UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 10-Q

(Mark One)

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

For the quarterly period ended June 30, 2023

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 333-211719

ASHLAND INC.

(a Delaware corporation)
I.R.S. No. 81-2587835

8145 Blazer Drive
Wilmington, Delaware 19808
Telephone Number (302) 995-3000

Securities Registered Pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol	Name of each exchange on which registered
Common Stock, par value $.01 per share	ASH	New York Stock Exchange

Securities Registered Pursuant to Section 12(g) of the Act: None

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

Indicate by check mark whether the Registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (232.405 of this chapter) during the preceding 12 months (or for such shorter period that the Registrant was required to submit such files). Yes ☑ No ☐

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

Large Accelerated Filer	☑	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 ☑

At June 30, 2023, there were 51,241,016 shares of Registrant’s Common Stock outstanding.

PART I - FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

ASHLAND INC. AND CONSOLIDATED SUBSIDIARIES
STATEMENTS OF CONSOLIDATED COMPREHENSIVE INCOME (LOSS)

(In millions except per share data - unaudited)	Three months ended June 30 2023	Three months ended June 30 2022	Nine months ended June 30 2023	Nine months ended June 30 2022
Sales	$ 546	$ 644	$ 1,674	$ 1,759
Cost of sales	368	404	1,134	1,139
Gross profit	178	240	540	620
Selling, general and administrative expense	84	127	256	299
Research and development expense	12	14	37	40
Intangibles amortization expense - Note G	24	23	70	71
Equity and other income	4	1	5	2
Income on acquisitions and divestitures, net - Note B	—	35	—	42
Operating income	62	112	182	254
Net interest and other expense (income)	3	59	(21)	108
Other net periodic benefit loss - Note K	2	1	6	—
Income from continuing operations before income taxes	57	52	197	146
Income tax expense - Note J	15	1	21	25
Income from continuing operations	42	51	176	121
Income (loss) from discontinued operations (net of income taxes) - Note C	8	(15)	6	749
Net income	$ 50	$ 36	$ 182	$ 870
PER SHARE DATA				
Basic earnings per share - Note M				
Income from continuing operations	$ 0.81	$ 0.94	$ 3.29	$ 2.16
Income (loss) from discontinued operations	0.15	(0.28)	0.11	13.40
Net income	$ 0.96	$ 0.66	$ 3.40	$ 15.56
Diluted earnings per share - Note M				
Income from continuing operations	$ 0.79	$ 0.93	$ 3.24	$ 2.12
Income (loss) from discontinued operations	0.15	(0.28)	0.11	13.16
Net income	$ 0.94	$ 0.65	$ 3.35	$ 15.28
COMPREHENSIVE INCOME				
Net income	$ 50	$ 36	$ 182	$ 870
Other comprehensive income (loss), net of tax				
Unrealized translation gain (loss)	(4)	(86)	105	(107)
Unrealized gain (loss) on commodity hedges	1	(3)	(6)	(2)
Other comprehensive income (loss) - Note N	(3)	(89)	99	(109)
Comprehensive income (loss)	$ 47	$ (53)	$ 281	$ 761

SEE NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS.

ASHLAND INC. AND CONSOLIDATED SUBSIDIARIES
CONDENSED CONSOLIDATED BALANCE SHEETS

(In millions - unaudited)	June 30 2023	September 30 2022
ASSETS		
Current assets		
Cash and cash equivalents	$ 349	$ 646
Accounts receivable (a) - Note H	345	402
Inventories - Note F	712	629
Other assets	120	91
Total current assets	1,526	1,768
Noncurrent assets		
Property, plant and equipment		
Cost	3,191	3,050
Accumulated depreciation	1,837	1,712
Net property, plant and equipment	1,354	1,338
Goodwill - Note G	1,383	1,312
Intangibles - Note G	916	963
Operating lease assets, net - Note I	126	107
Restricted investments - Note E	321	313
Asbestos insurance receivable (b) - Note L	129	138
Deferred income taxes	20	20
Other assets	254	254
Total noncurrent assets	4,503	4,445
Total assets	$ 6,029	$ 6,213
LIABILITIES AND EQUITY		
Current liabilities		
Trade and other payables	$ 210	$ 265
Accrued expenses and other liabilities	201	269
Current operating lease obligations - Note I	21	19
Total current liabilities	432	553
Noncurrent liabilities		
Long-term debt - Note H	1,328	1,270
Asbestos litigation reserve - Note L	437	472
Deferred income taxes	176	176
Employee benefit obligations - Note K	108	103
Operating lease obligations - Note I	109	94
Other liabilities	290	325
Total noncurrent liabilities	2,448	2,440
Commitments and contingencies - Note L		
Stockholders' equity - Note N	3,149	3,220
Total liabilities and stockholders' equity	$ 6,029	$ 6,213

(a) Accounts receivable includes an allowance for credit losses of $4 million at both June 30, 2023 and September 30, 2022, respectively.
(b) Asbestos insurance receivable includes an allowance for credit losses of $3 million at both June 30, 2023 and September 30, 2022, respectively.

SEE NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS.

ASHLAND INC. AND CONSOLIDATED SUBSIDIARIES
STATEMENTS OF CONDENSED CONSOLIDATED CASH FLOWS

(In millions - unaudited)	Nine months ended June 30 2023	2022
CASH FLOWS PROVIDED (USED) BY OPERATING ACTIVITIES FROM CONTINUING OPERATIONS		
Net income	$ 182	$ 870
Income from discontinued operations (net of income taxes)	(6)	(749)
Adjustments to reconcile income from continuing operations to cash flows from operating activities:		
Depreciation and amortization	181	182
Original issue discount and debt issuance costs amortization	4	4
Deferred income taxes	11	(5)
Gain from sales of property and equipment	(1)	—
Stock based compensation expense	17	14
Excess tax benefit on stock based compensation	1	1
Loss (income) from restricted investments	(57)	59
Income on acquisitions and divestitures	—	(42)
Asset impairments	4	—
Pension contributions	(7)	(4)
Gain on pension and other postretirement plan remeasurements	—	(1)
Change in operating assets and liabilities (a)	(166)	(315)
Total cash flows provided by operating activities from continuing operations	163	14
CASH FLOWS PROVIDED (USED) BY INVESTING ACTIVITIES FROM CONTINUING OPERATIONS		
Additions to property, plant and equipment	(101)	(67)
Proceeds from disposal of property, plant and equipment	3	51
Proceeds from settlement of company-owned life insurance contracts	3	2
Company-owned life insurance payments	(1)	—
Funds restricted for specific transactions	(7)	(74)
Reimbursements from restricted investments	46	28
Proceeds from sale of securities	36	75
Purchases of securities	(36)	(75)
Total cash flows used by investing activities from continuing operations	(57)	(60)
CASH FLOWS PROVIDED (USED) BY FINANCING ACTIVITIES FROM CONTINUING OPERATIONS		
Repurchase of common stock	(300)	(200)
Repayment of long-term debt	—	(250)
Repayment of short-term debt	—	(365)
Cash dividends paid	(56)	(52)
Stock based compensation employee withholding taxes paid in cash	(10)	(9)
Total cash flows used by financing activities from continuing operations	(366)	(876)
CASH USED BY CONTINUING OPERATIONS	(260)	(922)
Cash provided (used) by discontinued operations		
Operating cash flows	(43)	(302)
Investing cash flows	—	1,650
Total cash provided (used) by discontinued operations	(43)	1,348
Effect of currency exchange rate changes on cash and cash equivalents	6	(7)
INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	(297)	419
CASH AND CASH EQUIVALENTS - BEGINNING OF PERIOD	646	210
CASH AND CASH EQUIVALENTS - END OF PERIOD	$ 349	$ 629

(a) Excludes changes resulting from operations acquired, sold or held for sale.

SEE NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS.

NOTE A – SIGNIFICANT ACCOUNTING POLICIES

Basis of presentation

The accompanying unaudited Condensed Consolidated Financial Statements have been prepared in accordance with accounting principles generally accepted in the United States for interim financial reporting (U.S. GAAP) and Securities and Exchange Commission (SEC) regulations. In the opinion of management, all adjustments considered necessary for a fair presentation have been included. These statements omit certain information and footnote disclosures required for complete annual financial statements and, therefore, should be read in conjunction with the Ashland Inc. and consolidated subsidiaries (Ashland or the Company) Annual Report on Form 10-K for the fiscal year ended September 30, 2022. Results of operations for the period ended June 30, 2023 are not necessarily indicative of the expected results for the remainder of the fiscal year.

Ashland is comprised of the following reportable segments: Life Sciences, Personal Care, Specialty Additives and Intermediates. Unallocated and Other includes corporate governance activities and certain legacy matters. For additional information, see Note Q.

Use of estimates, risks and uncertainties

The preparation of Ashland’s Condensed Consolidated Financial Statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, sales and expenses, and the disclosures of contingent assets and liabilities. Significant items that are subject to such estimates and assumptions include, but are not limited to, environmental remediation, asbestos litigation, the accounting for goodwill and other intangible assets, and income taxes. Although management bases its estimates on historical experience and various other assumptions that are believed to be reasonable under the circumstances, actual results could differ significantly from the estimates under different assumptions or conditions.

Ashland’s results are affected by domestic and international economic, political, legislative, regulatory and legal actions. Economic conditions, such as recessionary trends, inflation, interest and monetary exchange rates, government fiscal policies and changes in the prices of certain key raw materials, can have a significant effect on operations. While Ashland maintains reserves for anticipated liabilities and carries various levels of insurance, Ashland could be affected by civil, criminal, regulatory or administrative actions, claims or proceedings relating to asbestos, environmental remediation or other matters.

New accounting pronouncements

A description of new U.S. GAAP accounting standards issued or adopted during the current year is required in interim financial reporting. A detailed listing of new accounting standards relevant to Ashland is included in the Annual Report on Form 10-K for the fiscal year ended September 30, 2022. There were no new standards that were either issued or adopted in the current fiscal year that will have a material impact on Ashland's Condensed Consolidated Financial Statements.

NOTE B – DIVESTITURES

Performance Adhesives

On February 28, 2022, Ashland completed the sale of its Performance Adhesives business to Arkema, a French société anonyme. Proceeds from the sale were approximately $1.7 billion, net of transaction costs. Ashland recognized a $732 million gain on sale within the Income (Loss) from Discontinued Operations caption of the Statements of Consolidated Comprehensive Income (Loss) for the nine months ended June 30, 2022.

The transaction represented a strategic shift in Ashland’s business and had a major effect on Ashland’s operations and financial results. Accordingly, the operating results and cash flows related to Performance Adhesives have been reflected as discontinued operations in the Statements of Consolidated Comprehensive Income (Loss) and Statements of Condensed Consolidated Cash Flows. See Note C for the results of operations for Performance Adhesives for all affected periods.

Certain indirect corporate costs included within the selling, general and administrative expense caption of the Statements of Consolidated Comprehensive Income (Loss) that were previously allocated to the Performance Adhesives segment do not qualify for classification within discontinued operations and are now reported as selling, general and administrative expense within continuing operations on a consolidated basis and within the Unallocated and other segment. There were no such costs for the three and nine months ended June 30, 2023 and $1 million and $8 million for the three and nine months ended June 30, 2022, respectively.

Other manufacturing facility sales

During the December 2022 quarter, Ashland entered into a definitive sale agreement to sell a Specialty Additives manufacturing facility for less than $1 million. The net asset value related to these sites was $4 million at September 30, 2022. During the three and nine months ended June 30, 2023, no impairment and $4 million of impairment charges, respectively, were recorded within the selling, general and administrative expense caption of the Statement of Consolidated Comprehensive Income (Loss) for this manufacturing facility.

During the current quarter, Ashland completed the sale of this facility, received proceeds of less than $1 million, and recorded a loss of less than $1 million within the income on acquisition and divestitures, net caption of the Statement of Consolidated Comprehensive Income (Loss) for the three and nine months ended June 30, 2023.

Other corporate assets

During the three and nine months ended June 30, 2022, Ashland completed the sale of two excess land properties. Ashland received net proceeds of approximately $50 million and recorded a pre-tax gain of $35 million within the Income on acquisitions and divestitures, net caption of the Statements of Consolidated Comprehensive Income (Loss) for the three and nine months ended June 30, 2022.

NOTE C– DISCONTINUED OPERATIONS

Ashland has divested certain businesses that have qualified as discontinued operations. The operating results from these divested businesses and subsequent adjustments related to ongoing assessments of certain retained liabilities and tax items have been recorded within the discontinued operations caption in the Statements of Consolidated Comprehensive Income (Loss) for all periods presented.

Components of amounts reflected in the Statements of Consolidated Comprehensive Income (Loss) related to discontinued operations are presented in the following table for the three and nine months ended June 30, 2023 and 2022.

	Three months ended June 30		Nine months ended June 30	
(In millions)	2023	2022	2023	2022
Income (loss) from discontinued operations (net of tax)				
Performance Adhesives	$ (1)	$ 4	$ (1)	$ 38
Composites/Marl facility	—	—	(1)	—
Valvoline	15	—	15	—
Asbestos	(4)	(13)	(4)	(13)
Water Technologies	—	(1)	—	(1)
Distribution	(2)	(5)	(3)	(7)
Gain on disposal of discontinued operations (net of tax)				
Performance Adhesives	—	—	—	732
	$ 8	$ (15)	$ 6	$ 749

The following table presents a reconciliation of the captions within Ashland's Statements of Consolidated Comprehensive Income (Loss) for the income (loss) from discontinued operations attributable to Performance Adhesives for the three and nine months ended June 30, 2022. This disclosure was not applicable for the three and nine months ended June 30, 2023 as a result of the sale in fiscal 2022.

	Three months ended June 30	Nine months ended June 30
(In millions)	2022	2022
Income (loss) from discontinued operations attributable to Performance Adhesives		
Sales	$ —	$ 171
Cost of sales	—	(122)
Selling, general and administrative expense	(1)	(12)
Research and development expense	—	(3)
Pretax income of discontinued operations	(1)	34
Income tax (expense) benefit	5	4
Income from discontinued operations	$ 4	$ 38

NOTE D – RESTRUCTURING ACTIVITIES

Fiscal 2023 Life Sciences restructuring program

During the December 2022 quarter, Ashland implemented a restructuring program within the Nutraceuticals business of the Life Sciences segment. Ashland recorded severance expense of zero and $1 million during the three and nine months ended June 30, 2023. As of June 30, 2023, the severance reserve associated with this program was less than $1 million.

Fiscal 2023 company-wide restructuring program

During the current quarter, Ashland implemented additional targeted company-wide restructuring actions to reduce costs. Ashland recorded severance expense of $1 million during the three and nine months ended June 30, 2023. As of June 30, 2023, the severance reserve associated with this program was $1 million.

NOTE E – FAIR VALUE MEASUREMENTS

Ashland uses applicable guidance for defining fair value, the initial recording and periodic remeasurement of certain assets and liabilities measured at fair value and related disclosures for instruments measured at fair value. Fair value accounting guidance establishes a fair value hierarchy, which prioritizes the inputs to valuation techniques used to measure fair value into three broad levels. The fair value hierarchy gives the highest priority to quoted prices in active markets for identical assets or liabilities (Level 1) and the lowest priority to unobservable inputs (Level 3). An instrument's categorization within the fair value hierarchy is based upon the lowest level of input that is significant to the instrument's fair value measurement.

For assets that are measured using quoted prices in active markets (Level 1), the total fair value is the published market price per unit multiplied by the number of units held without consideration of transaction costs. Assets and liabilities that are measured using significant other observable inputs (Level 2) are primarily valued by reference to quoted prices of similar assets or liabilities in active markets, adjusted for any terms specific to that asset or liability. For all other assets and liabilities for which unobservable inputs are used (Level 3), fair value is derived using fair value models, such as a discounted cash flow model or other standard pricing models that Ashland deems reasonable.

The following table summarizes financial instruments subject to recurring fair value measurements as of June 30, 2023.

(In millions)	Carrying value	Total fair value	Quoted prices in active markets for identical assets Level 1	Significant other observable inputs Level 2	Significant unobservable inputs Level 3
Assets					
Cash and cash equivalents	$ 349	$ 349	$ 349	$ —	$ —
Restricted investments (a) (b)	392	392	392	—	—
Investment of captive insurance company (c)	4	4	4	—	—
Foreign currency derivatives (d)	1	1	—	1	—
Total assets at fair value	$ 746	$ 746	$ 745	$ 1	$ —
Liabilities					
Foreign currency derivatives (e)	$ 1	$ 1	$ —	$ 1	$ —
Commodity derivatives (e)	5	5	—	5	—
Total liabilities at fair value	$ 6	$ 6	$ —	$ 6	$ —

(a) Included in restricted investments and $71 million within other current assets in the Condensed Consolidated Balance Sheets.
(b) Includes $265 million related to the Asbestos trust and $127 million related to the Environmental trust.
(c) Included in other noncurrent assets in the Condensed Consolidated Balance Sheets.
(d) Included in accounts receivable in the Condensed Consolidated Balance Sheets.
(e) Included in accrued expenses and other liabilities in the Condensed Consolidated Balance Sheets.

The following table summarizes financial asset instruments subject to recurring fair value measurements as of September 30, 2022.

(In millions)	Carrying value	Total fair value	Quoted prices in active markets for identical assets Level 1	Significant other observable inputs Level 2	Significant unobservable inputs Level 3
Assets					
Cash and cash equivalents	$ 646	$ 646	$ 646	$ —	$ —
Restricted investments (a) (b)	374	374	374	—	—
Investment of captive insurance company (c)	9	9	9	—	—
Foreign currency derivatives (d)	1	1	—	1	—
Commodity derivatives (d)	4	4	—	4	—
Total assets at fair value	$ 1,034	$ 1,034	$ 1,029	$ 5	$ —
Liabilities					
Foreign currency derivatives (e)	$ 9	$ 9	$ —	$ 9	$ —
Commodity derivatives (e)	1	1	—	1	—
Total liabilities at fair value	$ 10	$ 10	$ —	$ 10	$ —

(a) Included in restricted investments and $61 million within other current assets in the Condensed Consolidated Balance Sheets.
(b) Includes $245 million related to the Asbestos trust and $129 million related to the Environmental trust.
(c) Included in other noncurrent assets in the Condensed Consolidated Balance Sheets.
(d) Included in accounts receivable in the Condensed Consolidated Balance Sheets.
(e) Included in accrued expenses and other liabilities in the Condensed Consolidated Balance Sheets.

Restricted investments

Ashland maintains certain investments in company restricted renewable annual trusts for the purpose of paying future asbestos indemnity and defense costs and future environmental remediation and related litigation costs. The financial instruments are designated as investment securities, classified as Level 1 measurements within the fair value hierarchy. These securities were classified primarily as noncurrent restricted investment assets, with $71 million and $61 million classified within other current assets, in the Condensed Consolidated Balance Sheets as of June 30, 2023 and September 30, 2022, respectively.

The following table presents gross unrealized gains and losses for the restricted securities as of June 30, 2023 and September 30, 2022:

(In millions)	Adjusted Cost	Gross Unrealized Gain	Gross Unrealized Loss	Fair Value
As of June 30, 2023				
Demand deposit	$ 8	$ —	$ —	$ 8
Equity mutual fund	158	33	—	191
Fixed income mutual fund	232	—	(39)	193
Fair value	$ 398	$ 33	$ (39)	$ 392
As of September 30, 2022				
Demand deposit	$ 6	$ —	$ —	$ 6
Equity mutual fund	186	20	(25)	181
Fixed income mutual fund	234	—	(47)	187
Fair value	$ 426	$ 20	$ (72)	$ 374

The following table presents the investment income, net gains and losses realized, funds restricted for specific transactions, and disbursements related to the investments within the portfolio for the three and nine months ended June 30, 2023 and 2022.

	Three months ended June 30		Nine months ended June 30	
(In millions)	2023	2022	2023	2022
Investment income (a)	$ 4	$ 3	$ 10	$ 13
Net gains (losses) (a)	6	(48)	47	(72)
Funds restricted for specific transactions	1	30	7	74
Disbursements	(29)	—	(46)	(28)

(a) Included in the net interest and other expense (income) caption within the Statements of Consolidated Comprehensive Income (Loss).

Foreign currency derivatives

Ashland conducts business in a variety of foreign currencies. Accordingly, Ashland regularly uses foreign currency derivative instruments to manage exposure on certain transactions denominated in foreign currencies to curtail potential earnings volatility effects on certain assets and liabilities, including short-term inter-company loans, denominated in currencies other than Ashland's functional currency of an entity. These derivative contracts generally require exchange of one foreign currency for another at a fixed rate at a future date and generally have maturities of less than twelve months. All contracts are valued at fair value with net changes in fair value recorded within the selling, general and administrative expense caption. The impacts of these contracts were largely offset by gains and losses resulting from the impact of changes in exchange rates on transactions denominated in non-functional currencies. The following table summarizes the net gains and losses recognized during the three and nine months ended June 30, 2023 and 2022 within the Statements of Consolidated Comprehensive Income (Loss).

	Three months ended June 30		Nine months ended June 30	
(In millions)	2023	2022	2023	2022
Foreign currency derivative gains (losses)	$ 1	$ (12)	$ 10	$ (21)

The following table summarizes the fair values of the outstanding foreign currency derivatives as of June 30, 2023 and September 30, 2022 included in accounts receivable and accrued expenses and other liabilities of the Condensed Consolidated Balance Sheets.

(In millions)	June 30 2023	September 30 2022
Foreign currency derivative assets	$ 1	$ 1
Notional contract values	123	133
Foreign currency derivative liabilities	$ 1	$ 9
Notional contract values	145	535

Commodity derivatives

To manage its exposure to the market price volatility of natural gas consumed by its U.S. plants during the manufacturing process, Ashland regularly enters into forward contracts that are designated as cash flow hedges.

The following table summarizes the net gains and losses recognized during the three and nine months ended June 30, 2023 and 2022 within the cost of sales caption of the Statements of Consolidated Comprehensive Income (Loss).

	Three months ended June 30		Nine months ended June 30	
(In millions)	2023	2022	2023	2022
Commodity derivative gains (losses)	$ (2)	$ 2	$ (2)	$ 6

The following table summarizes the fair values of the outstanding commodity derivatives as of June 30, 2023, and September 30, 2022 included in accounts receivable and accrued expenses and other liabilities of the Condensed Consolidated Balance Sheets.

(In millions)	June 30 2023	September 30 2022
Commodity derivative assets	$ —	$ 4
Notional contract values	1	13
Commodity derivative liabilities	$ 5	$ 1
Notional contract values	18	9

Other financial instruments

At June 30, 2023 and September 30, 2022, Ashland's long-term debt (including the current portion and excluding debt issuance cost discounts) had a carrying value of $1,342 million and $1,284 million, respectively, compared to a fair value of $1,195 million and $1,102 million, respectively. The fair values of long-term debt are based on quoted market prices.

NOTE F – INVENTORIES

Inventories are carried at the lower of cost or net realizable value. Inventories are stated at cost using the weighted-average cost method. This method values inventories using average costs for raw materials and most recent production costs for labor and overhead.

The following table summarizes Ashland's inventories as of the reported Condensed Consolidated Balance Sheet dates.

(In millions)	June 30 2023	September 30 2022
Finished products	$ 460	$ 391
Raw materials, supplies and work in process	252	238
	$ 712	$ 629

NOTE G – GOODWILL AND OTHER INTANGIBLES

Goodwill

Ashland tests goodwill and other indefinite-lived intangible assets for impairment annually as of July 1 and when events and circumstances indicate an impairment may have occurred.

No indicators of impairment were identified in the three and nine months ended June 30, 2023.

The following is a progression of goodwill by reportable segment for the nine months ended June 30, 2023.

(In millions)	Life Sciences	Personal Care (a)	Specialty Additives (a)	Intermediates (a)	Total
Balance at September 30, 2022	$ 787	$ 118	$ 407	$ —	$ 1,312
Currency translation	45	5	21	—	71
Balance at June 30, 2023	$ 832	$ 123	$ 428	$ —	$ 1,383

(a) As of June 30, 2023 and September 30, 2022, there were accumulated impairments of $356 million, $174 million and $90 million related to the Personal Care, Specialty Additives and Intermediates reportable segments, respectively.

Other intangible assets

Intangible assets principally consist of trademarks and trade names, intellectual property and customer and supplier relationships. Intangible assets classified as finite are amortized on a straight-line basis over their estimated useful lives. The cost of trademarks and trade names is amortized principally over 3 to 20 years, intellectual property over 3 to 20 years, and customer and supplier relationships over 10 to 24 years.

Ashland annually reviews, as of July 1, indefinite-lived intangible assets for possible impairment or whenever events or changes in circumstances indicate that carrying amounts may not be recoverable.

No indicators of impairment were identified in the three and nine months ended June 30, 2023.

Other intangible assets were comprised of the following as of June 30, 2023 and September 30, 2022.

	June 30, 2023		
(In millions)	Gross carrying amount	Accumulated amortization	Net carrying amount
Definite-lived intangibles			
Trademarks and trade names	$ 98	$ (42)	$ 56
Intellectual property	738	(573)	165
Customer and supplier relationships	830	(413)	417
Total definite-lived intangibles	1,666	(1,028)	638
Indefinite-lived intangibles			
Trademarks and trade names	278	—	278
Total intangible assets	$ 1,944	$ (1,028)	$ 916

	September 30, 2022		
(In millions)	Gross carrying amount	Accumulated amortization	Net carrying amount
Definite-lived intangibles			
Trademarks and trade names	$ 95	$ (37)	$ 58
Intellectual property	718	(523)	195
Customer and supplier relationships	801	(369)	432
Total definite-lived intangibles	1,614	(929)	685
Indefinite-lived intangibles			
Trademarks and trade names	278	—	278
Total intangible assets	$ 1,892	$ (929)	$ 963

Amortization expense recognized on intangible assets was $24 million and $23 million for the three months ended June 30, 2023 and 2022, respectively, and $70 million and $71 million for the nine months ended June 30, 2023 and 2022, respectively, and is included in the intangibles amortization expense caption of the Statements of Consolidated Comprehensive Income (Loss). Estimated amortization expense for future periods is $93 million in 2023 (includes nine months actual and three months estimated), $80 million in 2024, $76 million in 2025, $74 million in 2026 and $53 million in 2027. Actual amounts may change from such estimated amounts due to fluctuations in foreign currency exchange rates, additional intangible asset acquisitions and divestitures, potential impairment, accelerated amortization, or other events.

NOTE H – DEBT AND OTHER FINANCING ACTIVITIES

The following table summarizes Ashland's current and long-term debt as of the dates reported in the Condensed Consolidated Balance Sheets.

(In millions)	June 30, 2023	September 30, 2022
3.375% Senior Notes, due 2031	$ 450	$ 450
2.00% Senior Notes, due 2028 (Euro 500 million principal)	544	489
6.875% notes, due 2043	281	282
6.50% junior subordinated notes, due 2029	63	60
Other (a)	(10)	(11)
Total debt	1,328	1,270
Short-term debt (includes current portion of long-term debt)	—	—
Long-term debt (less current portion)	$ 1,328	$ 1,270

(a) Other includes $14 million of debt issuance costs as of June 30, 2023 and September 30, 2022.

The scheduled aggregate maturities to 2027 for long-term debt by year (including the current portion and excluding debt issuance costs) are as follows as of June 30, 2023: zero in the next 4 years and $4 million in 2027.

Accounts Receivable Facilities and Off-Balance Sheet Arrangements

U.S. Accounts Receivable Sales Program

Ashland continues to maintain its U.S. Accounts Receivable Sales Program entered into during fiscal 2021. Ashland accounts for the receivables transferred to buyers as sales. Ashland recognizes any gains or losses based on the excess of proceeds received net of buyer's discounts and fees compared to the carrying value of the assets. Proceeds received, net of buyer's discounts and fees, are recorded within the operating activities of the Statements of Condensed Consolidated Cash Flows. Losses on sale of assets, including related transaction expenses are recorded within the net interest and other expense (income) caption of the Statements of Consolidated Comprehensive Income (Loss). Ashland regularly assesses its servicing obligations and records them as assets or liabilities when appropriate. Ashland also monitors its obligation with regards to the limited guarantee and records the resulting guarantee liability when warranted. When applicable, Ashland discloses the amount of the receivable that serves as over-collateralization as a restricted asset.

Ashland recognized a loss of less than $1 million and a loss of $1 million within the Statements of Consolidated Comprehensive Income (Loss) for the three months ended June 30, 2023 and June 30, 2022, respectively, and losses of $2 million and $1 million for the nine months ended June 30, 2023 and June 30, 2022, respectively, within the net interest and other expense (income) caption associated with sales under the program. Ashland has recorded $96 million in sales at June 30, 2023 against the buyer's limit, which was $115 million at June 30, 2023 compared to $110 million of sales at September 30, 2022 against the buyer's limit, which was $125 million at September 30, 2022. Ashland transferred $120 million and $136 million in receivables to the special purpose entity (SPE) as of June 30, 2023 and September 30, 2022, respectively. Ashland recorded liabilities related to its service obligations and limited guarantee as of June 30, 2023 and September 30, 2022 of less than $1 million.

As of June 30, 2023 and 2022, the year-to-date gross cash proceeds received for receivables transferred and derecognized were $150 million and $205 million, respectively, of which $164 million and $268 million were collected, which includes collections from sales in prior years transferred to the buyer. The difference between receivables transferred and derecognized versus collected of $14 million and $63 million for the periods ended June 30, 2023 and 2022, respectively, represent the impact of a net reduction in accounts receivable sales volume during each period, respectively. The prior year period included the impact of a $21 million net reduction in accounts receivables sales volume attributable to the Adhesives business sold in 2022.

On April 14, 2023, Ashland entered into Second and Third Amendments associated with this current program. As part of these amendments the buyer's limit was reduced to $115 million between April and October of each year, and up to $100 million at all other times. Additionally, the scheduled termination date was extended from May 31, 2023 to April 14, 2025.

Foreign Accounts Receivable Securitization Facility

Ashland continues to maintain its Foreign 2018 Accounts Receivable Securitization Facility. Ashland accounts for the Foreign 2018 Accounts Receivable Securitization Facility as secured borrowings, and the receivables sold pursuant to the facility are included in the Consolidated Balance Sheets as accounts receivable. At June 30, 2023 and September 30, 2022, the outstanding amounts of accounts receivable transferred by Ashland were $139 million and $162 million, respectively, and there were zero borrowings (denominated in multiple currencies) under the facility in both periods.

Available borrowing capacity and liquidity

The borrowing capacity remaining under the 2022 Credit Agreement was $593 million, which reflects the full $600 million Revolving Credit Facility less a reduction of $7 million for letters of credit outstanding as of June 30, 2023. Ashland's total borrowing capacity at June 30, 2023 was $702 million, which included $109 million of available capacity from the foreign 2018 Accounts Receivable Securitization Facility.

Additionally, Ashland had zero available liquidity under its current U.S. Accounts Receivable Sales Program as of June 30, 2023.

Covenants related to current Ashland debt agreements

Ashland's debt contains usual and customary representations, warranties and affirmative and negative covenants, including financial covenants for leverage and interest coverage ratios, limitations on liens, additional subsidiary indebtedness, restrictions on subsidiary distributions, investments, mergers, sale of assets and restricted payments and other customary limitations. As of June 30, 2023, Ashland is in compliance with all debt agreement covenant restrictions.

The maximum consolidated net leverage ratio permitted under Ashland's current credit agreement (the 2022 Credit Agreement) is 4.0. At June 30, 2023, Ashland’s calculation of the consolidated net leverage ratio was 1.8.

The minimum required consolidated interest coverage ratio under the 2022 Credit Agreement during its entire duration is 3.0. At June 30, 2023, Ashland’s calculation of the interest coverage ratio was 9.9.

NOTE I – LEASING ARRANGEMENTS

The components of lease cost recognized within the Statements of Consolidated Comprehensive Income (Loss) were as follows:

		Three months ended June 30		Nine months ended June 30	
(In millions)	Location	2023	2022	2023	2022
Lease cost:					
Operating lease cost	Selling, General & Administrative (a)	$ 3	$ 5	$ 10	$ 12
Operating lease cost	Cost of Sales	3	3	11	10
Variable lease cost	Selling, General & Administrative	1	1	3	3
Variable lease cost	Cost of Sales	2	1	4	3
Short-term leases	Cost of Sales	—	1	2	2
Total lease cost		$ 9	$ 11	$ 30	$ 30

(a) Includes $2 million lease termination fee for the three and nine months ended June 30, 2022.

Right-of-use assets exchanged for new operating lease obligations were $6 million and $7 million for the three months ended June 30, 2023 and 2022, respectively, and $29 million and $11 million for the nine months ended June 30, 2023 and 2022.

The following table provides cash paid for amounts included in the measurement of operating lease liabilities:

	Three months ended June 30		Nine months ended June 30	
(In millions)	2023	2022	2023	2022
Operating cash flows from operating leases	$ 8	$ 9	$ 21	$ 23

NOTE J – INCOME TAXES

Current fiscal year

Ashland’s effective tax rate in any interim period is subject to adjustments related to discrete items and the mix of domestic and foreign operating results. The overall effective tax rate was 26% and 11% for the three and nine months ended June 30, 2023.

The current quarter's tax rate was impacted by jurisdictional income mix, as well as net $4 million from favorable tax discrete items primarily related to changes in uncertain tax positions and adjustments to valuation allowances. The current nine month tax rate was impacted by jurisdictional income mix, as well as net $27 million from favorable tax discrete items primarily related to changes in uncertain tax positions.

Prior fiscal year

The overall effective tax rate was 2% and 17% for the three and nine months ended June 30, 2022. The prior year quarter's tax rate was impacted by jurisdictional income mix, as well as a net $1 million benefit primarily from favorable return to provision adjustments for certain jurisdictions. The nine month tax rate was impacted by jurisdictional income mix as well as $3 million from net unfavorable tax discrete items primarily related to restructuring and separation activity partially offset by a favorable valuation adjustment for certain foreign tax credits and adjustments to uncertain positions.

Unrecognized tax benefits

Changes in unrecognized tax benefits are summarized as follows for the nine months ended June 30, 2023.

(In millions)		
Balance at October 1, 2022	$	84
Increases related to positions taken in prior years		1
Decreases related to positions taken in prior years		(27)
Increases related to positions taken in the current year		3
Lapse of statute of limitations		(4)
Balance at June 30, 2023	$	57

From a combination of statute expirations and audit settlements in the next twelve months, Ashland expects a decrease in the amount accrued for uncertain tax positions of between zero and $1 million. It is reasonably possible that there could be other material changes to the amount of uncertain tax positions due to activities of the taxing authorities, settlement of audit issues or the reassessment of existing uncertain tax positions; however, Ashland is not able to estimate the impact of these items at this time.

NOTE K - EMPLOYEE BENEFIT PLANS

Plan contributions

For the nine months ended June 30, 2023, Ashland contributed $4 million to its non-U.S. pension plans and $3 million to its U.S. pension plans. Ashland expects to make additional contributions of less than $1 million to both its U.S. pension plans and non-U.S. pension plans during the remainder of fiscal 2023.

Plan Remeasurements

Following the completion of the sale of its Performance Adhesives business segment on February 28, 2022, the post-retirement benefits for approximately 40 employees transferred to Arkema, all of whom participated in a non-contributory defined benefit plan in the U.S., were frozen. This resulted in a significant decrease in total expected future years of service within the plan and required Ashland to remeasure the plan as of February 28, 2022. As a result, Ashland recorded zero and $1 million actuarial gain within the other net periodic benefits income caption of the Statements of Consolidated Comprehensive Income (Loss) for the three and nine months ended June 30, 2022.

Components of net periodic benefit costs (income)

The following table details the components of pension and other postretirement benefit costs for continuing operations.

	Pension benefits		Other postretirement benefits	
(In millions)	2023	2022	2023	2022
Three months ended June 30				
Service cost	$ —	$ 1	$ 1	$ —
Interest cost	4	2	—	—
Expected return on plan assets	(2)	(1)	—	—
Actuarial (gain)	—	—	—	—
Total net periodic benefit costs	$ 2	$ 2	$ 1	$ —
Nine months ended June 30				
Service cost	$ 2	$ 3	$ 1	$ —
Interest cost	10	5	1	1
Expected return on plan assets	(5)	(5)	—	—
Actuarial (gain)	—	(1)	—	—
Total net periodic benefit costs	$ 7	$ 2	$ 2	$ 1

For segment reporting purposes, service cost is proportionately allocated to each segment, excluding the Unallocated and other segment, and is recorded within the selling, general and administrative expense and cost of sales captions on the Statements of Consolidated Comprehensive Income (Loss). All other components are recorded within the other net periodic benefit loss caption on the Statements of Consolidated Comprehensive Income (Loss), which netted to a loss of $2 million and $6 million for the three and nine months ended June 30, 2023, respectively, and a loss of $1 million and zero for the three and nine months ended June 30, 2022.

NOTE L – LITIGATION, CLAIMS AND CONTINGENCIES

Asbestos litigation

Ashland is subject to liabilities from claims alleging personal injury caused by exposure to asbestos. Such claims result from indemnification obligations undertaken in 1990 in connection with the sale of Riley Stoker Corporation (Riley) and the acquisition of Hercules in November 2008. Although Riley, a former subsidiary, was neither a producer nor a manufacturer of asbestos, its industrial boilers contained some asbestos-containing components provided by other companies. Hercules, an indirect wholly-owned subsidiary of Ashland, has liabilities from claims alleging personal injury caused by exposure to asbestos. Such claims typically arise from alleged exposure to asbestos fibers from resin encapsulated pipe and tank products sold by one of Hercules' former subsidiaries to a limited industrial market.

To assist in developing and annually updating independent reserve estimates for future asbestos claims and related costs given various assumptions for Ashland and Hercules asbestos claims, Ashland retained third party actuarial experts Gnarus. The methodology used by Gnarus to project future asbestos costs is based largely on recent experience, including claim-filing and settlement rates, disease mix, open claims and litigation defense. The claim experience of Ashland and Hercules are separately compared to the results of previously conducted third party epidemiological studies estimating the number of people likely to develop asbestos-related diseases. Those studies were undertaken in connection with national analyses of the population expected to have been exposed to asbestos. Using that information, Gnarus estimates a range of the number of future claims that may be filed, as well as the related costs that may be incurred in resolving those claims. Changes in asbestos-related liabilities and receivables are recorded on an after-tax basis within the discontinued operations caption in the Statements of Consolidated Comprehensive Income (Loss).

Ashland asbestos-related litigation

The claims alleging personal injury caused by exposure to asbestos asserted against Ashland result primarily from indemnification obligations undertaken in 1990 in connection with the sale of Riley. The amount and timing of settlements and number of open claims can fluctuate from period to period. A summary of Ashland asbestos claims activity, excluding Hercules claims, follows.

	Nine months ended June 30		Years ended September 30		
(In thousands)	2023	2022	2022	2021	2020
Open claims - beginning of year	44	46	46	49	53
New claims filed	1	1	2	2	2
Claims settled	—	(1)	(1)	(1)	(1)
Claims dismissed	(3)	(1)	(3)	(4)	(5)
Open claims - end of period	42	45	44	46	49

Ashland asbestos-related liability

From the range of estimates, Ashland records the amount it believes to be the best estimate of future payments for litigation defense and claim settlement costs. Ashland reviews this estimate and related assumptions quarterly and annually updates the results of a non-inflated, non-discounted approximate 40-year model developed with the assistance of Gnarus.

During the most recent update completed in June 2023, it was determined that the liability for Ashland asbestos-related claims should be increased by $9 million. Total reserves for asbestos claims were $285 million at June 30, 2023 compared to $305 million at September 30, 2022.

A progression of activity in the asbestos reserve is presented in the following table.

	Nine months ended June 30		Years ended September 30		
(In millions)	2023	2022	2022	2021	2020
Asbestos reserve - beginning of year	$ 305	$ 320	$ 320	$ 335	$ 352
Reserve adjustment	9	16	16	12	13
Amounts paid	(29)	(26)	(31)	(27)	(30)
Asbestos reserve - end of period (a)	$ 285	$ 310	$ 305	$ 320	$ 335

(a) Included $28 million and $29 million classified in accrued expenses and other liabilities on the Condensed Consolidated Balance Sheets as of June 30, 2023 and September 30, 2022 respectively.

Ashland asbestos-related receivables

Ashland has insurance coverage for certain litigation defense and claim settlement costs incurred in connection with its asbestos claims, and coverage-in-place agreements exist with the insurance companies that provide substantially all of the coverage that will be accessed.

For the Ashland asbestos-related obligations, Ashland has estimated the value of probable insurance recoveries associated with its asbestos reserve based on management's interpretations and estimates surrounding the available or applicable insurance coverage, including an assumption that all solvent insurance carriers remain solvent. Substantially all of the estimated receivables from insurance companies are expected to be due from domestic insurers, all of which are solvent.

At June 30, 2023, Ashland's receivable for recoveries of litigation defense and claim settlement costs from insurers amounted to $97 million (excluding the Hercules receivable for asbestos claims discussed below) compared to $101 million at September 30, 2022. In June 2023, the annual update of the model used for purposes of valuing the asbestos reserve and its impact on valuation of future recoveries from insurers was completed. This model update resulted in a $3 million increase in the receivable for probable insurance recoveries.

A progression of activity in the Ashland insurance receivable is presented in the following table.

(In millions)	Nine months ended June 30 2023	Nine months ended June 30 2022	Years ended September 30 2022	Years ended September 30 2021	Years ended September 30 2020
Insurance receivable - beginning of year	$ 101	$ 100	$ 100	$ 103	$ 123
Receivable adjustment (a)	3	7	7	6	1
Insurance settlement	—	—	—	—	(10)
Amounts collected	(7)	(5)	(6)	(9)	(11)
Insurance receivable - end of period (b)	$ 97	$ 102	$ 101	$ 100	$ 103

(a) 2021 includes a $2 million reserve adjustment related to allowances for credit losses as a result of Ashland's adoption of the new credit measurement standard. The total allowance for credit losses were $1 million and $2 million as of June 30, 2023 and September 30, 2022, respectively.

(b) Includes $11 million and $12 million classified in accounts receivable on the Condensed Consolidated Balance Sheets as of June 30, 2023 and September 30, 2022 respectively.

Hercules asbestos-related litigation

Hercules has liabilities from claims alleging personal injury caused by exposure to asbestos. Such claims typically arise from alleged exposure to asbestos fibers from resin encapsulated pipe and tank products which were sold by one of Hercules' former subsidiaries to a limited industrial market. The amount and timing of settlements and number of open claims can fluctuate from period to period. A summary of Hercules' asbestos claims activity follows.

(In thousands)	Nine months ended June 30 2023	Nine months ended June 30 2022	Years ended September 30 2022	Years ended September 30 2021	Years ended September 30 2020
Open claims - beginning of year	11	12	12	12	13
New claims filed	1	1	1	1	1
Claims dismissed	—	(1)	(2)	(1)	(2)
Open claims - end of period	12	12	11	12	12

Hercules asbestos-related liability

From the range of estimates, Ashland records the amount it believes to be the best estimate of future payments for litigation defense and claim settlement costs. Ashland reviews this estimate, and related assumptions quarterly and annually updates the results of a non-inflated, non-discounted approximate 40-year model developed with the assistance of Gnarus. During the most recent update completed in June 2023, it was determined that the liability for Hercules asbestos-related claims should be decreased by $2 million. Total reserves for asbestos claims were $197 million at June 30, 2023 compared to $213 million at September 30, 2022.

A progression of activity in the asbestos reserve is presented in the following table.

(In millions)	Nine months ended June 30 2023	Nine months ended June 30 2022	Years ended September 30 2022	Years ended September 30 2021	Years ended September 30 2020
Asbestos reserve - beginning of year	$ 213	$ 217	$ 217	$ 229	$ 252
Reserve adjustments	(2)	15	15	8	(3)
Amounts paid	(14)	(12)	(19)	(20)	(20)
Asbestos reserve - end of period (a)	$ 197	$ 220	$ 213	$ 217	$ 229

(a) Included $17 million and $18 million classified in accrued expenses and other liabilities on the Condensed Consolidated Balance Sheets as of June 30, 2023 and September 30, 2022, respectively.

Hercules asbestos-related receivables

For the Hercules asbestos-related obligations, certain reimbursement obligations pursuant to coverage-in-place agreements with insurance carriers exist. As a result, any increases in the asbestos reserve have been partially offset by probable insurance recoveries. Ashland has estimated the value of probable insurance recoveries associated with its asbestos reserve based on management's interpretations and estimates surrounding the available or applicable insurance coverage, including an assumption that all solvent insurance carriers remain solvent. The estimated receivable consists exclusively of solvent domestic insurers.

As of June 30, 2023, Ashland's receivable for recoveries of litigation defense and claims costs from insurers with respect to Hercules amounted to $47 million compared to $52 million at September 30, 2022. In June 2023, the annual update of the model used for purposes of valuing the asbestos reserve and its impact on valuation of future recoveries from insurers was completed. This model update resulted in a decrease of $3 million in the receivable for probable insurance recoveries.

A progression of activity in the Hercules insurance receivable is presented in the following table.

	Nine months ended June 30		Years ended September 30		
(In millions)	2023	2022	2022	2021	2020
Insurance receivable - beginning of year	$ 52	$ 47	$ 47	$ 47	$ 49
Receivable adjustment (a)	(3)	7	7	1	(2)
Amounts collected	(2)	(1)	(2)	(1)	—
Insurance receivable - end of period (b)	$ 47	$ 53	$ 52	$ 47	$ 47

(a) 2021 includes a $1 million reserve adjustment related to allowances for credit losses as a result of Ashland's adoption of the new credit measurement standard. The total allowance for credit losses was $1 million as of June 30, 2023 and September 30, 2022.

(b) Includes $4 million and $3 million classified in accounts receivable on the Condensed Consolidated Balance Sheets as of June 30, 2023 and September 30, 2022.

Asbestos litigation cost projection

Projecting future asbestos costs is subject to numerous variables that are difficult to predict. In addition to the uncertainties surrounding the number of claims that might be received, other variables include the type and severity of the disease alleged by each claimant and the related costs incurred in resolving those claims, mortality rates, dismissal rates, uncertainties surrounding the litigation process from jurisdiction to jurisdiction and from case to case. Furthermore, any predictions with respect to these variables are subject to even greater uncertainty as the projection period lengthens. In light of these inherent uncertainties, Ashland believes that the asbestos reserves for Ashland and Hercules represent the best estimate within a range of possible outcomes. As a part of the process to develop these estimates of future asbestos costs, a range of long-term cost models was developed. These models are based on national studies that predict the number of people likely to develop asbestos-related diseases and are heavily influenced by assumptions regarding long-term inflation rates for indemnity payments and legal defense costs, as well as other variables mentioned previously. Ashland has currently estimated in various models ranging from approximately 40 year periods that it is reasonably possible that total future litigation defense and claim settlement costs on an inflated and undiscounted basis could range as high as approximately $422 million for the Ashland asbestos-related litigation (current reserve of $285 million) and approximately $288 million for the Hercules asbestos-related litigation (current reserve of $197 million), depending on the combination of assumptions selected in the various models. While the timeframe used in Ashland's models for projecting asbestos liabilities generally decreases over time based on the expected lifetime of the liabilities, these models have been consistently applied between all periods presented. If actual experience is worse than projected, relative to the number of claims filed, the severity of alleged disease associated with those claims or costs incurred to resolve those claims, or actuarial refinement or improvements to the assumptions used within these models are initiated, Ashland may need to further increase the estimates of the costs associated with asbestos claims and these increases could be material over time.

Environmental remediation and asset retirement obligations

Ashland is subject to various federal, state and local environmental laws and regulations that require environmental assessment or remediation efforts (collectively environmental remediation) at multiple locations. At June 30, 2023, such locations included 57 sites where Ashland has been identified as a potentially responsible party under Superfund or similar state laws, 108 current and former operating facilities and about 1,225 service station properties, of which 14 are being actively remediated.

Ashland's reserves for environmental remediation and related environmental litigation amounted to $204 million at June 30, 2023 compared to $211 million at September 30, 2022, of which $155 million at June 30, 2023 and $157 million at September 30, 2022 were classified in other noncurrent liabilities on the Condensed Consolidated Balance Sheets. The remaining reserves were classified in accrued expenses and other liabilities on the Condensed Consolidated Balance Sheets.

The following table provides a reconciliation of the changes in the environmental remediation reserves during the nine months ended June 30, 2023 and 2022.

	Nine months ended June 30	
(In millions)	2023	2022
Reserve - beginning of period	$ 211	$ 207
Disbursements	(40)	(42)
Revised obligation estimates and accretion	33	61
Reserve - end of period	$ 204	$ 226

The total reserves for environmental remediation reflect Ashland's estimates of the most likely costs that will be incurred over an extended period to remediate identified conditions for which the costs are reasonably estimable, without regard to any third-party recoveries. Engineering studies, historical experience and other factors are used to identify and evaluate remediation alternatives and their related costs in determining the estimated reserves for environmental remediation. Ashland continues to discount certain environmental sites and regularly adjusts its reserves as environmental remediation continues. Ashland has estimated the value of its probable insurance recoveries associated with its environmental reserve based on management's interpretations and estimates surrounding the available or applicable insurance coverage. At June 30, 2023 and September 30, 2022, Ashland's recorded receivable for these probable insurance recoveries was $21 million, of which $17 million at June 30, 2023 and September 30, 2022 were classified in other noncurrent assets on the Condensed Consolidated Balance Sheets.

Components of environmental remediation expense included within the selling, general and administrative expense caption of the Statements of Consolidated Comprehensive Income (Loss) are presented in the following table for the three and nine ended June 30, 2023 and 2022.

	Three months ended June 30		Nine months ended June 30	
(In millions)	2023	2022	2023	2022
Environmental expense	$ 22	$ 45	$ 32	$ 60
Accretion	—	1	1	1
Legal expense	1	1	3	3
Total expense	23	47	36	64
	—		—	
Insurance receivable	(2)	(2)	(2)	(5)
Total expense, net of receivable activity (a)	$ 21	$ 45	$ 34	$ 59

(a) Net expense of $5 million and $6 million for the three and nine months ended June 30, 2023, respectively, and $9 million and $11 million for the three and nine months ended June 30, 2022, respectively, relates to divested businesses which qualified for treatment as discontinued operations for which certain environmental liabilities were retained by Ashland. These amounts are classified within the income (loss) from discontinued operations caption of the Statements of Consolidated Comprehensive Income (Loss).

Environmental remediation reserves are subject to uncertainties that affect Ashland's ability to estimate its share of the costs. Such uncertainties involve the nature and extent of contamination at each site and the extent of required cleanup efforts under existing environmental regulations. Although it is not possible to predict with certainty the ultimate costs of environmental remediation, Ashland currently estimates that the upper end of the reasonably possible range of future costs for identified sites could be as high as approximately $465 million. The largest reserve for any site is 13% of the remediation reserve as of June 30, 2023.

Brazil tax credits

In March 2017, the Federal Supreme Court of Brazil (Brazil Supreme Court) ruled in a leading case that a Brazilian value-added tax (ICMS) should not be included in the base used to calculate a taxpayer's federal contribution on total revenue known as PIS/COFINS (2017 Decision). As a result, two of Ashland's Brazilian subsidiaries filed lawsuits challenging the inclusion of ICMS in Ashland's calculation of PIS/COFINs, seeking recovery of excess taxes paid plus interest.

In response to the 2017 Decision, the Brazilian tax authority filed an appeal of the 2017 Decision seeking clarification of the amount of ICMS tax to exclude from the calculation of PIS/COFINS. In May 2021, the Brazil Supreme Court ruled that the ICMS tax be excluded from the calculation of PIS/COFINS. In May 2023, Law 14592/23 was passed in Brazil, converting the 2017 Decision provisional measure effective for PIS/COFINS legislation excluding ICMS from the calculation basis.

As of June 2023, Ashland had received all favorable court rulings for previously filed suits, completed its analysis of certain prior year overpayments related to ICMS and received acknowledgment from the Brazilian tax authority that allows Ashland to begin the process to recover the taxes. As a result, Ashland recorded a pre-tax gain of $12 million for the three and nine months ended June 30, 2023 for certain excess PIS/COFINS paid from 2012 to February 2023 plus interest. The gain was recognized within the selling, general and administrative expense caption of the Statement of Consolidated Comprehensive Income (Loss).

Other legal proceedings and claims

In addition to the matters described above, there are other various claims, lawsuits and administrative proceedings pending or threatened against Ashland and its current and former subsidiaries. Such actions are with respect to commercial matters, product liability, toxic tort liability, and other environmental matters, which seek remedies or damages, some of which are for substantial amounts. While Ashland cannot predict with certainty the outcome of such actions, it believes that adequate reserves have been recorded and losses already recognized with respect to such actions were immaterial as of June 30, 2023. There is a reasonable possibility that a loss exceeding amounts already recognized may be incurred related to these actions; however, Ashland believes that such potential losses were immaterial as of June 30, 2023.

NOTE M – EARNINGS PER SHARE

The following is the computation of basic and diluted earnings per share (EPS) from continuing operations attributable to Ashland. Stock appreciation rights (SARs), stock options and warrants available to purchase shares outstanding for each reporting period whose exercise price was greater than the average market price of Ashland Common Stock for each applicable period were not included in the computation of income from continuing operations per diluted share because the effect of these instruments would be antidilutive. The total number of these shares outstanding was approximately 1 million at June 30, 2023 and 2022, respectively. The majority of these shares are for warrants with a strike price of $128.66. Earnings per share is reported under the treasury stock method.

	Three months ended June 30		Nine months ended June 30	
(In millions, except per share data)	2023	2022	2023	2022
Numerator				
Numerator for basic and diluted EPS - Income from continuing operations	$ 42	$ 51	$ 176	$ 121
Denominator				
Denominator for basic EPS - Weighted-average common shares outstanding	52	54	53	56
Share based awards convertible to common shares	1	1	1	1
Denominator for diluted EPS - Adjusted weighted-average shares and assumed conversions	53	55	54	57
EPS from continuing operations				
Basic	$ 0.81	$ 0.94	$ 3.29	$ 2.16
Diluted	0.79	0.93	3.24	2.12

NOTE N – EQUITY ITEMS

2023 Stock repurchase program

On June 28, 2023, Ashland's board of directors authorized a new evergreen $1 billion common share repurchase program (2023 stock repurchase program). The new authorization terminates and replaces the company's 2022 stock repurchase program, which had $200 million outstanding at the date of termination.

Stock repurchase program agreements

During May 2023, under the 2022 stock repurchase program, Ashland initiated a Rule 10b5-1 trading plan agreement to repurchase up to $100 million of its outstanding shares. The program was completed during June 2023, when Ashland paid a total of $100 million and received a delivery of 1.1 million shares of common stock.

During March 2023, under the 2022 stock repurchase program, Ashland initiated a Rule 10b5-1 trading plan agreement to repurchase up to $100 million of its outstanding shares. The program was completed during April 2023, when Ashland paid a total of $100 million and received a delivery of 1.0 million shares of common stock.

During February 2023, under the 2022 stock repurchase program, Ashland initiated a Rule 10b5-1 trading plan agreement to repurchase up to $100 million of its outstanding shares. The program was completed during February 2023, when Ashland paid a total of $100 million and received a delivery of 1.0 million shares of common stock.

On March 1, 2022, under the 2018 stock repurchase program, Ashland entered into an agreement to repurchase an aggregate amount of $200 million of Ashland common stock using open-market purchases under rule 10b-18. On April 8, 2022, Ashland completed repurchases under this agreement repurchasing a total of 2.15 million shares for a total amount of $200 million.

Stockholder dividends

On May 11, 2023, Ashland's Board declared a quarterly cash dividend of $0.385 per share on the company's common stock representing a 15 percent increase from the previous quarter. The dividend was paid in the third quarter of fiscal 2023. Dividends of $0.335 per share were paid in the first and second quarters of fiscal 2023 and the third quarter of fiscal 2022 and $0.30 per share were paid in the first and second quarters of fiscal 2022.

Accumulated other comprehensive income (loss)

Components of other comprehensive income (loss) recorded in the Statements of Consolidated Comprehensive Income (Loss) are presented below, before tax and net of tax effects.

	2023			2022		
(In millions)	Before tax	Tax (expense) benefit	Net of tax	Before tax	Tax (expense) benefit	Net of tax
Three months ended June 30						
Other comprehensive income (loss)						
Unrealized translation gain (loss)	$ (4)	$ —	$ (4)	$ (86)	$ —	$ (86)
Unrealized gain (loss) on commodity hedges	1	—	1	(4)	1	(3)
Total other comprehensive income (loss)	$ (3)	$ —	$ (3)	$ (90)	$ 1	$ (89)
Nine months ended June 30						
Other comprehensive income (loss)						
Unrealized translation gain (loss)	$ 106	$ (1)	$ 105	$ (108)	$ 1	$ (107)
Unrealized gain (loss) on commodity hedges	(8)	2	(6)	(3)	1	(2)
Total other comprehensive income (loss)	$ 98	$ 1	$ 99	$ (111)	$ 2	$ (109)

Summary of stockholders' equity

A reconciliation of changes in stockholders' equity are as follows:

(In millions)	Three months ended June 30 2023	Three months ended June 30 2022	Nine months ended June 30 2023	Nine months ended June 30 2022
Common stock and paid in capital				
Balance, beginning of period	$ —	$ 177	$ 136	$ 328
Compensation expense and common shares issued (a)	5	1	7	5
Common shares purchased under repurchase program (b) (c)	(5)	(45)	(143)	(200)
Balance, end of period	—	133	—	133
Retained earnings				
Balance, beginning of period	3,734	3,596	3,653	2,796
Net income	50	36	182	870
Regular dividends	(20)	(18)	(56)	(52)
Common shares purchased under repurchase program (b)	(145)	—	(160)	—
Balance, end of period	3,619	3,614	3,619	3,614
Accumulated other comprehensive income (loss)				
Balance, beginning of period	(467)	(392)	(569)	(372)
Unrealized translation gain (loss)	(4)	(86)	105	(107)
Unrealized gain (loss) on commodity hedges	1	(3)	(6)	(2)
Balance, end of period	(470)	(481)	(470)	(481)
Total stockholders' equity	$ 3,149	$ 3,266	$ 3,149	$ 3,266
Cash dividends declared per common share	$ 0.385	$ 0.335	$ 1.055	$ 0.935

(a) Common shares issued were 35,420 shares and 55,006 shares for the three months ended June 30, 2023 and 2022, respectively, and 179,934 shares and 163,656 shares for the nine months ended June 30, 2023 and 2022, respectively.

(b) Common shares repurchased were 1,594,677 and 3,082,928 shares for the three and nine months ended June 30, 2023, and 449,932 shares and 2,853,312 shares for the three and nine months ended June 30, 2022.

(c) Includes $2 million and $3 million in excise tax on stock repurchases for the three and nine months ended June 30, 2023.

NOTE O – STOCK INCENTIVE PLANS

The components of Ashland's pre-tax stock-based compensation expense included in continuing operations are as follows:

(In millions)	Three months ended June 30 2023 (a)	Three months ended June 30 2022 (b)	Nine months ended June 30 2023 (a)	Nine months ended June 30 2022 (b)
Nonvested stock awards	$ 2	$ 4	$ 9	$ 10
Performance share awards	1	3	8	8
	$ 3	$ 7	$ 17	$ 18

(a) Included $2 million of income and zero of expense related to cash-settled nonvested restricted stock awards during the three and nine months ended June 30, 2023.

(b) Included $1 million and $3 million of expense related to cash-settled nonvested restricted stock awards during the three and nine months ended June 30, 2022, and $1 million each of expense related to cash-settled performance units during the three and nine months ended June 30, 2022.

NOTE P – REVENUE

Disaggregation of revenue

Ashland disaggregates its revenue by segment and geographical region as Ashland believes these categories best depict how management reviews the financial performance of its operations. Ashland includes only U.S. and Canada in its North America designation and includes Europe, the Middle East and Africa in its Europe designation. See the following tables for details. See Note Q for additional information.

Sales by geography				
	Three months ended June 30		Nine months ended June 30	
(In millions)	2023	2022	2023	2022
Life Sciences				
North America	$ 57	$ 70	$ 166	$ 185
Europe	77	76	237	197
Asia Pacific	60	61	182	159
Latin America & other	25	21	81	61
	$ 219	$ 228	$ 666	$ 602

	Three months ended June 30		Nine months ended June 30	
(In millions)	2023	2022	2023	2022
Personal Care				
North America	$ 43	$ 50	$ 134	$ 146
Europe	53	69	173	194
Asia Pacific	28	31	84	93
Latin America & other	22	22	61	57
	$ 146	$ 172	$ 452	$ 490

	Three months ended June 30		Nine months ended June 30	
(In millions)	2023	2022	2023	2022
Specialty Additives				
North America	$ 52	$ 71	$ 157	$ 185
Europe	53	67	162	192
Asia Pacific	40	48	114	133
Latin America & other	7	8	23	22
	$ 152	$ 194	$ 456	$ 532

	Three months ended June 30		Nine months ended June 30	
(In millions)	2023	2022	2023	2022
Intermediates				
North America	$ 30	$ 47	$ 100	$ 121
Europe	7	13	23	32
Asia Pacific	5	10	19	31
Latin America & other	1	3	6	8
	$ 43	$ 73	$ 148	$ 192

Trade receivables

Trade receivables are defined as receivables arising from contracts with customers and are recorded within the accounts receivable caption within the Condensed Consolidated Balance Sheets. Ashland's trade receivables were $309 million and $369 million as of June 30, 2023 and September 30, 2022, respectively. See Note H for additional information on Ashland's program to sell certain receivables on a revolving basis to third party banks up to an aggregate purchase limit (U.S Accounts Receivable Sales Program).

NOTE Q – REPORTABLE SEGMENT INFORMATION

Ashland determines its reportable segments based on how operations are managed internally for the products and services sold to customers, including how the results are reviewed by the chief operating decision maker, which includes determining resource allocation methodologies used for reportable segments. Operating income and EBITDA are the primary measures of performance that are reviewed by the chief operating decision maker in assessing each reportable segment's financial performance. Ashland does not aggregate operating segments to arrive at these reportable segments.

Reportable segment business descriptions

Life Sciences is comprised of pharmaceuticals, nutrition, nutraceuticals, agricultural chemicals, diagnostic films (formerly known as advanced materials) and fine chemicals. Pharmaceutical solutions include controlled release polymers, disintegrants, film coatings, solubilizers, and tablet binders. Nutrition solutions include thickeners, stabilizers, emulsifiers and additives for enhancing mouthfeel, controlling moisture migration, reducing oil uptake and controlling color. Nutraceutical solutions include products for weight management, joint comfort, stomach and intestinal health, sports nutrition and general wellness, and provide custom formulation, toll processing and particle engineering solutions. Customers include pharmaceutical, food, beverage, nutraceuticals and supplements manufacturers, hospitals and radiologists and industrial manufacturers.

Personal Care is comprised of biofunctionals, microbial protectants (preservatives), skin care, sun care, oral care, hair care and household. These businesses have a broad range of natural, nature-derived, biodegradable, and high-performance ingredients for customer-driven solutions to help protect, renew, moisturize and revitalize skin and hair, and provide solutions for toothpastes, mouth washes and rinses, denture cleaning and care for teeth. Household supplies nature-derived rheology ingredients, biodegradable surface wetting agents, performance encapsulates, and specialty polymers for household, industrial and institutional cleaning products. Customers include formulators at large multinational branded consumer products companies and smaller, independent boutique companies.

Specialty Additives is comprised of rheology and performance-enhancing additives serving the architectural coatings, construction, energy, automotive and various industrial markets. Solutions include coatings additives for architectural paints, finishes and lacquers, cement and gypsum based dry mortars, ready-mixed joint compounds, synthetic plasters for commercial and residential construction, and specialty materials for industrial applications. Products include rheology modifiers (cellulosic and associative thickeners), foam control agents, surfactants and wetting agents, pH neutralizers, advanced ceramics used in catalytic converters, and environmental filters, ingredients that aid the manufacturing process of ceramic capacitors, plasma display panels and solar cells, ingredients for textile printing, thermoplastic metals and alloys for welding. Products help improve desired functional outcomes through rheology modification and control, water retention, workability, adhesive strength, binding power, film formation, deposition and suspension and emulsification. Customers include global paint manufacturers, electronics and automotive manufacturers, textile mills, the construction industry, and welders.

Intermediates is comprised of the production of 1,4 butanediol (BDO) and related derivatives, including n-methylpyrrolidone. These products are used as chemical intermediates in the production of engineering polymers and polyurethanes, and as specialty process solvents in a wide array of applications including electronics, pharmaceuticals, water filtration membranes and more. Butanediol is also supplied to Life Sciences, Personal Care, and Specialty Additives for use as a raw material.

Unallocated and Other generally includes items such as certain significant company-wide restructuring activities, corporate governance costs and legacy costs or activities that relate to divested businesses that are no longer operated by Ashland.

Reportable segment results

Results of Ashland's reportable segments are presented based on its management and internal accounting structure. The structure is specific to Ashland; therefore, the financial results of Ashland's reportable segments are not necessarily comparable with similar information for other comparable companies. Ashland allocates all significant costs to its reportable segments except for certain significant company-wide restructuring activities, certain corporate governance costs and other costs or activities that relate to former businesses that Ashland no longer operates. The service cost component of pension and other postretirement benefits costs is allocated to each reportable segment on a ratable basis; while the remaining components of pension and other postretirement benefits costs are recorded within the other net periodic benefit loss caption on the Statements of Consolidated Comprehensive Income (Loss). Ashland refines its expense allocation methodologies to the reportable segments from time to time as internal accounting practices are improved, more refined information becomes available and the industry or market changes. Significant revisions to Ashland's methodologies are adjusted for all segments on a retrospective basis.

The following table presents various financial information for each reportable segment for the three and nine months ended June 30, 2023 and 2022.

	Three months ended June 30		Nine months ended June 30	
(In millions - unaudited)	2023	2022	2023	2022
SALES				
Life Sciences	$ 219	$ 228	$ 666	$ 602
Personal Care	146	172	452	490
Specialty Additives	152	194	456	532
Intermediates	43	73	148	192
Intersegment sales (a)	(14)	(23)	(48)	(57)
	$ 546	$ 644	$ 1,674	$ 1,759
OPERATING INCOME (LOSS)				
Life Sciences	$ 49	$ 51	$ 141	$ 115
Personal Care	14	25	38	67
Specialty Additives	5	35	22	79
Intermediates	13	30	50	72
Unallocated and other	(19)	(29)	(69)	(79)
	$ 62	$ 112	$ 182	$ 254
DEPRECIATION EXPENSE				
Life Sciences	$ 11	$ 9	$ 31	$ 25
Personal Care	9	10	28	28
Specialty Additives	15	16	43	48
Intermediates	3	2	9	9
Unallocated and other	—	—	—	1
	$ 38	$ 37	$ 111	$ 111
AMORTIZATION EXPENSE				
Life Sciences	$ 7	$ 7	$ 20	$ 21
Personal Care	12	11	35	35
Specialty Additives	5	5	14	14
Intermediates	—	1	1	1
	$ 24	$ 24	$ 70	$ 71
EBITDA (b)				
Life Sciences	$ 67	$ 67	$ 192	$ 161
Personal Care	35	46	101	130
Specialty Additives	25	56	79	141
Intermediates	16	33	60	82
Unallocated and other	(19)	(64)	(69)	(120)
	$ 124	$ 138	$ 363	$ 394

(In millions - unaudited)	June 30 2023	September 30 2022
TOTAL ASSETS		
Life Sciences	$ 1,938	$ 1,905
Personal Care	1,044	1,073
Specialty Additives	1,642	1,567
Intermediates	160	170
Unallocated and other	1,245	1,498
	$ 6,029	$ 6,213

(a) Intersegment sales from Intermediates are accounted for at prices that approximate fair value. All other intersegment sales are accounted for at cost.

(b) Excludes income (loss) from discontinued operations and other net periodic benefit loss. See the Statement of Consolidated Comprehensive Income (Loss) for applicable amounts excluded.

FORWARD-LOOKING STATEMENTS

This Quarterly Report on Form 10-Q contains forward-looking statements including, without limitation, statements made under the caption "Management's Discussion and Analysis of Financial Condition and Results of Operation" (MD&A), within the meaning of Section 27A of the Securities Act of 1933, as amended and Section 21E of the Securities Exchange Act of 1934, as amended. Ashland has identified some of these forward-looking statements with words such as "anticipates," "believes," "expects," "estimates," "is likely," "predicts," "projects," "forecasts," "objectives," "may," "will," "should," "plans" and "intends" and the negative of these words or other comparable terminology. Ashland may from time to time make forward-looking statements in its Annual Report to Stockholders, quarterly reports and other filings with the Securities and Exchange Commission (SEC), news releases and other written and oral communications. These forward-looking statements are based on Ashland's expectations and assumptions, as of the date such statements are made, regarding Ashland's future operating performance and financial condition, as well as the economy and other future events or circumstances. Ashland's expectations and assumptions include, without limitation, those mentioned within the MD&A, internal forecasts and analyses of current and future market conditions and trends, management plans and strategies, operating efficiencies, cost savings and economic conditions (such as prices, supply and demand, cost of raw materials, and the ability to recover raw-material cost increases through price increases), and risks and uncertainties associated with the following: the impact of acquisitions and/or divestitures Ashland has made or may make (including the possibility that Ashland may not realize the anticipated benefits from such transactions); Ashland's substantial indebtedness (including the possibility that such indebtedness and related restrictive covenants may adversely affect Ashland's future cash flows, results of operations, financial condition and its ability to repay debt); execution risks associated with our growth strategies; the competitive nature of our business; severe weather, natural disasters, public health crises (including the COVID-19 pandemic), cyber events and legal proceedings and claims (including product recalls, environmental and asbestos matters); the effects of the ongoing Ukraine and Russia conflict on the geographies in which Ashland operates, the end markets Ashland serves and on Ashland's supply chain and customers; and without limitation, risks and uncertainties affecting Ashland that are contained in "Use of estimates, risks and uncertainties" in Note A of Notes to Consolidated Financial Statements and in Item 1A of its most recent Form 10-K filed with SEC. Various risks and uncertainties may cause actual results to differ materially from those stated, projected or implied by any forward-looking statements. Ashland believes its expectations and assumptions are reasonable, but there can be no assurance that the expectations reflected herein will be achieved. Unless legally required, Ashland undertakes no obligation to update any forward-looking statements made in this Form 10-Q whether as a result of new information, future events or otherwise. Information on Ashland's website is not incorporated into or a part of this Form 10-Q.

ASHLAND INC. AND CONSOLIDATED SUBSIDIARIES
MANAGEMENT’S DISCUSSION AND ANALYSIS

The following discussion should be read in conjunction with the Condensed Consolidated Financial Statements and the accompanying Notes to Condensed Consolidated Financial Statements herein.

BUSINESS OVERVIEW

Ashland profile

Ashland is a global additives and specialty ingredients company with a conscious and proactive mindset for environment, social and governance (ESG). The Company serves customers in a wide range of consumer and industrial markets, including architectural coatings, construction, energy, food and beverage, nutraceuticals, personal care and pharmaceutical. With approximately 3,900 employees worldwide, Ashland serves customers in more than 100 countries.

Ashland’s sales generated outside of North America were 69% and 70% for the three and nine months ended June 30, 2023, respectively, and 67% for the three and nine months ended June 30, 2022. Sales by region expressed as a percentage of total consolidated sales for the three and nine months ended June 30 were as follows:

	Three months ended June 30		Nine months ended June 30	
Sales by Geography	2023	2022	2023	2022
North America (a)	31 %	33 %	30 %	33 %
Europe (a)	35 %	35 %	36 %	35 %
Asia Pacific	24 %	23 %	24 %	24 %
Latin America & other	10 %	9 %	10 %	8 %
	100 %	100 %	100 %	100 %

(a) Ashland includes only U.S. and Canada in its North America designation and includes Europe, the Middle East and Africa in its Europe designation.

Reportable segments

Ashland’s reportable segments include Life Sciences, Personal Care, Specialty Additives and Intermediates. Unallocated and Other includes corporate governance activities and certain legacy matters. The contribution to sales by each reportable segment expressed as a percentage of total consolidated sales for the three and nine months ended June 30 was as follows:

	Three months ended June 30		Nine months ended June 30	
Sales by Reportable Segment	2023	2022	2023	2022
Life Sciences	40 %	35 %	40 %	35 %
Personal Care	27 %	27 %	27 %	28 %
Specialty Additives	28 %	30 %	27 %	30 %
Intermediates	5 %	8 %	6 %	7 %
	100 %	100 %	100 %	100 %

KEY DEVELOPMENTS

Business results current quarter

Ashland recorded net income of $50 million (income of $42 million in continuing operations and income of $8 million in discontinued operations) and net income of $36 million (income of $51 million in continuing operations and loss of $15 million in discontinued operations) in the current and prior year quarters, respectively. Ashland’s EBITDA of $130 million decreased by $27 million for the current quarter while Ashland’s Adjusted EBITDA of $133 million decreased by $41 million for the current quarter, compared to the prior year quarter (see U.S. GAAP reconciliation below under consolidated review). The decrease was primarily driven by lower sales volumes from customer de-stocking and higher costs primarily associated with inventory control actions, partially offset by improved pricing and favorable selling, general and administrative expense primarily driven by lower incentive compensation expense.

Uncertainty relating to the Ukraine and Russia conflict

Business disruptions, including those related to the ongoing conflict between Ukraine and Russia continue to impact businesses around the globe. While it is impossible to predict the effects of the conflict such as possible escalating geopolitical tensions (including the imposition of existing and additional sanctions by the U.S and the European Union on Russia), worsening macroeconomic and general business conditions, supply chain interruptions and unfavorable energy markets, the impact could be material. Ashland is closely monitoring the situation and maintains business continuity plans that are intended to continue operations or mitigate the effects of events that could disrupt its business.

Ashland does not have manufacturing operations in Russia, Ukraine, or Belarus. Ashland sells (or previously sold) additives and specialty ingredients to manufacturers in these countries for their use in pharmaceuticals, personal care, and coatings applications. Sales to Russia and Belarus were previously limited and our products were primarily used in products and applications that are essential to the population's wellbeing and currently support our customers' humanitarian efforts. We have sales controls in place to ensure that future potential sales into the region are only to support critical pharmaceutical or personal hygiene products which are essential for the general population and in accordance with any applicable sanctions. Sales to Ukraine, Russia, and Belarus represent less than 1% of total consolidated sales and less than 1% of total consolidated assets (related to accounts receivable).

Uncertainty relating to the COVID-19 pandemic

Ashland continues to successfully navigate the uncertain environment associated with the COVID-19 pandemic. Through the third quarter of fiscal 2023, Ashland has not experienced any additional major operating surprises related to the COVID-19 pandemic, continues to maintain supply chains in a challenging environment, had strong safety performance in the face of unprecedented pressures and improved operating discipline across each of its businesses. Ashland's businesses continued to show resiliency in the face of difficult economic circumstances. The COVID-19 impact related to the China re-opening did negatively impact demand during the first and second quarters of fiscal 2023 for both the Specialty Additives and Personal Care business segments. Additionally, Specialty Additives was also impacted by extended unplanned plant shutdowns at its Nanjing, China, facility as a result of these same dynamics during the first half of this fiscal year. Ashland’s overall liquidity remains strong and Ashland is more than able to meet its operating cash needs and other investing and financing cash requirements at this time, including those necessary to grow the business as economic conditions improve.

Other items

2023 Stock Repurchase program

On June 28, 2023, Ashland's board of directors authorized a new evergreen $1 billion common share repurchase program (2023 stock repurchase program). The new authorization terminates and replaces the company's 2022 stock repurchase program, which had $200 million outstanding at the date of termination.

Stock Repurchase program agreements

During May 2023, under the 2022 stock repurchase program, Ashland initiated a Rule 10b5-1 trading plan agreement to repurchase up to $100 million of its outstanding shares. The program was completed during June 2023, when Ashland paid a total of $100 million and received a delivery of 1.1 million shares of common stock.

During March 2023, under the 2022 stock repurchase program, Ashland initiated a Rule 10b5-1 trading plan agreement to repurchase up to $100 million of its outstanding shares. The program was completed during April 2023, when Ashland paid a total of $100 million and received a delivery of 1.0 million shares of common stock.

During February 2023, under the existing 2022 stock repurchase program, Ashland initiated a Rule 10b5-1 trading plan agreement to repurchase up to $100 million of its outstanding shares. The program was completed in February 2023, when Ashland paid a total of $100 million and received a delivery of 1.0 million shares of common stock.

RESULTS OF OPERATIONS – CONSOLIDATED REVIEW

Consolidated review

Net income

Ashland’s net income is primarily affected by results within operating income, net interest and other expense (income), income taxes, discontinued operations and other significant events or transactions that are unusual or nonrecurring.

Current Quarter - Key financial results for the three months ended June 30, 2023 and 2022 included the following:

- Ashland’s net income amounted to $50 million compared to $36 million for the three months ended June 30, 2023 and 2022, respectively, or income of $0.94 and $0.65 diluted earnings per share, respectively.
- Discontinued operations, which are reported net of taxes, resulted in income of $8 million and a loss of $15 million during the three months ended June 30, 2023 and 2022, respectively.
- Income from continuing operations, which excludes results from discontinued operations, amounted to income of $42 million and $51 million for the three months ended June 30, 2023 and 2022, respectively.
- The effective income tax rates were expense of 26% and 2% for the three months ended June 30, 2023 and 2022, respectively, and were significantly impacted by certain tax discrete items in both the current and prior year quarters.
- Ashland incurred pretax net interest and other expense of $3 million and $59 million for the three months ended June 30, 2023 and 2022, respectively. This includes a gain of $6 million and a loss of $48 million on restricted investments, respectively, for the current and prior year quarters.
- Other net periodic benefit loss resulted in losses of $2 million and $1 million during the three months ended June 30, 2023 and 2022, respectively.
- Operating income was $62 million and $112 million for the three months ended June 30, 2023 and 2022, respectively.

Year-to-date - Key financial results for the nine months ended June 30, 2023 and 2022 included the following:

- Ashland’s net income amounted to $182 million compared to $870 million for the nine months ended June 30, 2023 and 2022, respectively, or income of $3.35 and $15.28 diluted earnings per share, respectively.
- Discontinued operations, which are reported net of taxes, resulted in income of $6 million and $749 million during the nine months ended June 30, 2023 and 2022, respectively. The prior year period includes a $732 million gain on the sale of the Performance Adhesives business segment.
- Income from continuing operations, which excludes results from discontinued operations, amounted to income of $176 million and $121 million for the nine months ended June 30, 2023 and 2022, respectively.

- The effective income tax rates were an expense of 11% and 17% for the nine months ended June 30, 2023 and 2022, respectively, and were significantly impacted by certain tax discrete items in both the current and prior year periods.
- Ashland incurred pretax net interest and other income of $21 million and expense $108 million for the nine months ended June 30, 2023 and 2022, respectively. This includes a gain of $47 million and a loss of $72 million on restricted investments, respectively, for the current and prior year periods.
- Other net periodic benefit loss resulted in a loss of $6 million during the nine months ended June 30, 2023, and zero for the prior year period. See Note K for more information.
- Operating income was $182 million and $254 million for the nine months ended June 30, 2023 and 2022, respectively.

For further information on the items reported above, see the discussion in the comparative Statements of Consolidated Comprehensive Income (Loss) caption review analysis.

Operating income

Current Quarter - Operating income amounted to $62 million and $112 million for the three months ended June 30, 2023 and 2022, respectively. The current and prior year quarters' operating income included certain key items that were excluded to arrive at Adjusted EBITDA and are quantified in the table below in the "EBITDA and Adjusted EBITDA" section. These operating key items for the applicable periods are summarized as follows:

- Restructuring, separation and other costs – Ashland periodically implements cost reduction programs related to acquisitions, divestitures and other cost reduction programs in order to enhance profitability through streamlined operations and an improved overall cost structure. Ashland often incurs severance, facility and integration costs associated with these programs. See Note D in the Notes to Condensed Consolidated Financial Statements for further information on the restructuring activities.
- Environmental reserve adjustments – Ashland is subject to various federal, state and local environmental laws and regulations that require environmental assessment or remediation efforts (collectively environmental remediation) at multiple locations. As a result of these activities, Ashland recorded adjustments during the current and prior year quarters to its environmental liabilities and receivables primarily related to previously divested businesses or non-operational sites. See Note L of the Notes to Condensed Consolidated Financial Statements for more information.
- ICMS Brazil tax credit – In 2017, the Federal Supreme Court of Brazil ruled in a leading case that a Brazil value-added tax (ICMS) should not be included in the base used to calculate a taxpayer's federal contribution on total revenue known as PIS/COFINS (2017 Decision). Following favorable court rulings from lawsuits previously filed by two of Ashland's Brazilian subsidiaries challenging the inclusion of ICMS in Ashland's calculation of PIS/COFINS, Ashland received acknowledgment from the Brazilian tax authorities that allows Ashland to begin the process to recover the taxes. See Note L of the Notes to Condensed Consolidated Financial Statements for more information.
- Gain on acquisitions and divestitures – Ashland recorded income of $35 million during the three months ended June 30, 2022, related to the sale of excess land during the three months ended June 30, 2022. See Note B of the Notes to Condensed Consolidated Financial Statements for more information.

Operating income for the three months ended June 30, 2023 and 2022 included depreciation and amortization of $62 million and $61 million, respectively.

Year-to-date - Operating income amounted to $182 million and $254 million for the nine months ended June 30, 2023 and 2022, respectively. The current and prior year periods' operating income included certain key items that were excluded to arrive at Adjusted EBITDA and are quantified in the table below in the "EBITDA and Adjusted EBITDA" section. These operating key items for the applicable periods are summarized as follows:

- Restructuring, separation and other costs – Ashland periodically implements cost reduction programs related to acquisitions, divestitures and other cost reduction programs in order to enhance profitability through streamlined operations and an improved overall cost structure. Ashland often incurs severance, facility and integration costs associated with these programs. See Note D in the Notes to Condensed Consolidated Financial Statements for further information on the restructuring activities.

- Asset impairments - During the nine months ended June 30, 2023, Ashland incurred an impairment charge associated with the sale of a Specialty Additives manufacturing facility. See Note B of the Notes to Condensed Consolidated Financial Statements for more information.
- Environmental reserve adjustments – Ashland is subject to various federal, state and local environmental laws and regulations that require environmental assessment or remediation efforts (collectively environmental remediation) at multiple locations. As a result of these activities, Ashland recorded adjustments during the current and prior year periods to its environmental liabilities and receivables primarily related to previously divested businesses or non-operational sites. See Note L of the Notes to Condensed Consolidated Financial Statements for more information.
- ICMS Brazil tax credit – In 2017, the Federal Supreme Court of Brazil ruled in a leading case that a Brazil value-added tax (ICMS) should not be included in the base used to calculate a taxpayer's federal contribution on total revenue known as PIS/COFINS (2017 Decision). Following favorable court rulings from lawsuits previously filed by two of Ashland's Brazilian subsidiaries challenging the inclusion of ICMS in Ashland's calculation of PIS/COFINS, Ashland received acknowledgment from the Brazilian tax authorities that allows Ashland to begin the process to recover the taxes. See Note L of the Notes to Condensed Consolidated Financial Statements for more information.
- Gain on acquisitions and divestitures – Ashland recorded income of $42 million during the nine months ended June 30, 2022, related to the sale of excess land during the nine months ended June 30, 2022. See Note B of the Notes to Condensed Consolidated Financial Statements for more information.

Operating income for the nine months ended June 30, 2023 and 2022 included depreciation and amortization of $181 million and $182 million, respectively.

Statements of Consolidated Comprehensive Income (Loss) – caption review

A comparative analysis of the Statements of Consolidated Comprehensive Income (Loss) by caption is provided as follows for the three and nine months ended June 30, 2023 and 2022.

	Three months ended June 30			Nine months ended June 30		
(In millions)	2023	2022	Change	2023	2022	Change
Sales	$ 546	$ 644	$ (98)	$ 1,674	$ 1,759	$ (85)

The following table provides a reconciliation of the change in sales for the three and nine months ended June 30, 2023 and 2022.

(In millions)	Three months ended June 30, 2023	Nine months ended June 30, 2023
Volume	$ (134)	$ (221)
Pricing	33	170
Foreign currency exchange	3	(34)
Change in sales	$ (98)	$ (85)

<u>Current Quarter</u> - Sales for the current quarter decreased $98 million compared to the prior year quarter. Lower sales volume primarily from customer de-stocking of $134 million was partially offset by favorable product pricing associated with cost inflation pricing actions and favorable foreign currency exchange, which increased sales by $33 million and $3 million, respectively.

<u>Year-to-date</u> - Sales for the current year decreased $85 million compared to the prior year period. Lower sales volume primarily from customer de-stocking of $221 million and unfavorable foreign currency exchange of $34 million were partially offset by favorable product pricing associated with cost inflation pricing actions which increased sales by $170 million.

	Three months ended June 30			Nine months ended June 30		
(In millions)	2023	2022	Change	2023	2022	Change
Cost of sales	$ 368	$ 404	$ (36)	$ 1,134	$ 1,139	$ (5)
Gross profit as a percent of sales	32.6 %	37.3 %		32.3 %	35.2 %	

The following table provides a reconciliation of the change in cost of sales between the three and nine months ended June 30, 2023 and 2022.

(In millions)	Three months ended June 30, 2023	Nine months ended June 30, 2023
Changes in:		
Volume	$ (86)	$ (151)
Price/mix	4	32
Foreign currency exchange	1	(15)
Operating Costs	45	129
Change in cost of sales	$ (36)	$ (5)

Current Quarter - Cost of sales for the current quarter decreased $36 million compared to the prior year quarter. Lower volume primarily from customer de-stocking decreased cost of sales by $86 million. This decrease was partially offset by higher product pricing associated with cost inflation, unfavorable foreign currency exchange and higher operating costs primarily associated with inventory control actions, which increased cost of sales by $4 million, $1 million, and $45 million, respectively. Gross profit as a percentage of sales decreased 4.7% primarily as a result of lower sales volume and higher operating costs.

Year-to-date - Cost of sales for the current year decreased $5 million compared to the prior year period. Lower volume primarily from customer de-stocking and favorable foreign currency exchange decreased cost of sales by $151 million and $15 million, respectively. This decrease was partially offset by higher product pricing associated with cost inflation, and higher operating costs, which includes costs associated with inventory control actions and inflation associated with plant manufacturing and shipping costs (as well as planned and unplanned plant shutdowns and maintenance), increased cost of sales by $32 million and $129 million, respectively. Gross profit as a percentage of sales decreased 2.9% primarily as a result of lower sales volume and higher operating costs.

	Three months ended June 30			Nine months ended June 30		
(In millions)	2023	2022	Change	2023	2022	Change
Selling, general and administrative expense	$ 84	$ 127	$ (43)	$ 256	$ 299	$ (43)
As a percent of sales	15.4 %	19.7 %		15.3 %	17.0 %	

Current Quarter - Selling, general and administrative expense for the current quarter decreased $43 million compared to the prior year quarter with expenses as a percent of sales decreasing 4.3 percentage points. Key drivers of the fluctuation in selling, general and administrative expense compared to the prior year quarter were:

- Expense of $3 million and $1 million during the three months ended June 30, 2023 and 2022, respectively, comprised of key items for severance, lease abandonment and other restructuring costs;
- $12 million gain associated with ICMS Brazil tax credit (see Note L for more information);
- $17 million and $36 million in net environmental-related expenses during the current and prior year quarter, respectively (see Note L for more information); and
- Decreased incentive accruals primarily making up the remaining change.

Year-to-date - Selling, general and administrative expense for the current period decreased $43 million compared to the prior year period with expenses as a percent of sales decreasing 1.7 percentage points. Key drivers of the fluctuation in selling, general and administrative expense compared to the prior year period were:

- Expense of $4 million and $3 million comprised of key items for severance, lease abandonment and other restructuring costs during the nine months ended June 30, 2023 and 2022, respectively;
- $4 million impairment charge in the current year associated with the sale of a Specialty Additives manufacturing facility.

- $12 million gain associated with ICMS Brazil tax credit;
- $28 million and $48 million in net environmental-related expenses during the current and prior year period, respectively (see Note L for more information); and
- Decreased incentive accruals primarily making up the remaining change.

	Three months ended June 30			Nine months ended June 30		
(In millions)	2023	2022	Change	2023	2022	Change
Research and development expense	$ 12	$ 14	$ (2)	$ 37	$ 40	$ (3)

Current Quarter - Research and development expense decreased primarily due to lower incentive accruals.

Year-to-date - Research and development expense decreased primarily due to lower incentive accruals.

	Three months ended June 30			Nine months ended June 30		
(In millions)	2023	2022	Change	2023	2022	Change
Intangibles amortization expense	$ 24	$ 23	$ 1	$ 70	$ 71	$ (1)

Current Quarter - Intangibles amortization expense is primarily consistent with the prior year quarter.

Year-to-date - Intangibles amortization expense is primarily consistent with the prior year quarter.

	Three months ended June 30			Nine months ended June 30		
(In millions)	2023	2022	Change	2023	2022	Change
Equity and other income						
Other income	$ 4	$ 1	$ 3	$ 5	$ 2	$ 3
	$ 4	$ 1	$ 3	$ 5	$ 2	$ 3

Current Quarter - Other income increased $3 million primarily related to China financial cash subsidies.

Year-to-date - Other income increased $3 million primarily related to China financial cash subsidies.

	Three months ended June 30			Nine months ended June 30		
(In millions)	2023	2022	Change	2023	2022	Change
Income on acquisitions and divestitures, net	$ —	$ 35	$ (35)	$ —	$ 42	$ (42)

Current Quarter - The activity in the prior year quarter was related to a gain on the sale of excess land.

Year-to-date - The activity in the prior year was related to a gain on the sale of excess land. See Note B of the Notes to Condensed Consolidated Financial Statements for more information.

	Three months ended June 30			Nine months ended June 30		
(In millions)	2023	2022	Change	2023	2022	Change
Net interest and other expense (income)						
Interest expense	$ 14	$ 14	$ —	$ 41	$ 47	$ (6)
Interest income	(2)	—	(2)	(9)	—	(9)
Loss (income) from restricted investments	(10)	45	(55)	(57)	59	(116)
Other financing costs	1	—	1	4	2	2
	$ 3	$ 59	$ (56)	$ (21)	$ 108	$ (129)

Current Quarter - Net interest and other expense decreased by $56 million during the current quarter compared to the prior year quarter. Interest expense is primarily consistent during the current quarter compared to the prior year quarter. Interest income increased $2 million due to higher investment yields and higher cash balances. Restricted investments income of $10 million and losses of $45 million included realized gains of $6 million compared to losses $48 million for the three months ended June 30, 2023 and 2022, respectively. See Note E for more information on the restricted investments.

Year-to-date - Net interest and other expense decreased by $129 million during the current period compared to the prior year period. Interest expense decreased $6 million primarily due to lower debt levels during the current year compared to the prior year period. Interest income increased $9 million due to higher investment yields and higher cash balances. Restricted investments income of $57 million and losses of $59 million included realized gains of

$47 million compared to losses of $72 million for the nine months ended June 30, 2023 and 2022, respectively. See Note E for more information on the restricted investments.

	Three months ended June 30			Nine months ended June 30		
(In millions)	2023	2022	Change	2023	2022	Change
Other net periodic benefit loss (income)	$ 2	$ 1	$ 1	$ 6	$ —	$ 6

Current Quarter - Other net periodic benefit loss for the three months ended June 30, 2023 primarily included interest cost of $4 million which was partially offset by expected return on plan assets of $2 million. See Note K for more information.

Year-to-date - Other net periodic benefit loss for the nine months ended June 30, 2023 primarily included interest cost of $11 million which was partially offset by expected return on plan assets of $5 million. Other net periodic benefit income included a $1 million actuarial gain on the remeasurement of a pension plan during the prior year period. See Note K for more information.

	Three months ended June 30			Nine months ended June 30		
(In millions)	2023	2022	Change	2023	2022	Change
Income tax expense (benefit)	$ 15	$ 1	$ 14	$ 21	$ 25	$ (4)
Effective tax rate	26 %	2 %		11 %	17 %	

Current Quarter - Ashland's effective tax rate in any interim period is subject to adjustments related to discrete items and the mix of domestic and foreign operating results. The overall effective tax rate was 26% for the three months ended June 30, 2023 and was impacted by jurisdictional income mix, as well as net favorable discrete items of $4 million primarily related to changes in uncertain tax positions and adjustments to valuation allowances.

The overall effective tax rate was 2% for the three months ended June 30, 2022 and was impacted by jurisdictional income mix, as well as a net $1 million benefit primarily from favorable return to provision adjustments for certain jurisdictions.

Year-to-date - Ashland's effective tax rate in any interim period is subject to adjustments related to discrete items and the mix of domestic and foreign operating results. The overall effective tax rate was 11% for the nine months ended June 30, 2023 and was impacted by jurisdictional income mix, as well as net favorable discrete items of $27 million primarily related to changes in uncertain tax positions.

The overall effective tax rate was 17% for the nine months ended June 30, 2022 and was impacted by jurisdictional income mix, as well as net unfavorable discrete items of $3 million, primarily related to restructuring and separation activity partially offset by a favorable valuation allowance for certain foreign tax credits and adjustments to uncertain tax positions.

Adjusted income tax expense (benefit)

Key items are defined as the financial effects from significant transactions that may have caused short-term fluctuations in net income and/or operating income which Ashland believes do not accurately reflect Ashland's underlying business performance and trends. Tax specific key items are defined as the financial effects from tax specific financial transactions, tax law changes or other matters that fall within the definition of key items as previously described. The effective tax rate, excluding key items, which is a non-GAAP measure, has been prepared to illustrate the ongoing tax effects of Ashland's operations. Management believes investors and analysts use this financial measure in assessing Ashland's business performance and that presenting this non-GAAP measure on a consolidated basis assists investors in better understanding Ashland's ongoing business performance and enhancing their ability to compare period-to-period financial results.

The effective tax rate during the three and nine months ended June 30, 2023 and 2022 was significantly impacted by the following tax specific key items:

- Uncertain tax positions - Includes the impact from the settlement of uncertain tax positions with various tax authorities;
- Valuation allowances - Includes the impact from the release of certain foreign tax credit valuation allowances; and
- Restructuring and separation activity - Includes the impact from company-wide cost reduction programs during 2022.

The following table is a calculation of the effective tax rate, excluding these key items.

	Three months ended June 30		Nine months ended June 30	
(In millions)	2023	2022	2023	2022
Income from continuing operations before income taxes	$ 57	$ 52	$ 197	$ 146
Key items (pre-tax) (a)	5	50	(19)	79
Adjusted income from continuing operations before income taxes	$ 62	$ 102	$ 178	$ 225
Income tax expense	$ 15	$ 1	$ 21	$ 25
Income tax rate adjustments:				
Tax effect of key items	(3)	16	(8)	22
Tax specific key items: (b)				
Uncertain tax positions	3	—	23	—
Valuation allowance	1	—	1	4
Restructuring and separation activity	—	—	—	(10)
Total income tax rate adjustments	1	16	16	16
Adjusted income tax expense	$ 16	$ 17	$ 37	$ 41
Effective tax rate, excluding key items (Non-GAAP) (c)	26 %	16 %	21 %	18 %

(a) See Adjusted EBITDA reconciliation table disclosed in this MD&A for a summary of the key items, before tax.
(b) For additional information on the effect that these tax specific key items had on EPS, see the Adjusted Diluted EPS table disclosed in this MD&A.
(c) Due to rounding conventions, the effective tax rate presented may not recalculate precisely based on the numbers disclosed within this table.

	Three months ended June 30			Nine months ended June 30		
(In millions)	2023	2022	Change	2023	2022	Change
Income (loss) from discontinued operations (net of tax)						
Performance Adhesives	$ (1)	$ 4	$ (5)	$ (1)	$ 38	$ (39)
Composites/Marl facility	—	—	—	(1)	—	(1)
Valvoline	15	—	15	15	—	15
Asbestos	(4)	(13)	9	(4)	(13)	9
Water Technologies	—	(1)	1	—	(1)	1
Distribution	(2)	(5)	3	(3)	(7)	4
Gain on disposal of discontinued operations (net of tax)						
Performance Adhesives	—	—	—	—	732	(732)
	$ 8	$ (15)	$ 23	$ 6	$ 749	$ (743)

Current Quarter - The activity for Composites/Marl facility, Water Technologies and Distribution during the current and prior year quarter was related to post-closing adjustments. The Valvoline activity for the three months ended June 30, 2023 primarily represents cash proceeds related to subsequent adjustments that were made in conjunction with post-closing disputes and Tax Matters Agreement. Asbestos activity in each quarter primarily relates to Ashland's annual update.

Year-to-date - The activity for Composites/Marl facility, Water Technologies and Distribution during the current and prior year periods was related to post-closing adjustments. The Performance Adhesives segment sales and pre-tax operating income included in discontinued operations were $171 million and $34 million for the prior year period. A $732 million gain on disposal was recorded in the prior year period associated with the February 28, 2022 closing of the Performance Adhesives business segment divestiture. The Valvoline activity for the nine months ended June 30, 2023 primarily represents cash proceeds related to subsequent adjustments that were made in conjunction with post-closing disputes and Tax Matters Agreement. Asbestos activity in each period primarily relates to Ashland's annual update.

Other comprehensive income (loss)

A comparative analysis of the components of other comprehensive income is provided below for the three and nine months ended June 30, 2023 and 2022.

	Three months ended June 30			Nine months ended June 30		
(In millions)	2023	2022	Change	2023	2022	Change
Other comprehensive income (loss) (net of taxes)						
Unrealized translation gain (loss)	$ (4)	$ (86)	$ 82	$ 105	$ (107)	$ 212
Unrealized gain (loss) on commodity hedges	1	(3)	4	(6)	(2)	(4)
	$ (3)	$ (89)	$ 86	$ 99	$ (109)	$ 208

Current Quarter - Total other comprehensive income (loss), net of tax, for the current quarter increased $86 million compared to the prior year quarter primarily as a result of the following:

- For the three months ended June 30, 2023 and 2022, the change in unrealized gain (loss) from foreign currency translation adjustments resulted in losses of $4 million and $86 million, respectively. The fluctuations in unrealized translation gains and losses are primarily due to translating foreign subsidiary financial statements from local currencies to U.S. Dollars.
- For the three months ended June 30, 2023 and 2022, the change in commodity hedges is primarily due to the fluctuations of the market prices of the underlying commodities. Commodity hedges resulted in unrealized gains of $1 million and losses of $3 million for the three months ended June 30, 2023 and 2022, respectively.

Year-to-date - Total other comprehensive income (loss), net of tax, for the current year increased $208 million compared to the prior year period primarily as a result of the following:

- For the nine months ended June 30, 2023, the change in unrealized gain (loss) from foreign currency translation adjustments resulted in a gain of $105 million compared to a loss of $107 million for the nine months ended June 30, 2022. The fluctuations in unrealized translation gains and losses are primarily due to translating foreign subsidiary financial statements from local currencies to U.S. Dollars.
- For the nine months ended June 30, 2023 and 2022, the change in commodity hedges is primarily due to the fluctuations of the market prices of the underlying commodities. Commodity hedges resulted in unrealized losses of $6 million and $2 million for the nine months ended June 30, 2023 and 2022, respectively.

Use of non-GAAP measures

Ashland has included within this document the following non-GAAP measures, on both a consolidated and reportable segment basis, which are not defined within U.S. GAAP and do not purport to be alternatives to net income or cash flows from operating activities as a measure of operating performance or cash flows:

- EBITDA – net income (loss), plus income tax expense (benefit), net interest and other expenses, and depreciation and amortization.

- Adjusted EBITDA – EBITDA adjusted for noncontrolling interests, discontinued operations, net income (loss) on acquisitions and divestitures, other income and (expense) and key items (including remeasurement gains and losses related to pension and other postretirement plans).
- Adjusted EBITDA margin – Adjusted EBITDA divided by sales.
- Adjusted diluted earnings per share (EPS) – income (loss) from continuing operations, adjusted for key items, net of tax, divided by the average outstanding diluted shares for the applicable period.
- Adjusted diluted earnings per share (EPS) excluding intangibles amortization expense – Adjusted earnings per share adjusted for intangibles amortization expense net of tax, divided by the average outstanding diluted shares for the applicable period.
- Free cash flow – operating cash flows less capital expenditures.
- Ongoing free cash flow – operating cash flows less capital expenditures and certain other adjustments as applicable.
- Ongoing free cash flow conversion – ongoing free cash flow divided by Adjusted EBITDA.

Management believes the use of EBITDA and Adjusted EBITDA measures on a consolidated and reportable segment basis assists investors in understanding the ongoing operating performance by presenting comparable financial results between periods. Ashland believes that by removing the impact of depreciation and amortization and excluding certain non-cash charges, amounts spent on interest and taxes and certain other charges that are highly variable from year to year, EBITDA and Adjusted EBITDA provide Ashland's investors with performance measures that reflect the impact to operations from trends in changes in sales, margin and operating expenses, providing a perspective not immediately apparent from net income and operating income. The adjustments Ashland makes to derive the non-GAAP measures of EBITDA and Adjusted EBITDA exclude items which may cause short-term fluctuations in net income and operating income and which Ashland does not consider to be the fundamental attributes or primary drivers of its business. EBITDA and Adjusted EBITDA provide disclosure on the same basis as that used by Ashland's management to evaluate financial performance on a consolidated and reportable segment basis and provide consistency in financial reporting, facilitate internal and external comparisons of Ashland's historical operating performance and its business units and provide continuity to investors for comparability purposes.

The Adjusted diluted EPS metric enables Ashland to demonstrate what effect key items have on an earnings per diluted share basis by taking income (loss) from continuing operations, adjusted for key items after tax that have been identified in the Adjusted EBITDA table, and dividing by the average outstanding diluted shares for the applicable period. Ashland's management believes this presentation is helpful to illustrate how the key items have impacted this metric during the applicable period.

The Adjusted diluted EPS, excluding intangibles amortization expense metric enables Ashland to demonstrate the impact of non-cash intangibles amortization expense on EPS, in addition to the key items previously mentioned. Ashland's management believes this presentation is helpful to illustrate how previous acquisitions impact applicable period results.

The free cash flow metrics enable Ashland to provide a better indication of the ongoing cash being generated that is ultimately available for both debt and equity holders as well as other investment opportunities. Unlike cash flow provided by operating activities, free cash flow and ongoing free cash flow includes the impact of capital expenditures from continuing operations and other significant items impacting cash flow, providing a more complete picture of current and future cash generation. Free cash flow, ongoing free cash flow and ongoing free cash flow conversion are non-GAAP liquidity measures that Ashland believes provide useful information to management and investors about Ashland's ability to convert Adjusted EBITDA to ongoing free cash flow. These liquidity measures are used regularly by Ashland's stakeholders and industry peers to measure the efficiency at producing cash from regular business activities. Free cash flow, ongoing free cash flow and ongoing free cash flow conversion have certain limitations, including that they do not reflect adjustments for certain non-discretionary cash flows such as mandatory debt repayments. The amount of mandatory versus discretionary expenditures can vary significantly between periods.

Although Ashland may provide forward-looking guidance for Adjusted EBITDA, Adjusted diluted EPS and ongoing free cash flow, Ashland is not reaffirming or providing forward-looking guidance for U.S. GAAP-reported financial measures or a reconciliation of forward-looking non-GAAP financial measures to the most directly comparable U.S. GAAP measure because it is unable to predict with reasonable certainty the ultimate outcome of certain significant items that affect these metrics such as domestic and international economic, political, legislative, regulatory and legal actions.

These non-GAAP measures should be considered supplemental in nature and should not be construed as more significant than comparable measures defined by U.S. GAAP. Limitations associated with the use of these non-GAAP measures include that these measures do not present all of the amounts associated with our results as determined in accordance with U.S. GAAP. The non-GAAP measures provided are used by Ashland management and may not be determined in a manner consistent with the methodologies used by other companies. EBITDA and Adjusted EBITDA provide a supplemental presentation of Ashland's operating performance on a consolidated and reportable segment basis. Adjusted EBITDA generally includes adjustments for items that impact comparability between periods. In addition, certain financial covenants related to Ashland's 2022 Credit Agreement are based on similar non-GAAP measures and are defined further in the sections that reference this metric.

EBITDA and Adjusted EBITDA

EBITDA totaled income of $130 million and $157 million for the three months ended June 30, 2023 and 2022, respectively, and $363 million and $1,185 million for the nine months ended June 30, 2023 and 2022, respectively. EBITDA and Adjusted EBITDA results in the table below have been prepared to illustrate the ongoing effects of Ashland's operations, which exclude certain key items previously described. Management believes the use of such non-GAAP measures on a consolidated and reportable segment basis assists investors in understanding the ongoing operating performance by presenting the financial results between periods on a more comparable basis.

	Three months ended June 30		Nine months ended June 30	
(In millions)	2023	2022	2023	2022
Net income	$ 50	$ 36	$ 182	$ 870
Income tax expense	15	1	21	25
Net interest and other expense (income)	3	59	(21)	108
Depreciation and amortization	62	61	181	182
EBITDA	130	157	363	1,185
Loss (income) from discontinued operations (net of tax)	(8)	15	(6)	(749)
Key items included in EBITDA:				
Restructuring, separation and other costs	4	1	5	3
Environmental reserve adjustments	19	36	31	46
Asset impairments	—	—	4	—
ICMS Brazil tax credit	(12)	—	(12)	—
Income on acquisitions and divestitures, net	—	(35)	—	(42)
Total key items included in EBITDA	11	2	28	7
Adjusted EBITDA	$ 133	$ 174	$ 385	$ 443
Total key items included in EBITDA	$ 11	$ 2	$ 28	$ 7
Unrealized (gain) loss on securities	(6)	48	(47)	72
Total key items, before tax	$ 5	$ 50	$ (19)	$ 79

Diluted EPS and Adjusted Diluted EPS

The following table reflects the U.S. GAAP calculation for the income from continuing operations adjusted for the cumulative diluted EPS effect for key items after tax that have been identified in the Adjusted EBITDA table in the previous section. Key items are defined as the financial effects from significant transactions that may have caused short-term fluctuations in net income and/or operating income which Ashland believes do not accurately reflect Ashland's underlying business performance and trends. The Adjusted diluted EPS for the income from continuing operations in the following table has been prepared to illustrate the ongoing effects of Ashland's operations. Management believes investors and analysts use this financial measure in assessing Ashland's business performance and that presenting this non-GAAP measure on a consolidated basis assists investors in better understanding Ashland's ongoing business performance and enhances their ability to compare period-to-period financial results.

	Three months ended June 30		Nine months ended June 30	
	2023	2022	2023	2022
Diluted EPS from continuing operations (as reported)	$ 0.79	$ 0.93	$ 3.24	$ 2.12
Key items, before tax:				
Restructuring, separation and other costs	0.09	0.02	0.09	0.06
Environmental reserve adjustments	0.36	0.65	0.58	0.81
Asset impairments	—	—	0.07	—
ICMS Brazil tax credit	(0.23)	—	(0.22)	
Unrealized (gain) loss on securities	(0.12)	0.87	(0.87)	1.26
Income on acquisitions and divestitures, net	—	(0.63)	—	(0.73)
Key items, before tax	0.10	0.91	(0.35)	1.40
Tax effect of key items (a)	0.06	(0.29)	0.15	(0.39)
Key items, after tax	0.16	0.62	(0.20)	1.01
Tax specific key items:				
Restructuring and separation activity	—	—	—	0.18
Valuation allowance	(0.02)	—	(0.02)	(0.07)
Uncertain tax positions	(0.06)	—	(0.42)	—
Tax specific key items (b)	(0.08)	—	(0.44)	0.11
Total key items	0.08	0.62	(0.64)	1.12
Adjusted diluted EPS from continuing operations (non-GAAP)	$ 0.87	$ 1.55	$ 2.60	$ 3.24
Amortization expense adjustment (net of tax) (c)	$ 0.36	$ 0.34	$ 1.03	$ 1.00
Adjusted diluted EPS from continuing operations (non-GAAP) excluding intangibles amortization expense	$ 1.23	$ 1.89	$ 3.63	$ 4.24

(a) Represents the diluted EPS impact from the tax effect of the key items that are identified above.

(b) Represents the diluted EPS impact from tax specific financial transactions, tax law changes or other matters that fall within the definition of key items. For additional explanation of these tax specific key items, see the income tax expense discussion within the Statements of Consolidated Comprehensive Income (Loss) caption review section above.

(c) Amortization expense adjustment (net of tax) tax rates were 20% for the three and nine months ended June 30, 2023 and 2022.

RESULTS OF OPERATIONS – REPORTABLE SEGMENT REVIEW

Ashland's reportable segments include Life Sciences, Personal Care, Specialty Additives, and Intermediates. Unallocated and Other includes corporate governance activities and certain legacy matters.

Results of Ashland's reportable segments are presented based on its management and internal accounting structure. The structure is specific to Ashland; therefore, the financial results of Ashland's reportable segments are not necessarily comparable with similar information for other companies. Ashland allocates all significant costs to its reportable segments except for certain significant company-wide restructuring activities, certain corporate governance costs and other costs or activities that relate to former businesses that Ashland no longer operates. The service cost component of pension and other postretirement benefits costs is allocated to each reportable segment on a ratable basis; while the remaining components of pension and other postretirement benefits costs are recorded within the other net periodic benefit loss caption on the Statements of Consolidated Comprehensive Income (Loss). Ashland refines its expense allocation methodologies to the reportable segments from time to time as internal accounting practices are improved, more refined information becomes available and the industry or market changes. Significant revisions to Ashland's methodologies are adjusted for all segments on a retrospective basis.

The following table discloses sales, operating income, depreciation and amortization and EBITDA by reportable segment for the three and nine months ended June 30, 2023 and 2022.

	Three months ended June 30		Nine months ended June 30	
(In millions - unaudited)	2023	2022	2023	2022
SALES				
Life Sciences	$ 219	$ 228	$ 666	$ 602
Personal Care	146	172	452	490
Specialty Additives	152	194	456	532
Intermediates	43	73	148	192
Intersegment sales (a)	(14)	(23)	(48)	(57)
	$ 546	$ 644	$ 1,674	$ 1,759
OPERATING INCOME (LOSS)				
Life Sciences	$ 49	$ 51	$ 141	$ 115
Personal Care	14	25	38	67
Specialty Additives	5	35	22	79
Intermediates	13	30	50	72
Unallocated and other	(19)	(29)	(69)	(79)
	$ 62	$ 112	$ 182	$ 254
DEPRECIATION EXPENSE				
Life Sciences	$ 11	$ 9	$ 31	$ 25
Personal Care	9	10	28	28
Specialty Additives	15	16	43	48
Intermediates	3	2	9	9
Unallocated and other	—	—	—	1
	$ 38	$ 37	$ 111	$ 111
AMORTIZATION EXPENSE				
Life Sciences	$ 7	$ 7	$ 20	$ 21
Personal Care	12	11	35	35
Specialty Additives	5	5	14	14
Intermediates	—	1	1	1
	$ 24	$ 24	$ 70	$ 71
EBITDA (b)				
Life Sciences	$ 67	$ 67	$ 192	$ 161
Personal Care	35	46	101	130
Specialty Additives	25	56	79	141
Intermediates	16	33	60	82
Unallocated and other	(19)	(64)	(69)	(120)
	$ 124	$ 138	$ 363	$ 394

(a) Intersegment sales from Intermediates are accounted for at prices that approximate fair value. All other intersegment transfers are accounted for at cost.

(b) Excludes income (loss) from discontinued operations, other net periodic benefit loss. See the Statement of Consolidated Comprehensive Income (Loss) for applicable amounts excluded.

Life Sciences

Life Sciences is comprised of pharmaceuticals, nutrition, nutraceuticals, agricultural chemicals, advanced materials and fine chemicals. Pharmaceutical solutions include controlled release polymers, disintegrants, film coatings, solubilizers, and tablet binders. Nutrition solutions include thickeners, stabilizers, emulsifiers and additives for enhancing mouthfeel, controlling moisture migration, reducing oil uptake and controlling color. Nutraceutical solutions include products for weight management, joint comfort, stomach and intestinal health, sports nutrition and general wellness, and providing custom formulation, toll processing and particle engineering solutions. Customers include pharmaceutical, food, beverage, nutraceuticals and supplements manufacturers, hospitals and radiologists and industrial manufacturers.

June 2023 quarter compared to June 2022 quarter

Life Sciences' sales decreased $9 million to $219 million in the current quarter. Lower volume decreased sales by $32 million while favorable product pricing and foreign currency exchange increased sales by $22 million and $1 million, respectively.

Operating income decreased $2 million to income of $49 million for the current quarter. Lower volume and higher costs (including restructuring and environmental costs incurred during the current quarter) decreased operating income by $9 million and $16 million, respectively. These decreases were partially offset by favorable price/mix and foreign currency exchange which increased operating income by $22 million and $1 million, respectively. Current quarter EBITDA remained consistent at $67 million while Adjusted EBITDA increased $5 million to $72 million. Adjusted EBITDA margin increased 3.5 percentage points in the current quarter to 32.9%.

Fiscal 2023 year-to-date compared to fiscal 2022 year-to-date

Life Sciences' sales increased $64 million to $666 million in the current period. Favorable pricing increased sales by $82 million while lower volume and unfavorable foreign currency exchange decreased sales by $5 million and $13 million, respectively. Life Sciences experienced strong global demand for pharmaceutical ingredients throughout the current period.

Operating income increased $26 million to income of $141 million for the current period. Favorable price/mix and higher volume increased operating income by $81 million and $5 million, respectively, while unfavorable foreign currency exchange and higher costs (including restructuring and environmental costs incurred during the current year) decreased operating income by $9 million and $51 million, respectively. Current period EBITDA increased $31 million to $192 million while Adjusted EBITDA increased $37 million to $198 million. Adjusted EBITDA margin increased 3.0 percentage points in the current period to 29.7%.

EBITDA and Adjusted EBITDA reconciliation

The EBITDA and Adjusted EBITDA amounts presented within this business section are provided as a means to enhance the understanding of financial measurements that Ashland has internally determined to be relevant measures of comparison for each segment. Each of these non-GAAP measures is defined as follows: EBITDA (operating income plus depreciation and amortization), Adjusted EBITDA (EBITDA adjusted for key items, which may include pro forma effects for significant acquisitions or divestitures, as applicable), and Adjusted EBITDA margin (Adjusted EBITDA, which may include pro forma adjustments, divided by sales or sales adjusted for pro forma results). Ashland does not allocate items to each reportable segment below operating income, such as interest expense and income taxes. As a result, reportable segment EBITDA and Adjusted EBITDA are reconciled directly to operating income since it is the most directly comparable Statements of Consolidated Comprehensive Income (Loss) caption.

The following EBITDA presentation for the three and nine months ended June 30, 2023 and 2022 is provided as a means to enhance the understanding of financial measurements that Ashland has internally determined to be relevant measures of comparison for the results of Life Sciences. The key items during the three and nine months ended June 30, 2023 related to charges of $3 million and $4 million for restructuring programs, and $2 million each, for environmental reserve adjustments for the three and nine months ended June 30, 2023.

	Life Sciences			
	Three months ended June 30		Nine months ended June 30	
(In millions)	2023	2022	2023	2022
Operating income	$ 49	$ 51	$ 141	$ 115
Depreciation and amortization	18	16	51	46
EBITDA	$ 67	$ 67	192	161
Restructuring and other costs	3	—	4	—
Environmental reserve adjustments	2	—	2	—
Adjusted EBITDA	$ 72	$ 67	$ 198	$ 161

Personal Care

Personal Care is comprised of biofunctionals, microbial protectants (preservatives), skin care, sun care, oral care, hair care and household solutions. These businesses have a broad range of natural, nature-derived, biodegradable, and high-performance ingredients for customer driven solutions to help protect, renew, moisturize and revitalize skin and hair, and provide solutions for toothpastes, mouth washes and rinses, denture cleaning and care for teeth. Household supplies nature-derived rheology ingredients, biodegradable surface wetting agents, performance encapsulates, and specialty polymers for household, industrial and institutional cleaning products. Customers include formulators at large multinational branded consumer products companies and smaller, independent boutique companies.

June 2023 quarter compared to June 2022 quarter

Personal Care's sales decreased $26 million to $146 million in the current quarter. Lower volume decreased sales by $40 million while favorable product pricing and foreign currency exchange increased sales by $13 million and $1 million, respectively.

Operating income decreased $11 million to income of $14 million for the current quarter. Lower volume and higher operating costs decreased operating income by $15 million and $10 million, respectively. These decreases were partially offset by favorable price/mix and foreign currency exchange which increased operating income by $13 million and $1 million, respectively. Current quarter EBITDA decreased $11 million to $35 million. EBITDA margin decreased 2.7 percentage points in the current quarter to 24.0%.

Fiscal 2023 year-to-date compared to fiscal 2022 year-to-date

Personal Care's sales decreased $38 million to $452 million in the current year period. Lower volume and unfavorable foreign currency exchange decreased sales by $72 million and $9 million, respectively, while favorable product pricing increased sales by $43 million.

Operating income decreased $29 million to income of $38 million for the current year period. Lower volume, higher operating costs and unfavorable foreign currency exchange decreased operating income by $27 million, $35 million and $3 million, respectively. These decreases were partially offset by favorable price/mix which increased operating income by $36 million. Current year EBITDA decreased $29 million to $101 million. EBITDA margin decreased 4.2 percentage points in the current period to 22.3%.

EBITDA and Adjusted EBITDA reconciliation

The following EBITDA presentation for the three and nine months ended June 30, 2023 and 2022 is provided as a means to enhance the understanding of financial measurements that Ashland has internally determined to be relevant measures of comparison for the results of Personal Care. Personal Care had no key items for the three and nine months ended June 30, 2023 or 2022.

	Personal Care			
	Three months ended June 30		Nine months ended June 30	
(In millions)	2023	2022	2023	2022
Operating income	$ 14	$ 25	$ 38	$ 67
Depreciation and amortization	21	21	63	63
EBITDA	$ 35	$ 46	101	130

Specialty Additives

Specialty Additives is comprised of rheology- and performance-enhancing additives serving the coatings, construction, energy, automotive and various industrial markets. Solutions include coatings additives for architectural paints, finishes and lacquers, cement- and gypsum- based dry mortars, ready-mixed joint compounds, synthetic plasters for commercial and residential construction, and specialty materials for industrial applications. Products include rheology modifiers (cellulosic and associative thickeners), foam-control agents, surfactants and wetting agents, pH neutralizers, advanced ceramics used in catalytic converters, and environmental filters, ingredients that aid the manufacturing process of ceramic capacitors, plasma display panels and solar cells, ingredients for textile printing, thermoplastic metals and alloys for welding. Products help improve desired functional outcomes through rheology modification and control, water retention, workability, adhesive strength, binding power, film formation, deposition and suspension and emulsification. Customers include global paint manufacturers, electronics and automotive manufacturers, textile mills, the construction industry, and welders.

June 2023 quarter compared to June 2022 quarter

Specialty Additives’ sales decreased $42 million to $152 million in the current quarter. Lower volume decreased sales by $47 million which was partially offset by favorable product pricing which increased sales by $5 million.

Operating income decreased $30 million to income of $5 million for the current quarter. Lower volume and higher operating costs (including increased environmental costs) decreased operating income by $15 million and $16 million, respectively. These decreases were partially offset by favorable pricing/mix which increased operating income by $1 million. Current quarter EBITDA decreased $31 million to $25 million while Adjusted EBITDA decreased $28 million to $29 million. Adjusted EBITDA margin decreased 10.3 percentage points in the current quarter to 19.1%.

Fiscal 2023 year-to-date compared to fiscal 2022 year-to-date

Specialty Additives’ sales decreased $76 million to $456 million in the current year period. Lower volume and unfavorable foreign currency exchange decreased sales by $108 million and $11 million, respectively. Those decreases were partially offset by favorable product pricing which increased sales by $43 million. Specialty Additives sales were negatively impacted by the COVID-19 impact related to the China re-opening (particularly in the first and second quarter of the current period) and the general economic slowdown in Europe in the current period.

Operating income decreased $57 million to income of $22 million for the current year period. Lower volume, higher operating costs (including increased environmental costs), asset impairments, and unfavorable foreign currency exchange decreased operating income by $31 million, $43 million, $4 million, and $1 million, respectively. Operating costs were negatively impacted by COVID-19 dynamics in China which resulted in additional extended unplanned plant shutdowns, that were in addition to planned plant maintenance shutdowns. These decreases were partially offset by favorable pricing/mix which increased operating income by $22 million. Current year EBITDA decreased $62 million to $79 million while Adjusted EBITDA decreased $55 million to $87 million. Adjusted EBITDA margin decreased 7.6 percentage points in the current period to 19.1%.

EBITDA and Adjusted EBITDA reconciliation

The following EBITDA presentation for the three and nine months ended June 30, 2023 and 2022 is provided as a means to enhance the understanding of financial measurements that Ashland has internally determined to be relevant measures of comparison for the results of Specialty Additives. The key items during the nine months ended June 30, 2023 related to an impairment charge of $4 million associated with a manufacturing facility, and environmental reserve adjustments of $4 million, each for the three and nine months ended June 30, 2023 and $1 million, each for the three and nine months ended June 30, 2022.

	Specialty Additives			
	Three months ended June 30		Nine months ended June 30	
(In millions)	2023	2022	2023	2022
Operating income	$ 5	$ 35	$ 22	$ 79
Depreciation and amortization	20	21	57	62
EBITDA	25	56	79	141
Environmental reserve adjustments	4	1	4	1
Impairments	—	—	4	—
Adjusted EBITDA	$ 29	$ 57	$ 87	$ 142

Intermediates

Intermediates is comprised of the production of 1,4 butanediol (BDO) and related derivatives, including n-methylpyrrolidone. These products are used as chemical intermediates in the production of engineering polymers and polyurethanes, and as specialty process solvents in a wide array of applications including electronics, pharmaceuticals, water filtration membranes and more. Butanediol is also provided to Life Sciences, Personal Care, and Specialty Additives for use as a raw material.

June 2023 quarter compared to June 2022 quarter

Intermediates' sales decreased $30 million to $43 million in the current quarter. Unfavorable product pricing and lower volume decreased sales by $17 million and $13 million, respectively.

Operating income decreased $17 million to $13 million for the current quarter. Unfavorable price/mix, lower volume and higher production costs decreased operating income by $7 million, $9 million, and $1 million, respectively. Current quarter EBITDA decreased $17 million to $16 million. EBITDA margin decreased 8.0 percentage points in the current quarter to 37.2%.

Fiscal 2023 year-to-date compared to fiscal 2022 year-to-date

Intermediates' sales decreased $44 million to $148 million in the current period. Unfavorable product pricing, lower volume and unfavorable foreign currency exchange decreased sales by $7 million, $36 million and $1 million, respectively.

Operating income decreased $22 million to $50 million for the current period. Unfavorable price/mix, lower volume, higher production costs and unfavorable foreign currency exchange decreased operating income by $2 million, $16 million, $3 million and $1 million, respectively. Current year EBITDA decreased $22 million to $60 million. EBITDA margin decreased 2.2 percentage points in the current period to 40.5%.

EBITDA and Adjusted EBITDA reconciliation

The following EBITDA presentation (as defined and described in the section above) for the three and nine months ended June 30, 2023 and 2022 is provided as a means to enhance the understanding of financial measurements that Ashland has internally determined to be relevant measures of comparison for the results of Intermediates. Intermediates had no key items for the three and nine months ended June 30, 2023 or 2022.

	Intermediates			
	Three months ended June 30		Nine months ended June 30	
(In millions)	2023	2022	2023	2022
Operating income	$ 13	$ 30	$ 50	$ 72
Depreciation and amortization	3	3	10	10
EBITDA	$ 16	$ 33	$ 60	$ 82

Unallocated and other

The following table summarizes the key components of the Unallocated and other segment's operating income (loss) for the three and nine months ended June 30, 2023 and 2022.

	Unallocated and Other			
	Three months ended June 30		Nine months ended June 30	
(In millions)	2023	2022	2023	2022
Restructuring activities	$ (3)	$ (2)	$ (5)	$ (11)
Environmental expenses	(12)	(34)	(24)	(45)
ICMS Brazil tax credit	12	—	12	—
Income on acquisitions and divestitures, net	—	35	—	42
Other expenses (primarily governance and legacy expenses)	(16)	(28)	(52)	(65)
Total expense	$ (19)	$ (29)	$ (69)	$ (79)

June 2023 quarter compared to June 2022 quarter

Unallocated and other recorded expense of $19 million and $29 million for the three months ended June 30, 2023 and 2022, respectively. The current and prior year quarter included expense of $3 million and $2 million, respectively, for restructuring activities mainly comprised of severance, lease abandonment and other restructuring costs related to company-wide cost reduction programs during the current and prior year quarter, respectively, which included stranded costs of $1 million for prior year quarter associated with the Performance Adhesives divestiture.

The current quarter and prior year quarter included $12 million and $34 million for environmental expenses, respectively. The prior year quarter also included income of $35 million from acquisitions and divestitures. See income on acquisitions and divestitures caption review above for additional details.

The current quarter also included income of $12 million ICMS tax credits in Brazil (see Note L for more information).

Other expenses between periods were driven by decreases in governance and legacy expenses primarily associated with fluctuations in foreign currency, deferred compensation and incentive compensation.

Fiscal 2023 year-to-date compared to fiscal 2022 year-to-date

Unallocated and other recorded expense of $69 million and $79 million for the nine months ended June 30, 2023 and 2022, respectively. The current and prior year period included expense of $5 million and $11 million, respectively, for restructuring activities mainly comprised of severance, lease abandonment and other restructuring costs related to company-wide cost reduction programs during the current and prior year period, respectively, which included stranded costs of $8 million for the prior year associated with the Performance Adhesives divestiture.

The current period and prior year period included $24 million and $45 million for environmental expenses, respectively. The prior year period also included income of $42 million from acquisitions and divestitures. See income on acquisitions and divestitures caption review above for additional details.

The current period also included income of $12 million ICMS tax credits in Brazil (see Note L for more information).

Other expenses between periods were driven by decreases in governance and legacy expenses primarily associated with fluctuations in foreign currency, deferred compensation and incentive compensation.

FINANCIAL POSITION

Liquidity

Ashland believes that cash flow from operations, availability under existing credit facilities and arrangements, current cash and investment balances and the ability to obtain other financing, if necessary, will provide adequate cash funds for Ashland's foreseeable working capital needs, capital expenditures at existing facilities, dividend payments and debt service obligations. Ashland's cash requirements are subject to change as business conditions warrant and opportunities arise. The timing and size of any new business ventures or acquisitions that the Company may complete may also impact its cash requirements.

Cash flows

Ashland’s cash flows from operating, investing and financing activities, as reflected in the Statements of Condensed Consolidated Cash Flows, are summarized as follows for the nine months ended June 30, 2023 and 2022.

	Nine months ended June 30	
(In millions)	2023	2022
Cash provided (used) by:		
Operating activities from continuing operations	$ 163	$ 14
Investing activities from continuing operations	(57)	(60)
Financing activities from continuing operations	(366)	(876)
Discontinued operations	(43)	1,348
Effect of currency exchange rate changes on cash and cash equivalents	6	(7)
Net increase (decrease) in cash and cash equivalents	$ (297)	$ 419

Cash and cash equivalents decreased $297 million for the nine months ended June 30, 2023 compared to a $419 million increase for the nine months ended June 30, 2022.

The $297 million decrease for the nine months ended June 30, 2023 was primarily driven by payment of cash dividends, additions to property, plant and equipment, and stock repurchase activity of $56 million, $101 million, and $300 million, respectively. Operating cash flows from continuing operations were inflows of $163 million.

The $419 million increase for the nine months ended June 30, 2022 was primarily driven by the proceeds of the sale of the Performance Adhesives business segment of approximately $1.7 billion, net of transaction costs within discontinued operations cash flows, and $14 million of operating cash flows from continuing operations offset by short-term debt repayments of $365 million, long-term debt repayments of $250 million, $247 million of cash tax payment within discontinued operations cash flows related to the sale of Performance Adhesives, and $200 million of stock repurchase activity.

See the Statements of Condensed Consolidated Cash Flows for additional details.

Free cash flow and other liquidity resources

The following represents Ashland’s calculation of free cash flow and ongoing free cash flows for the disclosed periods. Free cash flow does not reflect adjustments for certain non-discretionary cash flows such as mandatory debt repayments.

(In millions)	Nine months ended June 30 2023	2022
Total cash flows provided by operating activities from continuing operations	$ 163	$ 14
less:		
Additions to property, plant and equipment	(101)	(67)
Free cash flows	62	(53)
Cash outflows from U.S. Accounts Receivable Sales Program (a)	14	42
Restructuring-related payments (b)	3	9
Environmental and related litigation payments (c)	34	36
Ongoing free cash flow	$ 113	$ 34
Net Income	182	870
Adjusted EBITDA (d)	386	443
Operating cash flow conversion (e)	90 %	2 %
Ongoing free cash flow conversion (f)	29 %	8 %

(a) Represents activity associated with the U.S. Accounts Receivable Sales Program impacting each period presented.
(b) Restructuring payments incurred during each period.
(c) Represents cash outflows associated with environmental and related litigation payments which will be reimbursed by the environmental trust.
(d) See adjusted EBITDA reconciliation.
(e) Operating cash flow conversion is defined Cash flows provided by operating activities from continuing operations divided by Net income.
(f) Ongoing free cash flow conversion is defined as Ongoing free cash flow divided by Adjusted EBITDA.

Working capital (current assets minus current liabilities, excluding long-term debt due within one year) amounted to $1,094 million and $1,215 million as of June 30, 2023 and September 30, 2022, respectively. The $121 million decrease in working capital was driven by a reduction in cash and cash equivalents, primarily associated with repurchases of common stock, offset by higher trade working capital (accounts receivable and inventories minus trade and other payables and accrued expenses and other liabilities). The $79 million increase in ongoing free cash flows between periods was primarily a result of reduced trade working capital additions compared to the prior year offset by $34 million in higher additions to property, plant and equipment. Liquid assets (cash, cash equivalents and accounts receivable) amounted to 161% and 190% of current liabilities as as of June 30, 2023 and September 30, 2022, respectively.

The following summary reflects Ashland’s cash, unused borrowing capacity and liquidity as of June 30, 2023 and September 30, 2022.

(In millions)	June 30 2023	September 30 2022
Cash and investment securities		
Cash and cash equivalents	$ 349	$ 646
Restricted investments (a)	392	374
Unused borrowing capacity and liquidity		
Revolving credit facility	593	581
2018 accounts receivable securitization (foreign)	109	99
Accounts receivable sales program (U.S.)	—	—

(a) Includes $265 million and $245 million related to the Asbestos trust and $127 million and $129 million related to the Environmental trust as of June 30, 2023 and September 30, 2022, respectively.

The borrowing capacity remaining under the 2022 Credit Agreement was $593 million, which reflects the full $600 million Revolving Credit Facility less a reduction of $7 million for letters of credit outstanding at June 30, 2023. In total, Ashland's available liquidity position, which includes cash, the revolving credit facility and foreign accounts receivable securitization facility, was $1,051 million at June 30, 2023, compared to $1,326 million at September 30, 2022. Ashland had zero available liquidity under the U.S. Accounts Receivable Sales Program as of June 30, 2023. Ashland also maintained $392 million of restricted investments to pay for future asbestos claims and environmental remediation and related litigation.

Capital resources

Debt

The following summary reflects Ashland's debt as of June 30, 2023 and September 30, 2022.

(In millions)	June 30 2023	September 30 2022
Short-term debt (includes current portion of long-term debt)	$ —	$ —
Long-term debt (less current portion and debt issuance cost discounts) (a)	1,328	1,270
Total debt	$ 1,328	$ 1,270

(a) Includes $14 million of debt issuance cost discounts as of June 30, 2023 and September 30, 2022, respectively.

Debt as a percent of capital employed was 30% and 28% at June 30, 2023 and at September 30, 2022, respectively. At June 30, 2023, Ashland's total debt had an outstanding principal balance of $1,376 million, discounts of $34 million, and debt issuance costs of $14 million. Ashland had no long-term debt (excluding debt issuance costs) maturing within the next 4 years and $4 million due in fiscal 2027.

Ashland credit ratings

Ashland's corporate credit ratings remained unchanged at BB+ by Standard & Poor's and Ba1 by Moody's Investor Services. As of June 30, 2023, both Moody's Investor Services and Standard & Poor's outlook remained at stable. Subsequent changes to these ratings or outlook may have an effect on Ashland's borrowing rate or ability to access capital markets in the future.

Ashland debt covenant restrictions

Ashland's current credit agreement (the 2022 Credit Agreement) contains usual and customary representations, warranties and affirmative and negative covenants, including financial covenants for leverage and interest coverage ratios, limitations on liens, additional subsidiary indebtedness, restrictions on subsidiary distributions, investments, mergers, sale of assets and restricted payments and other customary limitations. As of June 30, 2023, Ashland is in compliance with all debt agreement covenant restrictions under the 2022 Credit Agreement.

The maximum consolidated net leverage ratio permitted under the 2022 Credit Agreement is 4.0. The 2022 Credit Agreement defines the consolidated net leverage ratio as the ratio of consolidated indebtedness minus unrestricted cash and cash equivalents to consolidated EBITDA (Covenant Adjusted EBITDA) for any measurement period. In general, the 2022 Credit Agreement defines Covenant Adjusted EBITDA as net income plus consolidated interest charges, taxes, depreciation and amortization expense, fees and expenses related to capital market transactions and proposed or actual acquisitions and divestitures, restructuring and integration charges, noncash stock and equity compensation expense, and any other nonrecurring expenses or losses that do not represent a cash item in such period or any future period; less any noncash gains or other items increasing net income. The computation of Covenant Adjusted EBITDA differs from the calculation of EBITDA and Adjusted EBITDA, which have been reconciled above in the "consolidated review" section. In general, consolidated indebtedness includes debt plus all purchase money indebtedness, banker's acceptances and bank guaranties, deferred purchase price of property or services, attributable indebtedness and guarantees. At June 30, 2023, Ashland's calculation of the consolidated net leverage ratio was 1.8.

The minimum required consolidated interest coverage ratio under the 2022 Credit Agreement is 3.0. The 2022 Credit Agreement defines the consolidated interest coverage ratio as the ratio of Covenant Adjusted EBITDA to consolidated interest charges for any measurement period. At June 30, 2023, Ashland's calculation of the consolidated interest coverage ratio was 9.9.

Any change in Covenant Adjusted EBITDA of $100 million would have an approximate 0.3x effect on the consolidated net leverage ratio and a 1.8x effect on the consolidated interest coverage ratio. The change in consolidated indebtedness of $100 million would affect the consolidated leverage ratio by approximately 0.2x.

Additional capital resources

Ashland cash projection

During the March 31, 2023 quarter, Ashland entered into a new, ten year raw materials contract with the option to terminate in year five. The purchase obligations under the contract are estimated to be roughly $12 million for fiscal 2023, and $209 million thereafter for a total of $221 million for the ten year period.

Total equity

Total equity decreased by $71 million since September 30, 2022 to $3,149 million at June 30, 2023. The decrease of $71 million was due to net income of $182 million, compensation expense and common shares issued of $7 million, and $105 million of deferred translation gains offset by stock repurchase activity of $303 million (includes $3 million in excise tax), dividends of $56 million, and losses on commodity hedges of $6 million.

2023 Stock Repurchase program

On June 28, 2023, Ashland's board of directors authorized a new evergreen $1 billion common share repurchase program (2023 stock repurchase program). The new authorization terminates and replaces the company's 2022 stock repurchase program, which had $200 million outstanding at the date of termination.

Stock repurchase program agreements

During May 2023, under the 2022 stock repurchase program, Ashland initiated a Rule 10b5-1 trading plan agreement to repurchase up to $100 million of its outstanding shares. The program was completed during June 2023, when Ashland paid a total of $100 million and received a delivery of 1.1 million shares of common stock.

During March 2023, under the 2022 stock repurchase program, Ashland inititated a Rule 10b5-1 trading plan agreement to repurchase up to $100 million of its outstanding shares. The program was completed during April 2023, when Ashland paid a total of $100 million and received a delivery of 1.0 million shares of common stock.

During February 2023, under the existing 2022 stock repurchase program, Ashland initiated a Rule 10b5-1 trading plan agreement to repurchase up to $100 million of its outstanding shares. The program was completed during February 2023 when Ashland paid a total of $100 million and received a delivery of 1.0 million shares of common stock.

Stockholder dividends

On May 11, 2023, Ashland's Board declared a quarterly cash dividend of $0.385 per share on the company's common stock representing a 15 percent increase from the previous quarter. The dividend was paid in the third quarter of fiscal 2023. Dividends of $0.335 per share were paid in the first and second quarters of fiscal 2023 and the third quarter of fiscal 2022 and $0.30 per share were paid in the first and second quarters of fiscal 2022.

Capital expenditures

Capital expenditures were $101 million for the nine months ended June 30, 2023 compared to $67 million for the nine months ended June 30, 2022.

CRITICAL ACCOUNTING POLICIES

The preparation of Ashland’s Condensed Consolidated Financial Statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, sales and expenses, and the disclosures of contingent assets and liabilities. Significant items that are subject to such estimates and assumptions include, but are not limited to, long-lived assets (including goodwill and other intangible assets), income taxes, other liabilities and receivables associated with asbestos litigation and environmental remediation. These accounting policies are discussed in detail in “Management’s Discussion and Analysis – Critical Accounting Policies” in Ashland’s Annual Report on Form 10-K for the fiscal year ended September 30, 2022. Although management bases its estimates on historical experience and various other assumptions that are believed to be reasonable under the circumstances, actual results could differ significantly from the estimates under different assumptions or conditions. Management has reviewed the estimates affecting these items with the Audit Committee of Ashland’s Board of Directors. No material changes have been made to the valuation techniques during the nine months ended June 30, 2023.

OUTLOOK

Based on current forecasting, continued customer de-stocking and external uncertainties for the remainder of the fiscal year, Ashland would expect sales to be in the range of $2.2 billion and Adjusted EBITDA to be in the range of $500 million for fiscal year 2023.

Ashland is unable to reconcile forward-looking adjusted EBITDA to forward-looking net income, the most closely comparable GAAP financial measure, because the information needed to provide such reconciliation would require unreasonable efforts.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Ashland’s market risk exposure at June 30, 2023 is generally consistent with the types of market risk exposures presented in Ashland’s Annual Report on Form 10-K for the fiscal year ended September 30, 2022.

ITEM 4. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures - As of the end of the period covered by this quarterly report, Ashland, under the supervision and with the participation of its management, including Ashland’s Chief Executive Officer and its Chief Financial Officer, evaluated the effectiveness of Ashland’s disclosure controls and procedures pursuant to Rule 13a-15(b) and 15d-15(b) promulgated under the Securities Exchange Act of 1934, as amended. Based upon that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that the disclosure controls and procedures were effective as of June 30, 2023.

Changes in Internal Control over Financial Reporting - During the three months ended June 30, 2023, there were no significant changes in Ashland's internal control over financial reporting, or in other factors, that occurred during the period covered by this quarterly report that have materially affected, or are reasonably likely to materially affect, Ashland's internal control over financial reporting.

PART II – OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

The following is a description of Ashland's material legal proceedings. Ashland's threshold for disclosing material environmental legal proceedings involving a governmental authority where potential monetary sanctions are involved is $1 million.

Asbestos-Related Litigation

Ashland is subject to liabilities from claims alleging personal injury caused by exposure to asbestos. Such claims result primarily from indemnification obligations undertaken in 1990 in connection with the sale of Riley Stoker Corporation (Riley), a former subsidiary. Although Riley was neither a producer nor a manufacturer of asbestos, its industrial boilers contained some asbestos-containing components provided by other companies.

Hercules LLC (formerly Hercules Incorporated), an indirect wholly-owned subsidiary of Ashland, is also subject to liabilities from asbestos-related personal injury lawsuits involving claims which typically arise from alleged exposure to asbestos fibers from resin encapsulated pipe and tank products which were sold by one of Hercules' former subsidiaries to a limited industrial market.

Ashland and Hercules are also defendants in lawsuits alleging exposure to asbestos at facilities formerly or presently owned or operated by Ashland or Hercules.

For additional detailed information regarding liabilities arising from asbestos-related litigation, see Note L of Notes to Condensed Consolidated Financial Statements in this quarterly report on Form 10-Q.

Environmental Proceedings

(a) CERCLA and Similar State Law Sites - Under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 and similar state laws, Ashland and its subsidiaries may be subject to joint and several liability for cleanup costs in connection with alleged releases of hazardous substances at sites where it has been identified as a "potentially responsible party" (PRP). As of June 30, 2023, Ashland and its subsidiaries have been identified as a PRP by U.S. federal and state authorities, or by private parties seeking contribution, for the cost of environmental investigation and/or cleanup at 57 sites. These sites are currently subject to ongoing investigation and remedial activities, overseen by the United States Environmental Protection Agency (USEPA) or a state agency, in which Ashland or its subsidiaries are typically participating as a member of a PRP group. Generally, the types of relief sought include remediation of contaminated soil and/or groundwater, reimbursement for past costs of site cleanup and administrative oversight and/or long-term monitoring of environmental conditions at the sites. The ultimate costs are not predictable with assurance.

(b) Lower Passaic River, New Jersey Matters - Ashland, through two formerly owned facilities, and ISP, through a now-closed facility, have been identified as PRPs, along with approximately 70 other companies (the Cooperating Parties Group or the CPG), in a May 2007 Administrative Order of Consent (AOC) with the USEPA. The parties are required to perform a remedial investigation and feasibility study (RI/FS) of the entire 17 miles of the Passaic River. In June 2007, the USEPA separately commenced a Focused Feasibility Study (FFS) as an interim measure. In accordance with the 2007 AOC, in June 2012 the CPG voluntarily entered into another AOC for an interim removal action focused solely at mile 10.9 of the Passaic River. The allocations for the 2007 AOC and the 2012 removal action are based on interim allocations, are immaterial and have been accrued. In April 2014, the USEPA released the FFS. The CPG submitted the Draft RI/FS Report on April 30, 2015. The USEPA has released the FFS Record of Decision for the lower 8 miles and recently reached an agreement with another chemical company to conduct and pay for the remedial design. This chemical company has sued Ashland, ISP and numerous other defendants to recover past and future costs pursuant to the CERCLA. Ashland, ISP and numerous other defendants have filed a Motion to Dismiss all of the claims. Ashland and ISP are participating in an USEPA allocation process. The release of the FFS Record of Decision, the current allocations proceedings and the lawsuit are not expected to be material to Ashland.

For additional information regarding environmental matters and reserves, see Note L of Notes to Condensed Consolidated Financial Statements in this quarterly report on Form 10-Q.

Other Pending Legal Proceedings

In addition to the matters described above, there are other various claims, lawsuits and administrative proceedings pending or threatened against Ashland and its current and former subsidiaries. Such actions are with respect to commercial matters, product liability, toxic tort liability and other environmental matters which seek remedies or damages, some of which are for substantial amounts. While Ashland cannot predict with certainty the outcome of such actions, it believes that adequate reserves have been recorded and losses already recognized with respect to such actions were immaterial as of June 30, 2023. There is a reasonable possibility that a loss exceeding amounts already recognized may be incurred related to these actions; however, Ashland believes that such potential losses were immaterial as of June 30, 2023.

ITEM 1A. RISK FACTORS

During the period covered by this report, there were no material changes from the risk factors previously disclosed in Ashland's Annual Report on Form 10-K for the fiscal year ended September 30, 2022.

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

Share repurchase activity during the three months ended June 30, 2023 was as follow:

Issuer Purchases of Equity Securities				
Q3 Fiscal Periods	Total Number of Shares Purchased	Average Price Paid Per Share, including commission	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Dollar Value of Shares that May Be Purchased Under the Plans or Programs (in millions) (a) (b)
April 1, 2023 to April 30, 2023	465,735	$ 102.41	465,735	$ 300
May 1, 2023 to May 31, 2023	968,196	88.82	968,196	214
June 1, 2023 to June 30, 2023	160,746	87.12	160,746	1,000
Total	1,594,677		1,594,677	$ 1,000

(a) During May 2022, Ashland's Board of Directors approved a new evergreen $500 million stock repurchase program which replaced the previous stock repurchase program. Ashland's stock repurchase program does not obligate it to acquire any specific number of shares. Under the program, shares may be repurchased in privately negotiated and/or open market transactions, including under plans complying with Rule 10b5-1 of the Exchange Act. As of June 30, 2023, $200 million remained available for repurchase under this authorization prior to the initiation of the 2023 stock repurchase program noted below in (b).

(b) On June 28, 2023, Ashland's board of directors authorized a new evergreen $1 billion common share repurchase program (2023 stock repurchase program). The new authorization terminates and replaces the company's 2022 stock repurchase program, which had $200 million outstanding at the date of termination.

ITEM 5. OTHER INFORMATION

Insider Trading Arrangements

During the three months ended June 30, 2023, none of the Company's directors or officers adopted, modified or terminated a Rule 10b5-1 plan or a non-Rule 10b5-1 trading arrangement.

ITEM 6. EXHIBITS

(a) Exhibits

10.1	Third Amendment to the Receivables Purchase Agreement dated as of April 14, 2023, by and among CVG Capital III LLC as the Seller, PNC Bank National association as the Administrative Agent and Ashland Inc. as the Servicer filed as Exhibit 10.1 to Ashland Inc.'s Form 8-K filed on April 20, 2023 (SEC File No. 333-211719) and incorporated herein by reference.
10.2	Second Amendment to the Second Amended and Restated Purchase and Sale Agreement dated as of April 14, 2023, by and among Ashland Inc. as Exiting Originator and Servicer, Ashland Specialty Ingredients G.P. as remaining originator and CVG Capital III as the Buyer filed as Exhibit 10.2 to Ashland Inc.'s Form 8-K filed on April 20, 2023 (SEC File No. 333-211719) and incorporated herein by reference.
31.1*	Certificate of Guillermo Novo, Chief Executive Officer of Ashland pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2*	Certificate of J. Kevin Willis, Chief Financial Officer of Ashland pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32*	Certificate of Guillermo Novo, Chief Executive Officer of Ashland, and J. Kevin Willis, Chief Financial Officer of Ashland pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS**	Inline XBRL Instance Document.
101.SCH**	Inline XBRL Taxonomy Extension Schema Document.
101.CAL**	Inline XBRL Taxonomy Extension Calculation Linkbase Document.
101.DEF**	Inline XBRL Taxonomy Extension Definition Linkbase Document.
101.LAB**	Inline XBRL Taxonomy Extension Label Linkbase Document.
101.PRE**	Inline XBRL Taxonomy Extension Presentation Linkbase Document.
104	Cover Page Interactive Data File (formatted as inline XBRL and contained in Exhibit 101).

*	Filed herewith.
**	Attached as Exhibit 101 to this report are the following documents formatted in XBRL (Extensible Business Reporting Language): (i) Statements of Consolidated Comprehensive Income (Loss) for the three and nine months ended June 30, 2023 and June 30, 2022; (ii) Condensed Consolidated Balance Sheets at June 30, 2023 and September 30, 2022; (iii) Statements of Condensed Consolidated Cash Flows for the nine months ended June 30, 2023 and June 30, 2022; and (iv) Notes to Condensed Consolidated Financial Statements.
SM	Service mark, Ashland or its subsidiaries, registered in various countries.
TM	Trademark, Ashland or its subsidiaries, registered in various countries.

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.

	Ashland Inc.
	(Registrant)
July 27, 2023	/s/ J. Kevin Willis
	J. Kevin Willis Senior Vice President and Chief Financial Officer (on behalf of the Registrant and as principal financial officer)

EXHIBIT 31.1

CERTIFICATION

I, Guillermo Novo, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Ashland Inc.;
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.

Date: July 27, 2023

/s/ Guillermo Novo

Guillermo Novo
Chair and Chief Executive Officer
(Principal Executive Officer)

EXHIBIT 31.2

CERTIFICATIONS

I, J. Kevin Willis, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Ashland Inc.;
2. Based on my knowledge, this report does not contain andy 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.

Date: July 27, 2023

/s/ J. Kevin Willis

J. Kevin Willis
Chief Financial Officer
(Principal Financial Officer)

EXHIBIT 32

ASHLAND INC.

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report of Ashland Inc. (the “Company”) on Form 10-Q for the period ended June 30, 2023, as filed with the Securities and Exchange Commission on the date hereof (the “Report”), each of the undersigned, Guillermo Novo, Chief Executive Officer of the Company, and J. Kevin Willis, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of Section 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.

/s/ Guillermo Novo

Guillermo Novo
Chief Executive Officer
July 27, 2023

/s/ J. Kevin Willis

J. Kevin Willis
Chief Financial Officer
July 27, 2023