid growth. In North America, new supply and inventory destocking led to declines in polyolefins prices. The impacts of higher energy, raw material, labor and transportation costs were reflected in our Advanced Polymers Solutions results. Our oxyfuels and refining businesses continued to earn margins above historical averages. Lastly we launched our value enhancement program, which we expect will generate $750 million in recurring annual EBITDA by the end of 2025.

During the first nine months of 2022 our results decreased compared to the first nine months of 2021, primarily due to lower results in our O&P—Americas segment driven by lower olefin margins, and in our O&P—EAI segment driven by lower volumes and margins across most businesses, lower income from equity investments and the unfavorable impacts of foreign exchange. These declines were partially offset by higher margins in our Refining and Intermediates & Derivatives segments.

During the third quarter and first nine months of 2022 we generated $1,414 million and $4,515 million in cash from operating activities, respectively. We remain committed to a disciplined approach to capital allocation. During the first nine months of 2022 we paid dividends of $2,859 million to shareholders, which included a special dividend and increased quarterly dividend, and repurchased $420 million worth of our shares.

Results of operations for the periods discussed are presented in the table below:

| | Three Months Ended | | Nine Months Ended | |
|---|---|---|---|---|
| **Millions of dollars** | **September 30, 2022** | **June 30, 2022** | **September 30, 2022** | **September 30, 2021** |
| Sales and other operating revenues | $ 12,250 | $ 14,838 | $ 40,245 | $ 33,343 |
| Cost of sales | 11,088 | 12,267 | 34,491 | 26,463 |
| Impairments | — | 69 | 69 | — |
| Selling, general and administrative expenses | 319 | 329 | 976 | 927 |
| Research and development expenses | 31 | 32 | 95 | 91 |
| Operating income | 812 | 2,141 | 4,614 | 5,862 |
| Interest expense | (70) | (58) | (202) | (366) |
| Interest income | 7 | 4 | 13 | 8 |
| Other income (expense), net | 4 | (86) | (63) | 27 |
| (Loss) income from equity investments | (26) | 22 | 25 | 389 |
| Income from continuing operations before income taxes | 727 | 2,023 | 4,387 | 5,920 |
| Provision for income taxes | 154 | 378 | 848 | 1,028 |
| Income from continuing operations | 573 | 1,645 | 3,539 | 4,892 |
| Loss from discontinued operations, net of tax | (1) | (1) | (3) | (1) |
| Net income | 572 | 1,644 | 3,536 | 4,891 |
| Other comprehensive income (loss), net of tax – | | | | |
| Financial derivatives | 23 | 102 | 213 | 132 |
| Unrealized losses on available-for-sale debt securities | — | — | — | (1) |
| Defined benefit pension and other postretirement benefit plans | 51 | 78 | 134 | 56 |
| Foreign currency translations | (169) | (161) | (355) | (127) |
| Total other comprehensive (loss) income, net of tax | (95) | 19 | (8) | 60 |
| Comprehensive income | $ 477 | $ 1,663 | $ 3,528 | $ 4,951 |

## RESULTS OF OPERATIONS

**Revenues**—Revenues decreased by $2,588 million, or 17%, in the third quarter of 2022 compared to the second quarter of 2022. Average sales prices were lower for many of our products as sales prices generally correlate with crude oil prices, which decreased relative to the second quarter of 2022 coupled with lower demand across most of our segments and increased industry supply in our O&P—Americas and I&D segments. These lower prices led to a 12% decrease in revenue. Lower volumes driven by reduced demand resulted in a 3% decrease in Revenues. Unfavorable foreign exchange impacts resulted in a 2% decrease in Revenues.

Revenues increased by $6,902 million, or 21%, in the first nine months of 2022 compared to the first nine months of 2021. Average sales prices were higher for many of our products as sales prices generally correlate with crude oil prices, which increased relative to the first nine months of 2021. These higher prices led to a 22% increase in revenue. Higher volumes driven by improved demand resulted in a 3% increase in Revenues. Unfavorable foreign exchange impacts resulted in a 4% decrease in Revenues.

**Cost of Sales**—Cost of sales decreased by $1,179 million, or 10%, in the third quarter of 2022 compared to the second quarter of 2022. These decreases were primarily related to lower feedstock costs.

Cost of sales increased $8,028 million, or 30%, in the first nine months of 2022 compared to the first nine months of 2021. These increases were primarily related to higher feedstock and energy costs.

**Operating Income**—Operating income decreased by $1,329 million, or 62%, in the third quarter of 2022 compared to the second quarter of 2022. Operating income in our O&P—Americas, I&D, Refining, O&P— EAI, APS and Technology segments decreased $377 million, $345 million, $324 million, $207 million, $62 million, and $24 million, respectively.

Operating income decreased by $1,248 million, or 21%, in the first nine months of 2022 compared to the first nine months of 2021. Operating income in our O&P—Americas, O&P—EAI, APS and Technology segments decreased by $1,598 million, $998 million, $73 million and $27 million, respectively. These decreases were partially offset by increases in Operating income in our Refining and I&D segments of $868 million and $565 million, respectively.

Results for each of our business segments are discussed further in the Segment Analysis section below.

**Income from Equity Investments**—Income from our equity investments decreased by $48 million, or 218%, in the third quarter of 2022 compared to the second quarter of 2022 and by $364 million, or 94%, in the first nine months of 2022 compared to the first nine months of 2021. The decrease in the third quarter of 2022 compared to the second quarter of 2022 was primarily driven by decreases in our O&P—EAI segment primarily driven by lower margins for joint ventures in the Middle East and Europe. The decrease in the first nine months of 2022 compared to the first nine months of 2021 was primarily driven by decreases in our O&P—EAI segment as a result of margin compression largely attributable to decreased spreads for our integrated cracker joint venture in China, which remained challenged by weak markets due to zero-COVID measures and logistical challenges.

**Income Taxes**—Our effective income tax rate for the third quarter of 2022 was 21.2% compared with 18.7% for the second quarter of 2022. The higher effective tax rate for the third quarter of 2022 is primarily attributable to decreased exempt income and return to accrual adjustments of 5.1% and 1.9% respectively. These increases were partially offset by a 5.3% decrease in our effective income tax rate due to changes in pre-tax income in countries with varying statutory tax rates.

Our effective income tax rate for the first nine months of 2022 was 19.3% compared with 17.4% for the first nine months of 2021. In the first nine months of 2021, we benefited from return to accrual adjustments primarily associated with a step-up of certain Italian assets to fair market value and benefits resulting from the Coronavirus Aid, Relief, and Economic Security Act, also known as “CARES Act” of 2.0% and 1.1%, respectively; such benefits did not impact our effective tax rate in the first nine months of 2022. These increases were partially offset by 1.4% decrease in our effective income tax rate due to changes in pre-tax income in countries with varying statutory tax rates.

Our income tax results are discussed further in Note 9 to the Consolidated Financial Statements.

**Comprehensive Income**—Comprehensive income decreased by $1,186 million in the third quarter of 2022 compared to the second quarter of 2022, and by $1,423 million in the first nine months of 2022 compared to the first nine months of 2021, primarily due to declines in net income. The activities from the remaining components of Comprehensive income are discussed below.

Financial derivatives designated as cash flow hedges, primarily our forward-starting interest rate swaps, led to a decrease in Comprehensive income of $79 million in the third quarter of 2022 compared to the second quarter of 2022, and an increase of $81 million in the first nine months of 2022 compared to the first nine months of 2021 due to periodic changes in the benchmark interest rates, combined with less notional outstanding during the third quarter of 2022.

Defined benefit pension and other postretirement benefit plans led to an increase in Comprehensive income of $78 million in the first nine months of 2022 compared to the first nine months of 2021, primarily resulting from pension settlements.

We recognized additional foreign currency translation losses in Comprehensive income of $228 million in the first nine months of 2022 compared to the first nine months of 2021, primarily due to the strengthening of the U.S. dollar relative to the euro.

See Note 7, 8 and 11 to our Consolidated Financial Statements for further discussions.

## Segment Analysis

We use earnings from continuing operations 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 or losses and components of pension and other postretirement benefits other than service costs are included in "Other". For additional information related to our operating segments, as well as a reconciliation of EBITDA to its nearest GAAP measure, Income from continuing operations before income taxes, see Note 13 to our Consolidated Financial Statements.

Revenues and the components of EBITDA for the periods presented are reflected in the table below:

| | Three Months Ended | | Nine Months Ended | |
|---|---|---|---|---|
| Millions of dollars | September 30, 2022 | June 30, 2022 | September 30, 2022 | September 30, 2021 |
| **Sales and other operating revenues:** | | | | |
| O&P—Americas segment | $ 3,566 | $ 4,069 | $ 11,230 | $ 10,990 |
| O&P—EAI segment | 2,948 | 3,714 | 10,424 | 9,960 |
| I&D segment | 3,283 | 3,766 | 10,388 | 7,246 |
| APS segment | 1,294 | 1,425 | 4,127 | 3,892 |
| Refining segment | 2,752 | 3,788 | 9,260 | 5,359 |
| Technology segment | 173 | 194 | 548 | 586 |
| Other, including intersegment eliminations | (1,766) | (2,118) | (5,732) | (4,690) |
| Total | $ 12,250 | $ 14,838 | $ 40,245 | $ 33,343 |
| **Operating income (loss):** | | | | |
| O&P—Americas segment | $ 391 | $ 768 | $ 1,887 | $ 3,485 |
| O&P—EAI segment | (86) | 121 | 173 | 1,171 |
| I&D segment | 290 | 635 | 1,393 | 828 |
| APS segment | 38 | 100 | 226 | 299 |
| Refining segment | 98 | 422 | 668 | (200) |
| Technology segment | 82 | 106 | 281 | 308 |
| Other, including intersegment eliminations | (1) | (11) | (14) | (29) |
| Total | $ 812 | $ 2,141 | $ 4,614 | $ 5,862 |
| **Depreciation and amortization:** | | | | |
| O&P—Americas segment | $ 149 | $ 144 | $ 437 | $ 427 |
| O&P—EAI segment | 43 | 42 | 132 | 150 |
| I&D segment | 83 | 81 | 245 | 264 |
| APS segment | 26 | 25 | 80 | 83 |
| Refining segment | 9 | 2 | 11 | 58 |
| Technology segment | 8 | 10 | 28 | 34 |
| Total | $ 318 | $ 304 | $ 933 | $ 1,016 |
| **Income (loss) from equity investments:** | | | | |
| O&P—Americas segment | $ 19 | $ 29 | $ 81 | $ 94 |
| O&P—EAI segment | (39) | (1) | (39) | 263 |
| I&D segment | (6) | (6) | (17) | 32 |
| Total | $ (26) | $ 22 | $ 25 | $ 389 |

| Millions of dollars | Three Months Ended September 30, 2022 | Three Months Ended June 30, 2022 | Nine Months Ended September 30, 2022 | Nine Months Ended September 30, 2021 |
|---|---|---|---|---|
| **Other income (expense), net:** | | | | |
| O&P—Americas segment | $ — | $ (36) | $ (30) | $ 5 |
| O&P—EAI segment | (1) | (3) | (2) | 10 |
| I&D segment | (7) | (35) | (40) | 2 |
| APS segment | 2 | (7) | 3 | 3 |
| Refining segment | (1) | (6) | (7) | (8) |
| Technology segment | 2 | (4) | (2) | (1) |
| Other, including intersegment eliminations | 9 | 5 | 15 | 16 |
| Total | $ 4 | $ (86) | $ (63) | $ 27 |
| **EBITDA:** | | | | |
| O&P—Americas segment | $ 559 | $ 905 | $ 2,375 | $ 4,011 |
| O&P—EAI segment | (83) | 159 | 264 | 1,594 |
| I&D segment | 360 | 675 | 1,581 | 1,126 |
| APS segment | 66 | 118 | 309 | 385 |
| Refining segment | 106 | 418 | 672 | (150) |
| Technology segment | 92 | 112 | 307 | 341 |
| Other, including intersegment eliminations | 8 | (6) | 1 | (13) |
| Total | $ 1,108 | $ 2,381 | $ 5,509 | $ 7,294 |

***Olefins and Polyolefin—Americas Segment***

**Overview**—EBITDA in the third quarter of 2022 decreased compared to second quarter of 2022 driven by a decline in olefins and polyolefins margins. EBITDA decreased in the first nine months of 2022 relative to the first nine months of 2021 primarily driven by lower olefins margins.

*Ethylene Raw Materials*—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 the third and second quarters of 2022, and the first nine months of 2022 and 2021, approximately 65% to 75% 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 dollars | Three Months Ended September 30, 2022 | Three Months Ended June 30, 2022 | Nine Months Ended September 30, 2022 | Nine Months Ended September 30, 2021 |
|---|---|---|---|---|
| Sales and other operating revenues | $ 3,566 | $ 4,069 | $ 11,230 | $ 10,990 |
| Income from equity investments | 19 | 29 | 81 | 94 |
| EBITDA | 559 | 905 | 2,375 | 4,011 |

**Revenue**—Revenues for our O&P—Americas segment decreased by $503 million, or 12%, in the third quarter of 2022 compared to the second quarter of 2022 and increased by $240 million, or 2%, in the first nine months of 2022 compared to the first nine months of 2021.

*Third quarter of 2022 versus second quarter of 2022*—Lower average sales prices resulted in a revenue decrease of 16% primarily driven by lower demand and an increase in industry supply for polyethylene and polypropylene. Revenue increased by 4% as a result of higher sales volumes for olefins.

*First nine months of 2022 versus first nine months of 2021*—Higher average sales prices for co-products resulted in a 1% increase in revenue primarily driven by higher demand combined with tight market conditions. Higher sales volumes resulted in a revenue increase of 1% as the first nine months of 2021 were impacted by the effects of unusually cold temperatures and associated electrical power outages that led to shutdowns of manufacturing facilities in Texas.

**EBITDA**—EBITDA decreased by $346 million, or 38%, in the third quarter of 2022 compared to the second quarter of 2022 and decreased by $1,636 million, or 41%, in the first nine months of 2022 compared to the first nine months of 2021.

*Third quarter of 2022 versus second quarter of 2022*—Lower olefins results led to a 22% decrease in EBITDA primarily due to lower margins driven by lower co-product prices along with a decline in the average sales price of ethylene. Lower polyethylene results led to a 17% decrease in EBITDA due to lower margins driven by lower average sales prices.

*First nine months of 2022 versus first nine months of 2021*—Lower olefins results led to a 33% decrease in EBITDA due to lower margins driven by higher feedstock and energy costs coupled with a decline in the average sales price of ethylene. Lower polyethylene results led to a 4% decrease in EBITDA. This change was driven by lower margins as a result of lower spreads partially offset by higher volumes. Lower polypropylene results led to a 3% decrease in EBITDA. Approximately 65% of this change was driven by lower margins as a result of lower spreads with the remainder due to a decrease in volumes due to unplanned downtime.

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

**Overview**—EBITDA decreased in the third quarter of 2022 compared to the second quarter of 2022 primarily due to lower margins across all businesses and an increase in loss from equity investments. EBITDA decreased in the first nine months of 2022 relative to the first nine months of 2021 as a result of lower margins and volumes across all businesses, lower income from equity investments and the unfavorable impacts of foreign exchange.

During the first nine months of 2022, we had planned and unplanned maintenance resulting in ethylene cracker operating rates of approximately 70% of capacity compared to 95% of capacity during the nine months ended September 30, 2021.

*Ethylene Raw Materials*—In Europe, naphtha is the primary raw material for our ethylene production and represented approximately 70% of the raw materials used in the third and second quarters of 2022 and the first nine months of 2022 and 2021.

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

| | Three Months Ended | | Nine Months Ended | |
|---|---|---|---|---|
| **Millions of dollars** | **September 30, 2022** | **June 30, 2022** | **September 30, 2022** | **September 30, 2021** |
| Sales and other operating revenues | $ 2,948 | $ 3,714 | $ 10,424 | $ 9,960 |
| (Loss) income from equity investments | (39) | (1) | (39) | 263 |
| EBITDA | (83) | 159 | 264 | 1,594 |

**Revenue**—Revenues decreased by $766 million, or 21%, in the third quarter of 2022 compared to the second quarter of 2022 and increased by $464 million, or 5%, in the first nine months of 2022 compared to the first nine months of 2021.

*Third quarter of 2022 versus second quarter of 2022*—Lower average sales prices resulted in a 14% decrease in revenue as sales prices generally correlate with crude oil prices, which on average, decreased compared to the second quarter of 2022, coupled with lower demand driven by higher energy costs. Unfavorable foreign exchange impacts resulted in a revenue decrease of 4%. Lower volumes resulted in a revenue decrease of 3% primarily due to lower demand.

*First nine months of 2022 versus first nine months of 2021*—Higher average sales prices resulted in a 19% increase in revenue as sales prices generally correlate with crude oil prices, which on average, increased compared to the first nine months of 2021. Unfavorable foreign exchange impacts resulted in a revenue decrease of 8%. Lower volumes resulted in a revenue decrease of 6% primarily due to lower demand along with planned and unplanned maintenance.

**EBITDA**—EBITDA decreased by $242 million, or 152%, in the third quarter of 2022 compared to the second quarter of 2022 and by $1,330 million, or 83%, in the first nine months of 2022 compared to the first nine months of 2021.

In the second quarter of 2022, we recognized a $69 million non-cash impairment charge in conjunction with the sale of our polypropylene manufacturing facility located in Australia, see Note 13 to the Consolidated Financial Statements for additional information. The charge resulted in a 43% increase in EBITDA for the third quarter of 2022 compared to the second quarter of 2022 and a 4% decrease in EBITDA for the first nine months of 2022 compared to the first nine months of 2021.

*Third quarter of 2022 versus second quarter of 2022*—Lower polyethylene and polypropylene results led to a 118% decrease in EBITDA primarily driven by lower margins as a result of higher energy costs and lower spreads due to decreased demand. Lower olefins results led to a 47% decrease in EBITDA primarily driven by lower margins as a result of lower ethylene and co-product prices. Increased losses from our equity investments led to a decrease in EBITDA of 25% mainly attributable to lower margins in the Middle East and Europe. Unfavorable foreign exchange impacts resulted in a 6% decrease in EBITDA.

*First nine months of 2022 versus first nine months of 2021*—Lower polyethylene and polypropylene results led to a 33% decrease in EBITDA. Approximately 65% of the change was driven by decreased margins resulting from higher energy costs and lower spreads with the remainder due to a decrease in volumes driven by lower demand. Lower olefins results led to a 21% decrease in EBITDA, which was equally driven by lower volumes due to planned and unplanned maintenance and lower margins resulting from higher feedstock and energy costs which outpaced increased ethylene prices. Lower income from our equity investments led to a decrease in EBITDA of 19% mainly attributable to lower spreads. Unfavorable foreign exchange impacts resulted in an 8% decrease in EBITDA.

***Intermediates and Derivatives Segment***

**Overview**—EBITDA decreased in the third quarter of 2022 compared to the second quarter of 2022, primarily driven by margin compression across most businesses. EBITDA increased in the first nine months of 2022 compared to the first nine months of 2021, primarily driven by oxyfuels and related products margin improvements.

The following table sets forth selected financial information for the I&D segment including Income from equity investments, which is a component of EBITDA:

| | Three Months Ended | | Nine Months Ended | |
|---|---|---|---|---|
| Millions of dollars | September 30, 2022 | June 30, 2022 | September 30, 2022 | September 30, 2021 |
| Sales and other operating revenues | $ 3,283 | $ 3,766 | $ 10,388 | $ 7,246 |
| (Loss) income from equity investments | (6) | (6) | (17) | 32 |
| EBITDA | 360 | 675 | 1,581 | 1,126 |

**Revenue**—Revenues decreased by $483 million, or 13%, in the third quarter of 2022 compared to the second quarter of 2022 and increased by $3,142 million, or 43%, in the first nine months of 2022 compared to the first nine months of 2021.

*Third quarter of 2022 versus second quarter of 2022*—Lower average sales prices resulted in a 14% decrease in revenue as sales prices generally correlate with crude oil prices, which, on average, decreased compared to the second quarter of 2022, coupled with lower demand and increased industry supply. Unfavorable foreign exchange impacts resulted in a revenue decrease of 2%. Sales volumes improved resulting in a 3% increase in revenue, largely due to the absence of planned and unplanned outages experienced during the second quarter of 2022.

*First nine months of 2022 versus first nine months of 2021*—Higher average sales prices resulted in a 36% increase in revenue as sales prices generally correlate with crude oil prices, which, on average, increased compared to the same period in 2021, coupled with lower industry supply. Sales volumes improved resulting in an 11% increase in revenue as the first nine months of 2021 were impacted by unusually cold temperatures and associated electrical power outages that led to shutdowns of our manufacturing facilities in Texas. Unfavorable foreign exchange impacts resulted in a revenue decrease of 4%.

**EBITDA**—EBITDA decreased by $315 million, or 47%, in the third quarter of 2022 compared to the second quarter of 2022 and increased by $455 million, or 40%, in the first nine months of 2022 compared to the first nine months of 2021.

In the second quarter of 2022, we recognized a non-cash pension settlement loss of $37 million, see Note 8 to the Consolidated Financial Statements for additional information. This loss resulted in a 5% increase in EBITDA for the third quarter of 2022 compared to the second quarter of 2022 and a 3% decrease in EBITDA for the first nine months of 2022 compared to the first nine months of 2021.

*Third quarter of 2022 versus second quarter of 2022*—Intermediate chemicals and oxyfuels and related products results decreased EBITDA by 31% and 14%, respectively, primarily driven by lower margins due to lower average sales prices. Propylene oxide and derivatives results led to an EBITDA decrease of 8%. Approximately 65% of the change was due to lower margins driven by higher energy costs and lower average sales prices with the remainder due to lower volumes resulting from lower demand.

*First nine months of 2022 versus first nine months of 2021*—Oxyfuels and related products results increased EBITDA by 48% primarily driven by margin improvement as a result of higher sales prices. Propylene oxide and derivatives results increased EBITDA by 6% which was equally driven by improved margins due to tight market supply and increased volumes due to higher demand. Unfavorable foreign exchange impacts resulted in a 5% decrease in EBITDA. Lower income from our equity investments led to a decrease in EBITDA of 4% mainly attributable to margin compression in Asia.

***Advanced Polymer Solutions Segment***

**Overview**—EBITDA in the third quarter of 2022 relative to the second quarter of 2022 was lower due to a decline in the results of both advanced polymers and compounding and solutions. EBITDA in the first nine months of 2022 relative to the first nine months of 2021 was lower due to a decline in compounding and solutions results partially offset by improved advanced polymers results.

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

| | Three Months Ended | | Nine Months Ended | |
|---|---|---|---|---|
| **Millions of dollars** | **September 30, 2022** | **June 30, 2022** | **September 30, 2022** | **September 30, 2021** |
| Sales and other operating revenues | $ 1,294 | $ 1,425 | $ 4,127 | $ 3,892 |
| EBITDA | 66 | 118 | 309 | 385 |

**Revenue**—Revenues decreased by $131 million, or 9%, in the third quarter of 2022 compared to the second quarter of 2022 and increased by $235 million, or 6%, in the first nine months of 2022 compared to the first nine months of 2021.

*Third quarter of 2022 versus second quarter of 2022*—Foreign exchange impacts resulted in a revenue decrease of 4%. Average sales price decreased resulting in a 3% decrease in revenue as sales prices generally correlate with crude oil prices, which, on average, decreased compared to the second quarter of 2022. Sales volumes decreased resulting in a 2% decrease in revenue stemming from lower demand.

*First nine months of 2022 versus first nine months of 2021*—Average sales price increased resulting in a 18% increase in revenue as sales prices generally correlate with crude oil prices, which, on average, increased compared to the first nine months of 2021. Foreign exchange impacts resulted in a revenue decrease of 9%. Sales volumes decreased resulting in a 3% decrease in revenue stemming from constraints in automotive production as a result of component shortages.

**EBITDA**—EBITDA decreased by $52 million, or 44%, in the third quarter of 2022 compared to the second quarter of 2022 and by $76 million, or 20%, in the first nine months of 2022 compared to the first nine months of 2021.

In the second quarter of 2022, we recognized a non-cash pension settlement loss of $8 million, see Note 8 to the Consolidated Financial Statements for additional information. The loss resulted in a 7% increase in EBITDA for the third quarter of 2022 compared to the second quarter of 2022 and a 2% decrease in EBITDA for the first nine months of 2022 compared to the first nine months of 2021.

*Third quarter of 2022 versus second quarter of 2022*—Advanced polymers and compounding and solutions results led to an EBITDA decrease of 31% and 19%, respectively. Approximately 70% of the change for both advanced polymers and compounding and solutions was due to lower margins driven by higher costs with the remainder due to lower volumes resulting from lower demand.

*First nine months of 2022 versus first nine months of 2021*—Compounding and solutions results led to an EBITDA decrease of 20%. Approximately 60% of the change was due to lower volumes as described above with the remainder driven by margin compression. Advanced polymers results increased by 6% driven by margin improvements due to higher spreads. Unfavorable foreign exchange impacts resulted in a EBITDA decrease of 7%.

***Refining Segment***

**Overview**—EBITDA decreased in the third quarter of 2022 relative to the second quarter of 2022 due to lower margins and planned downtime. EBITDA increased in the first nine months of 2022 compared to the first nine months of 2021 due to higher margins.

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.

| | Three Months Ended | | Nine Months Ended | |
|---|---|---|---|---|
| **Millions of dollars** | **September 30, 2022** | **June 30, 2022** | **September 30, 2022** | **September 30, 2021** |
| Sales and other operating revenues | $ 2,752 | $ 3,788 | $ 9,260 | $ 5,359 |
| EBITDA | 106 | 418 | 672 | (150) |
| | | | | |
| **Thousands of barrels per day** | | | | |
| Heavy crude oil processing rates | 215 | 252 | 241 | 220 |
| | | | | |
| **Market margins, dollars per barrel** | | | | |
| Brent - 2-1-1 | $ 33.18 | $ 47.83 | $ 34.45 | $ 14.00 |
| Brent - Maya differential | 13.35 | 8.00 | 9.95 | 5.97 |
| Total Maya 2-1-1 | $ 46.53 | $ 55.83 | $ 44.40 | $ 19.97 |

**Revenue**—Revenues decreased by $1,036 million, or 27%, in the third quarter of 2022 compared to the second quarter of 2022 and increased by $3,901 million, or 73%, in the first nine months of 2022 compared to the first nine months of 2021.

*Third quarter of 2022 versus second quarter of 2022*—Lower product prices led to a revenue decrease of 15% due to an average Brent crude oil price decrease of approximately $14 per barrel. Sales volumes declined resulting in a 12% decrease in revenue due to planned downtime.

*First nine months of 2022 versus first nine months of 2021*—Higher product prices led to a revenue increase of 62% due to an average Brent crude oil price increase of approximately $35 per barrel. Sales volumes increased resulting in a 11% increase in revenue due to improved demand as refined products markets recovered from the impacts of the COVID-19 pandemic and improved supply as the first nine months of 2021 were impacted by planned and unplanned outages, including the effects of unusually cold temperatures and associated electrical power outages that led to shutdowns of our manufacturing facilities in Texas.

**EBITDA**—EBITDA decreased by $312 million, or 75%, in the third quarter of 2022 compared to the second quarter of 2022 and increased by $822 million, or 548%, in the first nine months of 2022 compared to the first nine months of 2021.

In April 2022 we announced our decision to cease operation of our Houston Refinery no later than the end of 2023. In the third quarter of 2022, we expensed accelerated lease amortization costs and personnel costs of $36 million and $48 million, respectively, see Note 13 to the Consolidated Financial Statements for additional information. These costs resulted in a 20% and 56% decrease in EBITDA for the third quarter of 2022 compared to the second quarter of 2022 and the first nine months of 2022 compared to the first nine months of 2021, respectively.

*Third quarter of 2022 versus second quarter of 2022*—EBITDA decreased approximately 38% due to margin declines as a result of a decrease in the Maya 2-1-1 market margin with the remainder due to lower volumes as a result of planned downtime.

*First nine months of 2022 versus first nine months of 2021*—Volumes increased as demand improved for refined products which resulted in a 15% increase in EBITDA. The remaining increase in EBITDA was driven by margin improvements due to an increase in the Maya 2-1-1 market margin.

***Technology Segment***

**Overview**—EBITDA decreased in the third quarter of 2022 compared to the second quarter of 2022 from lower licensing revenues together with lower catalyst margins and volumes. EBITDA decreased in the first nine months of 2022 relative to the first nine months of 2021 driven by lower licensing revenues and the unfavorable impacts of foreign exchange partly offset by higher catalyst volumes.

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

| | Three Months Ended | | Nine Months Ended | |
|---|---|---|---|---|
| Millions of dollars | September 30, 2022 | June 30, 2022 | September 30, 2022 | September 30, 2021 |
| Sales and other operating revenues | $ 173 | $ 194 | $ 548 | $ 586 |
| EBITDA | 92 | 112 | 307 | 341 |

**Revenue**—Revenues decreased by $21 million, or 11%, in the third quarter of 2022 compared to the second quarter of 2022 and by $38 million, or 6%, in the first nine months of 2022 compared to the first nine months of 2021.

*Third quarter of 2022 versus second quarter of 2022*—Unfavorable foreign exchange impacts decreased revenue by 5%. Lower catalyst volumes resulted in a 4% decrease in revenue due to lower demand. Licensing revenues decreased by 1% as fewer contracts reached significant milestones during the quarter. Changes in average catalyst sales price resulted in a revenue decrease of 1%.

*First nine months of 2022 versus first nine months of 2021*—Unfavorable foreign exchange impacts resulted in an 9% decrease in revenue. Lower licensing revenues resulting from fewer contracts reaching significant milestones drove a 2% decrease in revenue. Changes in average catalyst sales price resulted in a 1% decrease in revenue. Higher catalyst volumes resulted in a 6% increase in revenue primarily driven by strong demand.

**EBITDA**—EBITDA decreased by $20 million, or 18%, in the third quarter of 2022 compared to the second quarter of 2022 and by $34 million, or 10%, in the first nine months of 2022 compared to the first nine months of 2021.

*Third quarter of 2022 versus second quarter of 2022*—Lower licensing revenues resulting from fewer contracts reaching significant milestones drove a 6% decrease in EBITDA. Lower catalyst margins resulted in an EBITDA decrease of 6% due to higher energy costs and lower catalyst volumes decreased EBITDA by 4% driven by lower demand. Unfavorable foreign exchange impacts resulted in a 4% decrease in EBITDA.

*First nine months of 2022 versus first nine months of 2021*—Lower licensing revenues resulting from fewer contracts reaching significant milestones drove a 10% decrease in EBITDA. Unfavorable foreign exchange impacts resulted in an EBITDA decrease of 9%. Higher catalyst volumes driven by stronger demand resulted in an EBITDA increase of 8%.

## FINANCIAL CONDITION

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

| Millions of dollars | Nine Months Ended September 30, 2022 | 2021 |
|---|---|---|
| Cash provided by (used in): | | |
| Operating activities | $ 4,515 | $ 4,616 |
| Investing activities | (1,433) | (797) |
| Financing activities | (2,929) | (3,627) |

**Operating Activities**—Cash provided by operating activities of $4,515 million in the first nine months of 2022 primarily reflected earnings adjusted for non-cash items and by the main components of working capital—Accounts receivable, Inventories and Accounts payable.

In the first nine months of 2022, the main components of working capital used $267 million of cash driven primarily by an increase in Inventories partially offset by a decrease in Accounts receivable and an increase in Accounts payable. The increase in Inventories was primarily due to inventory build following planned and unplanned outages. The decrease in Accounts receivable was driven by lower revenues across most businesses primarily driven by lower average sales prices and lower sales volume. The increase in Accounts payable was primarily driven by higher energy costs and higher raw material costs for our Refining and I&D segments.

Cash provided by operating activities of $4,616 million in the first nine months of 2021 reflected earnings adjusted for non-cash items and cash used by the main components of working capital.

In the first nine months of 2021, the main components of working capital used $1,517 million of cash driven primarily by an increase in Accounts receivable and Inventories, partially offset by an increase in Accounts payable. The increase in Accounts receivable was driven by higher revenues across most businesses primarily driven by higher sales volumes along with higher average sales prices. The increase in Inventories was primarily due to an increase in raw material costs coupled with the replenishment of inventory levels to support anticipated business demands. The increase in Accounts payable was primarily driven by increased raw material costs.

**Investing Activities**—Capital expenditures in the first nine months of 2022 totaled $1,417 million compared to $1,285 million in the first nine months of 2021. Approximately 50% and 60% of our capital expenditures in the first nine months of 2022 and 2021, respectively, was for profit-generating growth projects, primarily our PO/TBA plant, with the remaining expenditures supporting sustaining maintenance. See Note 13 to the Consolidated Financial Statements for additional information regarding capital expenditures by segment.

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.

In the first nine months of 2022 and 2021, we received proceeds of $8 million and $309 million, respectively, from the liquidation of our investment in equity securities. Additionally, in the first nine months of 2021, we received proceeds of $346 million from maturities of certain available-for-sale debt securities.

In the first nine months of 2021 we made an equity contribution of $104 million to form Ningbo ZRCC LyondellBasell New Material Company Limited, a 50/50 joint venture with China Petroleum & Chemical Corporation. The joint venture constructed a new propylene oxide and styrene monomer unit in Zhenhai Ningbo, China which began production in January 2022. The joint venture is included in our I&D segment.

In July 2022, foreign currency contracts with an aggregate notional value of €500 million expired. Upon settlement of these foreign currency contracts, we paid €500 million ($501 million at the expiry spot rate) to our counterparties and received $614 million from our counterparties.

In July 2021, foreign currency contracts with an aggregate notional value of €300 million expired. Upon settlement of these foreign currency contracts, we paid €300 million ($355 million at the expiry spot rate) to our counterparties and received $358 million from our counterparties.

**Financing Activities**—We made dividend payments totaling $2,859 million, which included a combination of a special dividend of $5.20 per share and an increased quarterly dividend, and $1,110 million in the first nine months of 2022 and 2021, respectively. Additionally, in the first nine months of 2022 and 2021, we made payments of $420 million and $78 million to repurchase outstanding ordinary shares, respectively.

In the first nine months of 2022 and 2021, we received net proceeds of $96 million and made net repayments of $103 million, respectively, related to the issuance and repurchase of commercial paper instruments under our commercial paper program.

In the first nine months of 2022, we received a return of collateral of $238 million related to the positions held with our counterparties for certain forward-starting interest rate swaps.

In the first nine months of 2021, we repaid $1,450 million, $325 million and $500 million outstanding under our $4,000 million senior unsecured delayed draw term loan credit facility due March 2022, 4% Guaranteed Notes due 2023 and 2.875% Guaranteed notes due 2025, respectively.

**Liquidity and Capital Resources**

*Overview*

We plan to fund our working capital, capital expenditures, debt service, dividends and other cash requirements with our current available liquidity and 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. 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.

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. Our focus on funding our dividends while remaining committed to a strong investment grade balance sheet continues to be the foundation of our capital allocation strategy.

*Cash and Liquid Investments*

As of September 30, 2022, we had Cash and cash equivalents totaling $1,480 million, which includes $919 million in jurisdictions outside of the U.S., primarily held in countries within the European Union and China. There are currently no legal or economic restrictions that would materially impede our transfers of cash.

*Credit Arrangements*

At September 30, 2022, we had total debt, including current maturities, of $11,316 million. Additionally, we had $209 million of outstanding letters of credit, bank guarantees and surety bonds issued under uncommitted credit facilities to support trade payables and other obligations.

We had total unused availability under our credit facilities of $3,850 million at September 30, 2022, which included the following:

- $2,950 million under our $3,250 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. At September 30, 2022, we had $300 million of outstanding commercial paper, net of discount, and no borrowings or letters of credit outstanding under this facility; and

- $900 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 September 30, 2022, we had no borrowings or letters of credit outstanding under this facility.

At any time and from time to time, we may repay or redeem our outstanding debt, including purchases of our outstanding bonds in the open market, through privately negotiated transactions or a combination thereof, in each case using cash and cash equivalents, cash from our short-term investments, cash from operating activities, proceeds from the issuance of debt or proceeds from asset divestitures. Any repayment or redemption of our debt will depend on prevailing market conditions, our liquidity requirements, contractual restrictions and other factors. In connection with such repurchases or redemptions, 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.

*Share Repurchases*

In May 2022, our shareholders approved a proposal to authorize us to repurchase up to 34.0 million ordinary shares, through November 27, 2023, which superseded any prior repurchase authorizations. 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 the first nine months of 2022, we purchased approximately 4.4 million shares under our share repurchase authorizations for $406 million.

As of October 26, 2022, we had approximately 31.7 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. For additional information related to our share repurchase authorizations, see Note 11 to the Consolidated Financial Statements.

## CURRENT BUSINESS OUTLOOK

In October, demand from consumer packaging, oxyfuels and refining markets remains strong. Nonetheless, persistent inflation and high energy costs coupled with weaker seasonal demand are likely to drive further margin compression across most of the company's businesses in the fourth quarter. Challenging conditions are expected to continue in European and Asian markets. To match the global demand outlook, we expect fourth quarter average operating rates of 75% for assets in our O&P—Americas segment, 60% for European assets in our O&P—EAI segment and 75% for assets in our I&D segment. The company remains watchful for market improvements in China.

## ACCOUNTING AND REPORTING CHANGES

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

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

This report includes forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. You can identify our forward-looking statements by the words "anticipate," "estimate," "believe," "continue," "could," "intend," "may," "plan," "potential," "predict," "should," "will," "expect," "objective," "projection," "forecast," "goal," "guidance," "outlook," "effort," "target" and similar expressions.

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

- the cost of raw materials represents a substantial portion of our operating expenses, and energy costs generally follow price trends of crude oil, natural gas liquids and/or natural gas; price volatility can significantly affect our results of operations and we may be unable to pass raw material and energy cost increases on to our customers due to the significant competition that we face, the commodity nature of our products and the time required to implement pricing changes;
- our operations in the United States ("U.S.") have benefited from low-cost natural gas and natural gas liquids; decreased availability of these materials (for example, from their export or regulations impacting hydraulic fracturing in the U.S.) could reduce the current benefits we receive;
- if crude oil prices fall materially, or remain low relative to U.S. natural gas prices, we would see less benefit from low-cost natural gas and natural gas liquids and it could have a negative effect on our results of operations;
- industry production capacities and operating rates may lead to periods of oversupply and low profitability;
- we may face unplanned operating interruptions (including leaks, explosions, fires, weather-related incidents, mechanical failures, unscheduled downtime, supplier disruptions, labor shortages, strikes, work stoppages or other labor difficulties, transportation interruptions, spills and releases and other environmental incidents) at any of our facilities, which would negatively impact our operating results; for example, because the Houston refinery is our only refining operation, we would not have the ability to increase production elsewhere to mitigate the impact of any outage at that facility;
- changes in general economic, business, political and regulatory conditions in the countries or regions in which we operate could increase our costs, restrict our operations and reduce our operating results;
- our ability to execute our organic growth plans may be negatively affected by our ability to complete projects on time and on budget;
- our ability to acquire new businesses and assets and integrate those operations into our existing operations and make cost-saving changes in operations;
- our ability to successfully implement initiatives identified pursuant to our value enhancement program and generate anticipated earnings;
- uncertainties associated with worldwide economies could create reductions in demand and pricing, as well as increased counterparty risks, which could reduce liquidity or cause financial losses resulting from counterparty default;
- uncertainties related to the extent and duration of the pandemic-related decline in demand, or other impacts due to the pandemic in geographic regions or markets served by us, or where our operations are located, including the risk of prolonged recession;

- the negative outcome of any legal, tax and environmental proceedings or changes in laws or regulations regarding legal, tax and environmental matters may increase our costs, reduce demand for our products, or otherwise limit our ability to achieve savings under current regulations;

- any loss or non-renewal of favorable tax treatment under agreements or treaties, or changes in laws, regulations or treaties, may substantially increase our tax liabilities;

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

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

- we may be unable to meet our sustainability goals, including the ability to operate safely, increase production of recycled and renewable-based polymers, and reduce our emissions;

- we may be unable to shut down the Houston refinery within the expected timeframe or incur additional charges or expenses;

- we have significant international operations, and fluctuations in exchange rates, valuations of currencies and our possible inability to access cash from operations in certain jurisdictions on a tax-efficient basis, if at all, could negatively affect our liquidity and our results of operations;

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

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

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

Any of these factors, or a combination of these factors, could materially affect our future results of operations and the ultimate accuracy of the forward-looking statements. Our management cautions against putting undue reliance on forward-looking statements or projecting any future results based on such statements or present or prior earnings levels.

All subsequent written and oral forward-looking statements attributable to us or any person acting on our behalf are expressly qualified in their entirety by the cautionary statements contained or referred to in this section and any other cautionary statements that may accompany such forward-looking statements. Except as otherwise required by applicable law, we disclaim any duty to update any forward-looking statements.

**Item 3**. **QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK**

Our exposure to market and regulatory risks is described in Item 7A of our Annual Report on Form 10-K for the year ended December 31, 2021. Our exposure to such risks has not changed materially in the nine months ended September 30, 2022.

## Item 4. CONTROLS AND PROCEDURES

As of September 30, 2022, with the participation of our management, our Chief Executive Officer (principal executive officer) and our Chief Financial Officer (principal financial and accounting officer) carried out an evaluation, pursuant to Rule 13a-15(b) of the Securities Exchange Act of 1934, as amended (the "Act"), of the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rule 13a-15(e) of the Act). Based upon that evaluation, our Chief Executive Officer and our Chief Financial Officer concluded that our disclosure controls and procedures were effective as of September 30, 2022.

There have been no changes in our internal controls over financial reporting, as defined in Rule 13a-15(f) of the Act, in the period covered by this report that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

## PART II. OTHER INFORMATION

### Item 1. LEGAL PROCEEDINGS

Information regarding our litigation and legal proceedings can be found in Note 10 to the Consolidated Financial Statements, which is incorporated into this Item 1 by reference.

In September 2013, U.S. Environmental Protection Agency Region V issued a Notice and Finding of Violation alleging violations at our Morris, Illinois facility related to flaring activity. In July 2022, we entered into a final settlement agreement providing for a civil penalty of $324,000 and the installation of monitoring and control equipment. The consent decree approving the settlement was entered by the court and is now effective.

Additional information about our environmental proceedings can be found in Part I, Item 3 of our 2021 Annual Report on Form 10-K, which is incorporated into this Item 1 by reference.

### Item 1A. RISK FACTORS

There have been no material changes to the risk factors associated with our business previously disclosed in "Item 1A. Risk Factors," in our Annual Report on Form 10-K for the year ended December 31, 2021.

### Item 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

**Issuer Purchases of Equity Securities**

| Period | Total Number of Shares Purchased | | Average Price Paid per Share | Total Number of Shares Purchased as Part of Publicly Announced Plans or Authorizations | Maximum Number of Shares That May Yet Be Purchased Under the Plans or Authorizations |
|---|---|---|---|---|---|
| July 1 - July 31 | 1,137,656 | $ | 86.29 | 1,137,656 | 32,328,895 |
| August 1 - August 31 | 588,164 | $ | 88.17 | 588,164 | 31,740,731 |
| September 1 - September 30 | — | $ | — | — | 31,740,731 |
| Total | 1,725,820 | $ | 86.93 | 1,725,820 | 31,740,731 |

On May 27, 2022, our shareholders approved a share repurchase authorization of up to 34,026,947 shares of our ordinary shares, through November 27, 2023, which superseded any prior repurchase authorizations. 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.

### Item 4. MINE SAFETY DISCLOSURES

Not applicable.

## Item 6. EXHIBITS

| Exhibit Number | Description |
|---|---|
| 10.1+* | Appointment letter for Torkel Rhenman dated September 27, 2022 |
| 10.2+* | Appointment letter for Ken Lane dated September 26, 2022 |
| 31.1* | Certification of Principal Executive Officer pursuant to Rule 13a-14(a) under the Securities Exchange Act of 1934 |
| 31.2* | Certification of Principal Financial Officer pursuant to Rule 13a-14(a) under the Securities Exchange Act of 1934 |
| 32* | Certifications pursuant to 18 U.S.C. Section 1350 |
| 101.INS* | XBRL Instance Document–The instance document does not appear in the interactive data file because its XBRL tags are embedded within the Inline XBRL document. |
| 101.SCH* | XBRL Schema Document |
| 101.CAL* | XBRL Calculation Linkbase Document |
| 101.DEF* | XBRL Definition Linkbase Document |
| 101.LAB* | XBRL Labels Linkbase Document |
| 101.PRE* | XBRL Presentation Linkbase Document |
| 104* | Cover Page Interactive Data File (formatted as inline XBRL and contained in Exhibit 101) |

+ Management contract or compensatory plan, contract or arrangement
* Filed herewith

## SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

**LYONDELLBASELL INDUSTRIES N.V.**

Date: October 28, 2022

*/s/ Chukwuemeka A. Oyolu*
Chukwuemeka A. Oyolu
Senior Vice President,
Chief Accounting Officer and Investor Relations
*(Principal Accounting Officer)*

Exhibit 10.1

September 22, 2022

Torkel Rhenman
Houston, TX

Dear Torkel:

I am pleased to confirm on behalf of LyondellBasell that your new role will be Executive Vice President, Advanced Polymer Solutions reporting directly to me. This change will be effective October 1, 2022.

Your annualized base salary, incentives (both STI and LTI), prior benefits and perquisites as well as share ownership guidelines remain unchanged.

You will continue to be eligible to participate in the amended and restated Executive Severance Plan (the "Severance Plan") in accordance with the terms of the Severance Plan and your applicable participation agreement.

Please read, sign, scan and return this letter to Michele Gest at [redacted] to indicate your acceptance as soon as possible.

Congratulations Torkel, I look forward to welcoming you on the Executive Committee as we work together to align our business strategy with execution towards our North Star.

Sincerely,

*/s/ Peter Vanacker*

Peter Vanacker
Chief Executive Officer

By signature, I acknowledge receipt of this letter and my intent to carry out the work that this new role will involve.

| | |
|---|---|
| */s/ Torkel Rhenman* | September 27, 2022 |
| Signature | Date |

Torkel Rhenman
Printed Name

*This does not change the existing terms and conditions of your current employment status. This letter is not a contract of employment for any specific or minimum term. Any prior oral or written representations to the contrary are void and our at-will relationship may not be modified except by a formal written employment contract signed by the senior officer for Human Resources at Lyondell Chemical Company.*

**Exhibit 10.2**

September 22, 2022

Kenneth Lane
Houston, TX

Dear Ken:

I am pleased to confirm on behalf of LyondellBasell that your new role will be Executive Vice President, Olefins and Polyolefins (O&P) reporting directly to me. This change will be effective October 1, 2022.

Your annualized base salary will be $870,000 per year ("annual base salary").

Your incentives (both STI and LTI), prior benefits and perquisites as well as share ownership guidelines remain unchanged.

You will continue to be eligible to participate in the amended and restated Executive Severance Plan (the "Severance Plan") in accordance with the terms of the Severance Plan and your applicable participation agreement.

Please read, sign, scan and return this letter to Michele Gest at [redacted] to indicate your acceptance as soon as possible.

Congratulations Ken, I look forward to welcoming you on the Executive Committee as we work together to align our business strategy with execution towards our North Star.

Sincerely,

*/s/ Peter Vanacker*

Peter Vanacker
Chief Executive Officer

By signature, I acknowledge receipt of this letter and my intent to carry out the work that this new role will involve.

| | |
|---|---|
| */s/ Kenneth Lane* | September 26, 2022 |
| Signature | Date |
| Kenneth Lane | |
| Printed Name | |

*This does not change the existing terms and conditions of your current employment status. This letter is not a contract of employment for any specific or minimum term. Any prior oral or written representations to the contrary are void and our at-will relationship may not be modified except by a formal written employment contract signed by the senior officer for Human Resources at Lyondell Chemical Company.*

**Exhibit 31.1**

**CERTIFICATION**

I, Peter Vanacker, certify that:

1. I have reviewed this quarterly report on Form 10-Q of LyondellBasell Industries N.V.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

October 28, 2022

*/s/ Peter Vanacker*
Peter Vanacker
Chief Executive Officer
*(Principal Executive Officer)*

**Exhibit 31.2**

**CERTIFICATION**

I, Michael C. McMurray, certify that:

1. I have reviewed this quarterly report on Form 10-Q of LyondellBasell Industries N.V.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

October 28, 2022

*/s/Michael C. McMurray*
Michael C. McMurray
Executive Vice President and
Chief Financial Officer
*(Principal Financial Officer)*

**CERTIFICATIONS PURSUANT TO 18 U.S.C. SECTION 1350**

In connection with the Quarterly Report of LyondellBasell Industries N.V. (the Company) on Form 10-Q for the period ended September 30, 2022, as filed with the U.S. Securities and Exchange Commission on the date hereof (the Report), each of the undersigned hereby certifies, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to their knowledge:

(1) The Report fully complies with the requirements of Sections 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

October 28, 2022

*/s/Peter Vanacker*
Peter Vanacker
Chief Executive Officer
*(Principal Executive Officer)*

*/s/Michael C. McMurray*
Michael C. McMurray
Executive Vice President and
Chief Financial Officer
*(Principal Financial Officer)*