On the Road to an Electrified Future

2022 Annual Report

Dear Fellow Stockholders,

As I look back at 2022, I am incredibly proud of how BorgWarner successfully navigated the challenging global macro environment and continued to thrive despite the conditions.

The main headlines for this past year center on four important accomplishments. First, we made significant advancements in our *Charging Forward* strategy, which culminated with the announcement in December of the planned separation of PHINIA, our Fuel Systems and Aftermarket segments. Second, we secured a significant number of organic electrification program awards during the year. Third, we continued to execute disciplined acquisitions, which have significantly expanded our EV capabilities and are expected to generate approximately $1.3 billion of EV-related revenue in 2025. And fourth, we continued to take decisive actions toward our sustainability efforts, emphasizing both progress on our current Environmental, Social & Governance (ESG) objectives, as well as setting additional ambitious goals, as noted in our annual Sustainability Report.

Let me provide more information on the intended separation of PHINIA into a new publicly traded company. Once complete, BorgWarner will consist only of the Air Management and e-Propulsion & Drivetrain segments of our business, both of which we expect to continue to contribute toward our *Charging Forward* strategy and advance our position as a market leader in EV propulsion.

We believe that this separation is the most significant step we have taken to deliver our *Charging Forward* strategy since it was announced in 2021. BorgWarner and PHINIA are each expected to continue BorgWarner's legacy of disciplined financial and operational management with top-quartile margins and strong free cash flow generation, as each company pursues its respective strategies focused on maximizing shareholder value. As such, we are working diligently through the various work streams and continue to expect the separation to be complete in late 2023.

As a leader in fuel systems and aftermarket distribution, PHINIA will focus on the Commercial Vehicle, Light Vehicle and Aftermarket end markets, and is expected to benefit from its strong relationships with global OEMs. We have seen significant operational and segment margin improvement in recent years despite the challenging industry volume environment, and we believe this positions PHINIA well for success as a stand-alone public company.

In addition, we recently announced that Brady D. Ericson will serve as President and Chief Executive Officer, while Chris Gropp will serve as Executive Vice President and Chief Financial Officer for PHINIA. Both Brady and Chris have been at the company for more than 20 years and have served in numerous important roles across a variety of business units. They are well-rounded and respected leaders, and each possesses a breadth of knowledge and significant experience that will place them in good stead as they lead PHINIA in the years ahead.

We delivered strong financial and operational performance in 2022, and I continue to be very proud of the strength of our revenue relative to the overall industry. We delivered approximately 14% organic revenue growth for the year, significantly higher than growth in overall industry production. And more importantly, our revenue from electric-related products made a meaningful contribution to this growth.

The company delivered solid margin performance in 2022 despite significant production and inflationary headwinds. We also delivered record free cash flow performance, which allowed us to continue to make investments to support our future while continuing to return cash to our shareholders. We feel very positive about our 2022 results and accomplishments, and we are also progressing well along our *Charging Forward* plan, with ambitious goals to do even more in the years ahead.

Building on a successful 2022, we are excited about our plans for 2023 and beyond. We believe BorgWarner is now on track to achieve $4.3 billion in pure EV revenue by 2025, which includes $3.0 billion of booked organic revenue and

$1.3 billion of revenue from acquisitions. We expect to gain additional business across our electric vehicle product portfolio and invest our cash to further grow as the world continues to pivot quickly toward electrification.

Since the announcement of our *Charging Forward* strategy in 2021, we have completed five important acquisitions that have expanded our EV portfolio and that we expect to drive future growth: AKASOL, Santroll, Rhombus, DriveTek and Hubei Surpass Sun Electric.

In June, BorgWarner released its 2022 Sustainability Report, "*Charging Forward* Together," emphasizing significant work the company has made toward meeting our ESG objectives, as well as outlining additional ambitious future goals we have set going forward. As stewards of the environment helping to build a cleaner, healthier and safer future, we remain committed to being a sector leader in sustainability and advancing electrification and eMobility efforts.

There are a few significant environmental highlights that I would like to point out. Early last year, we announced a target to achieve 85% absolute Scope 1 and Scope 2 emissions reduction by 2030 (from a 2021 baseline), and more recently in December, we announced a commitment to reduce our absolute Scope 3 emissions by at least 25% by 2031 (also from a 2021 baseline). Both of these science-based targets were formally submitted for validation to the Science Based Target initiative (SBTi) and align with our *Charging Forward* strategy to further our vision of a clean, energy-efficient world. These targets are fully supported by BorgWarner leadership and encourage a company-wide effort to meet our objectives as we continue to support and collaborate with our partners to achieve environmentally sustainable operations.

These past few years have been challenging. At BorgWarner, we have drawn strength from our 100-plus years of history and dynamic culture to lead the industry and continually thrive during these difficult times. I am so proud of the remarkable achievements our team has delivered, and I continue to be inspired by the tireless work our world-class team puts in every day. Since announcing *Charging Forward*, we believe we are exceeding our organic targets and are on track for our M&A plans, and we expect to complete our dispositions well in advance of the 2025 target.

BorgWarner has consistently demonstrated its willingness and ability to evolve. Our product leadership, agile, decentralized operating model and disciplined financial and operational management are expected to continue to serve us well as we enter the important next phase of our evolution. Although we have made tremendous progress in recent years, the pace of change is set to continue as we move aggressively to build upon our market-leading position and deliver shareholder value.

Finally, I'd like to thank all of our stakeholders for your continued support of the company over the years. I'd particularly like to express my ongoing appreciation for our resilient and committed global workforce for everything they do to ensure our company continues to succeed every day. We are confident in our abilities to execute our stated plans and unlock value for our shareholders. I have never been more excited about the future of BorgWarner and look forward to keeping you updated on our growth and achievements in the near future.

Best regards,

Frédéric B. Lissalde
President and Chief Executive Officer

Forward-Looking Statements: This document contains forward-looking statements as contemplated by the 1995 Private Securities Litigation Reform Act that are based on management's current outlook, expectations, estimates and projections. Words such as "anticipates," "believes," "continues," "could," "designed," "effect," "estimates," "evaluates," "expects," "forecasts," "goal," "guidance," "initiative," "intends," "may," "outlook," "plans," "potential," "predicts," "project," "pursue," "seek," "should," "target," "when," "will," "would," and variations of such words and similar expressions are intended to identify such forward-looking statements. Further, all statements, other than statements of historical fact contained or incorporated by reference in this document that we expect or anticipate will or may occur in the future regarding our financial position, business strategy and measures to implement that strategy, including changes to operations, competitive strengths, goals, expansion and growth of our business and operations, plans, references to future success and other such matters, are forward-looking statements. Accounting estimates, such as those described under the heading "Critical Accounting Policies and Estimates" in Item 7 of our most recently-filed Annual Report on Form 10-K ("Form 10-K"), are inherently forward-looking. All forward-looking statements are based on assumptions and analyses made by us in light of our experience and our perception of historical trends, current conditions and expected future developments, as well as other factors we believe are appropriate under the circumstances. Forward-looking statements are not guarantees of performance, and the Company's actual results may differ materially from those expressed, projected or implied in or by the forward looking statements.

You should not place undue reliance on these forward-looking statements, which speak only as of the date of this document. Forward-looking statements are subject to risks and uncertainties, many of which are difficult to predict and generally beyond our control, that could cause actual results to differ materially from those expressed, projected or implied in or by the forward-looking statements. These risks and uncertainties, among others, include supply disruptions impacting us or our customers, such as the current shortage of semiconductor chips that has impacted original equipment manufacturer ("OEM") customers and their suppliers, including us; commodity availability and pricing, and an inability to achieve expected levels of recoverability in commercial negotiations with customers concerning these costs; competitive challenges from existing and new competitors including OEM customers; the challenges associated with rapidly-changing technologies, particularly as relates to electric vehicles, and our ability to innovate in response; uncertainties regarding the extent and duration of impacts of matters associated with the COVID-19/coronavirus pandemic, including additional production disruptions; the difficulty in forecasting demand for electric vehicles and our electric vehicles revenue growth; potential disruptions in the global economy caused by Russia's invasion of Ukraine; the ability to identify targets and consummate acquisitions on acceptable terms; failure to realize the expected benefits of acquisitions on a timely basis; our ability to effect the intended tax-free spin-off of our Fuel Systems and Aftermarket segments into a separate, publicly traded company on a timely basis or at all; the potential that uncertainty during the pendency of the spin-off transaction could affect our financial performance; the possibility that the spin-off transaction will not achieve its intended benefits; the failure to promptly and effectively integrate acquired businesses; the potential for unknown or inestimable liabilities relating to the acquired businesses; our dependence on automotive and truck production, both of which are highly cyclical and subject to disruptions; our reliance on major OEM customers; fluctuations in interest rates and foreign currency exchange rates; our dependence on information systems; the uncertainty of the global economic environment; the outcome of existing or any future legal proceedings, including litigation with respect to various claims; future changes in laws and regulations, including, by way of example, taxes and tariffs, in the countries in which we operate; impacts from any potential future acquisition or disposition transactions; and the other risks noted under Item 1A, "Risk Factors" in our most recently-filed Form 10-K and/or Quarterly Report on Form 10-Q. We do not undertake any obligation to update or announce publicly any updates to or revisions to any of the forward-looking statements in this document to reflect any change in our expectations or any change in events, conditions, circumstances or assumptions underlying the statements.

Organic Net Sales Change

BorgWarner net sales change year over year, excluding the estimated impact of foreign exchange (FX), the 2022 acquisitions of Santroll's light vehicle eMotor business and Rhombus Energy Solutions, as well as the 2021 divestiture of the Water Valley, Mississippi business.

$ in millions	2021 Net Sales	Disposition Impact	2021 Pro Forma Net Sales	FX	2022 Acquisition Impact	Organic Net Sales Change	2022 Net Sales	Organic Net Sales Change %
Air Management	$ 6,820	$ —	$ 6,820	$ (504)	$ 3	$ 810	$ 7,129	11.9%
e-Propulsion & Drivetrain	5,086	(177)	4,909	(283)	41	958	5,625	19.5%
Fuel Systems	2,237	—	2,237	(132)	—	209	2,314	9.3%
Aftermarket	1,212	—	1,212	(42)	—	115	1,285	9.5%
Inter-segment eliminations	(517)	—	(517)	—	—	(35)	(552)	—
Total	**$ 14,838**	**$ (177)**	**$ 14,661**	**$ (961)**	**$ 44**	**$ 2,057**	**$ 15,801**	**14.0%**

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington D.C. 20549
Form 10-K

(Mark One)
☑ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the fiscal year ended December 31, 2022
OR
☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the transition period from_______________ to _______________

Commission File Number: 1-12162
BorgWarner Inc.
(Exact name of registrant as specified in its charter)

Delaware	13-3404508
(State or other jurisdiction of Incorporation or organization)	(I.R.S. Employer Identification No.)

3850 Hamlin Road,
Auburn Hills, Michigan 48326
(Address of principal executive offices) (Zip Code)

Registrant's telephone number, including area code: (248) 754-9200

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value $0.01 per share	BWA	New York Stock Exchange
1.00% Senior Notes due 2031	BWA31	New York Stock Exchange

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

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

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

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

Indicate by check mark whether the registrant has submitted electronically 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 has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☑

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

The aggregate market value of the voting common stock of the registrant held by stockholders (not including voting common stock held by directors and executive officers of the registrant) on June 30, 2022 (the last business day of the most recently completed second fiscal quarter) was approximately $7.8 billion.

As of February 3, 2023, the registrant had 234,130,802 shares of voting common stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the following documents are incorporated herein by reference into the Part of the Form 10-K indicated.

Document	Part of Form 10-K into which incorporated
Portions of the BorgWarner Inc. Proxy Statement for the 2023 Annual Meeting of Stockholders	*Part III*

BORGWARNER INC.

FORM 10-K

YEAR ENDED DECEMBER 31, 2022

INDEX

		Page No.
	PART I.	
Item 1.	Business	5
Item 1A.	Risk Factors	17
Item 1B.	Unresolved Staff Comments	30
Item 2.	Properties	30
Item 3.	Legal Proceedings	30
Item 4.	Mine Safety Disclosures	30
	PART II.	
Item 5.	Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities	31
Item 6.	[Reserved]	33
Item 7.	Management's Discussion and Analysis of Financial Condition and Results of Operations	33
Item 7A.	Quantitative and Qualitative Disclosures About Market Risk	55
Item 8.	Financial Statements and Supplementary Data	56
Item 9.	Changes in and Disagreements With Accountants on Accounting and Financial Disclosure	126
Item 9A.	Controls and Procedures	126
Item 9B.	Other Information	127
Item 9C.	Disclosure Regarding Foreign Jurisdictions that Prevent Inspections	127
	PART III.	
Item 10.	Directors, Executive Officers and Corporate Governance	127
Item 11.	Executive Compensation	127
Item 12.	Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters	127
Item 13.	Certain Relationships and Related Transactions and Director Independence	127
Item 14.	Principal Accountant Fees and Services	128
	PART IV.	
Item 15.	Exhibits and Financial Statement Schedules	128
Item 16.	Form 10-K Summary	128

CAUTIONARY STATEMENTS FOR FORWARD-LOOKING INFORMATION

Statements contained in this Annual Report on Form 10-K ("Form 10-K") (including Management's Discussion and Analysis of Financial Condition and Results of Operations) may contain forward-looking statements as contemplated by the 1995 Private Securities Litigation Reform Act (the "Act") that are based on management's current outlook, expectations, estimates and projections. Words such as "anticipates," "believes," "continues," "could," "designed," "effect," "estimates," "evaluates," "expects," "forecasts," "goal," "initiative," "intends," "may," "outlook," "plans," "potential," "predicts," "project," "pursue," "seek," "should," "target," "when," "will," "would," and variations of such words and similar expressions are intended to identify such forward-looking statements. Further, all statements, other than statements of historical fact contained or incorporated by reference in this Form 10-K, that we expect or anticipate will or may occur in the future regarding our financial position, business strategy and measures to implement that strategy, including changes to operations, competitive strengths, goals, expansion and growth of our business and operations, plans, references to future success and other such matters, are forward-looking statements. Accounting estimates, such as those described under the heading "Critical Accounting Policies and Estimates" in Item 7 of this Annual Report on Form 10-K, are inherently forward-looking. All forward looking statements are based on assumptions and analyses made by us in light of our experience and our perception of historical trends, current conditions and expected future developments, as well as other factors we believe are appropriate in the circumstances. Forward-looking statements are not guarantees of performance and the Company's actual results may differ materially from those expressed, projected or implied in or by the forward-looking statements.

You should not place undue reliance on these forward-looking statements, which speak only as of the date of this Annual Report. Forward-looking statements are subject to risks and uncertainties, many of which are difficult to predict and generally beyond our control, that could cause actual results to differ materially from those expressed, projected or implied in or by the forward-looking statements. These risks and uncertainties, among others, include supply disruptions impacting us or our customers, such as the current shortage of semiconductor chips that has impacted original equipment manufacturer ("OEM") customers and their suppliers, including us; commodity availability and pricing, and an inability to achieve expected levels of recoverability in commercial negotiations with customers concerning these costs; competitive challenges from existing and new competitors including OEM customers; the challenges associated with rapidly-changing technologies, particularly as relates to electric vehicles, and our ability to innovate in response; uncertainties regarding the extent and duration of impacts of matters associated with the COVID-19/coronavirus pandemic ("COVID-19"), including additional production disruptions; the difficulty in forecasting demand for electric vehicles and our electric vehicles revenue growth; potential disruptions in the global economy caused by Russia's invasion of Ukraine; the ability to identify targets and consummate acquisitions on acceptable terms; failure to realize the expected benefits of acquisitions on a timely basis; our ability to effect the intended tax-free spin-off of our Fuel Systems and Aftermarket segments into a separate, publicly traded company on a timely basis or at all; the potential that uncertainty during the pendency of the spin-off transaction could affect our financial performance; the possibility that the spin-off transaction will not achieve its intended benefits; the failure to promptly and effectively integrate acquired businesses; the potential for unknown or inestimable liabilities relating to the acquired businesses; our dependence on automotive and truck production, both of which are highly cyclical and subject to disruptions; our reliance on major OEM customers; fluctuations in interest rates and foreign currency exchange rates; our dependence on information systems; the uncertainty of the global economic environment; the outcome of existing or any future legal proceedings, including litigation with respect to various claims; future changes in laws and regulations, including, by way of example, taxes and tariffs, in the countries in which we operate; impacts from any potential future acquisition or disposition transactions; and the other risks noted under Item 1A, "Risk Factors," and in other reports that we file with the Securities and Exchange Commission. We do not undertake any obligation to update or announce publicly any updates to or revisions to any of the forward-looking statements in this Form 10-K to reflect any change in our expectations or any change in events, conditions, circumstances, or assumptions underlying the statements.

This section and the discussions contained in Item 1A, “Risk Factors,” and in Item 7, subheading “Critical Accounting Policies and Estimates” in this report, are intended to provide meaningful cautionary statements for purposes of the safe harbor provisions of the Act. This should not be construed as a complete list of all of the economic, competitive, governmental, technological and other factors that could adversely affect our expected consolidated financial position, results of operations or liquidity. Additional risks and uncertainties, including without limitation those not currently known to us or that we currently believe are immaterial, also may impair our business, operations, liquidity, financial condition and prospects.

Use of Non-GAAP Financial Measures

In addition to results presented in accordance with accounting principles generally accepted in the United States of America (“GAAP”), this report includes non-GAAP financial measures. The Company believes these non-GAAP financial measures provide additional information that is useful to investors in understanding the underlying performance and trends of the Company. Readers should be aware that non-GAAP financial measures have inherent limitations and should be cautious with respect to the use of such measures. To compensate for these limitations, we use non-GAAP measures as comparative tools, together with GAAP measures, to assist in the evaluation of our operating performance or financial condition. We calculate these measures using the appropriate GAAP components in their entirety and compute them in a manner intended to facilitate consistent period-to-period comparisons. The Company’s method of calculating these non-GAAP measures may differ from methods used by other companies. These non-GAAP measures should not be considered in isolation or as a substitute for those financial measures prepared in accordance with GAAP. Where non-GAAP financial measures are used, the most directly comparable GAAP financial measure, as well as the reconciliation to the most directly comparable GAAP financial measure, can be found in this report.

PART I

Item 1. Business

BorgWarner Inc. (together with its Consolidated Subsidiaries, the “Company” or “BorgWarner”) is a Delaware corporation incorporated in 1987. The Company is a global product leader in clean and efficient technology solutions for combustion, hybrid and electric vehicles. Its products help improve vehicle performance, propulsion efficiency, stability and air quality. The Company manufactures and sells these products worldwide, primarily to original equipment manufacturers (“OEMs”) of light vehicles (passenger cars, sport-utility vehicles (“SUVs”), vans and light trucks). The Company’s products are also sold to OEMs of commercial vehicles (medium-duty trucks, heavy-duty trucks and buses) and off-highway vehicles (agricultural and construction machinery and marine applications). The Company also manufactures and sells its products to certain tier one vehicle systems suppliers and into the aftermarket for light, commercial and off-highway vehicles. The Company operates manufacturing facilities serving customers in Europe, the Americas and Asia and is an original equipment supplier to nearly every major automotive OEM in the world.

Charging Forward - Electrification Portfolio Strategy

In 2021, the Company announced its strategy to aggressively grow its electrification product portfolio over time through organic investments and technology-focused acquisitions. The Company believes it is well positioned for the industry’s anticipated migration to electric vehicles (“EV”). The Company is targeting its revenue from products for pure electric vehicles to be over 25% of its total revenue by 2025 and approximately 45% of its total revenue by 2030. The Company believes it is on track to exceed its 2025 organic EV-related sales target and over the last two years has announced or completed five acquisitions. On December 6, 2022, the Company announced its intention to execute a tax-free spin-off of its Fuel Systems and Aftermarket segments into a separate, publicly traded company. The intended separation of its Fuel Systems and Aftermarket segments would support optimizing the Company’s combustion portfolio and advancing its electrification journey, while at the same time creating a new, focused company that would be able to pursue growth opportunities in alternative fuels, such as hydrogen, and in Aftermarket. The Company expects to complete the transaction in late 2023, subject to satisfaction of customary conditions. In 2022, the Company’s EV-related revenue was approximately $870 million, or 6%, of its total revenue. Based on new business awards and actions announced to date, the Company believes it is on track to achieve $4.3 billion of EV revenue by 2025.

Recent Acquisitions

Acquisitions are an integral component of the Company’s growth and value creation strategy. Below are summaries of recent acquisitions. Refer to Note 2, “Acquisitions and Dispositions,” to the Consolidated Financial Statements in Item 8 of this report for more information.

Hubei Surpass Sun Electric Charging Business

On September 20, 2022, the Company announced that it had entered into an Equity Transfer Agreement under which BorgWarner will acquire the electric vehicle solution, smart grid and smart energy businesses of Hubei Surpass Sun Electric. The transaction has an enterprise value up to ¥410 million ($60 million), of which approximately ¥267 million ($39 million) will be delivered at or soon after closing, and up to ¥143 million ($21 million) could be paid in the form of contingent payments over approximately two years following the closing. The acquisition complements the Company’s existing European and North American charging footprint by adding a presence in China. The transaction is subject to satisfaction of customary closing conditions and is expected to close in the first quarter of 2023.

Drivetek AG

On December 1, 2022, the Company acquired Drivetek AG, an engineering and product development company located in Switzerland. This acquisition strengthens the Company's power electronics capabilities in auxiliary inverters, which it expects to accelerate the growth of the High Voltage eFan business. The Company paid ₣27 million ($29 million) at closing, and up to ₣10 million ($10 million) could be paid in the form of contingent payments over the three years following closing.

Rhombus Energy Solutions

On July 29, 2022, the Company acquired Rhombus Energy Solutions, a provider of charging solutions in the North American market. The acquisition complements the Company's existing European charging footprint to accelerate organic growth and adds North American regional presence to its charging business. The Company paid $131 million at closing, and up to $30 million could be paid in the form of contingent payments over the three years following closing.

Santroll Automotive Components

On March 31, 2022, the Company acquired Santroll Automotive Components, a carve-out of Santroll Electric Auto's eMotor business. The acquisition strengthens the Company's vertical integration, scale and portfolio breadth in light vehicle eMotors while allowing for increased speed to market. The total final consideration was $192 million, which reflects a reduction of approximately $20 million in the base purchase price since the acquisition closing date resulting from an amendment to the Equity Transfer Agreement and finalization of post-closing adjustments. The consideration includes approximately ¥1.0 billion ($152 million) of base purchase price and ¥0.25 billion ($40 million) of originally estimated earn-out payments. The Company paid approximately $157 million of base purchase price in the year ended December 31, 2022 and expects to recapture approximately $5 million of post-closing adjustments through a reduction of the payment of the second earn-out.

AKASOL AG

On June 4, 2021, the Company completed a voluntary public takeover offer for shares of AKASOL AG ("AKASOL"), resulting in ownership of 89% of AKASOL's outstanding shares. The Company paid approximately €648 million ($788 million) to settle the offer. During 2021, the Company increased its ownership to 93% through the subsequent purchase of additional shares. On February 10, 2022, the Company completed a merger squeeze-out process to obtain the remaining shares, resulting in 100% ownership. The acquisition further strengthens BorgWarner's commercial vehicle and industrial electrification capabilities, which positions the Company to capitalize on what it believes to be a fast-growing battery module and pack market.

Delphi Technologies PLC

On October 1, 2020, the Company completed its acquisition of Delphi Technologies PLC ("Delphi Technologies") from the shareholders of Delphi Technologies pursuant to the terms of the Transaction Agreement, dated January 28, 2020, as amended on May 6, 2020, by and between the Company and Delphi Technologies (the "Transaction Agreement"). Pursuant to the terms of the Transaction Agreement, the Company issued, in exchange for each Delphi Technologies share, 0.4307 of a share of common stock of the Company and cash in lieu of any fractional shares. In the aggregate, the Company delivered consideration of approximately $2.4 billion. The acquisition has strengthened the Company's electronics and power electronics products, strengthened its capabilities and scale, enhanced key combustion, commercial vehicle and aftermarket product offerings, and positioned the Company for greater growth as electrified propulsion systems gain momentum.

Financial Information About Reporting Segments

Refer to Note 24, “Reporting Segments and Related Information,” to the Consolidated Financial Statements in Item 8 of this report for financial information about the Company's reporting segments.

Narrative Description of Reporting Segments

The Company reports its results under four reporting segments: Air Management, e-Propulsion & Drivetrain, Fuel Systems and Aftermarket.

In the first quarter of 2022, the Company announced that the starter and alternator business, previously reported in its e-Propulsion & Drivetrain segment, would transition to the Aftermarket segment. The Company also announced in 2022 that the canisters and fuel delivery modules business, previously reported in its Air Management segment, would transition to the Fuel Systems segment. Both of these transitions were completed during the second quarter of 2022. Additionally, in the fourth quarter of 2022, the Company moved its battery systems business, previously reported in its Air Management segment, to the e-Propulsion & Drivetrain segment. The reporting segment disclosures have been updated accordingly which included recasting prior period information for the new reporting structure.

Net sales by reporting segment were as follows:

	Year Ended December 31,		
(in millions)	2022	2021	2020
Air Management	$ 7,129	$ 6,820	$ 5,564
e-Propulsion & Drivetrain	5,625	5,086	3,695
Fuel Systems	2,314	2,237	593
Aftermarket	1,285	1,212	488
Inter-segment eliminations	(552)	(517)	(175)
Net sales	$ 15,801	$ 14,838	$ 10,165

The sales information presented above does not include the sales by the Company’s unconsolidated joint ventures (see sub-heading “Joint Ventures” below). Such unconsolidated sales totaled approximately $969 million, $1,053 million, and $721 million for the years ended December 31, 2022, 2021 and 2020, respectively.

Air Management

The Air Management segment develops and manufactures products to improve fuel economy, reduce emissions and enhance performance. The Air Management segment’s technologies include turbochargers, eBoosters, eTurbos, timing systems, emissions systems, thermal systems, gasoline ignition technology, smart remote actuators, powertrain sensors, cabin heaters, battery heaters, battery charging and direct current charging stations.

The Air Management segment’s emissions, thermal and turbocharger systems provide several benefits including increased power for a given engine size, improved fuel economy, reduced emissions and optimized temperatures in propulsion systems and vehicle cabins. Sales of turbochargers for light vehicles represented approximately 20%, 19% and 24% of the Company’s net sales for the years ended December 31, 2022, 2021 and 2020, respectively. No other single product line accounted for more than 10% of consolidated net sales in any of the years presented.

The Air Management segment’s timing systems enable precise control of air and exhaust flow through the engine, improving fuel economy and emissions. The Air Management segment is a leading manufacturer of timing systems for OEMs around the world.

The Air Management segment's powertrain products include an array of highly engineered products that complement and enhance the efficiency improvements delivered by many other air management technologies.

e-Propulsion & Drivetrain

The Company's e-Propulsion & Drivetrain segment's technologies include rotating electrical components, power electronics, electric drive motors, control modules, software, battery products, friction and mechanical products for automatic transmissions and torque-management products.

The e-Propulsion & Drivetrain segment's electronics portfolio consists of electric motors for hybrid and electric vehicles, power electronics and engine and transmission control modules. As electrification of vehicles increases, its power electronics solutions, including inverters, onboard chargers, DC/DC converters, battery management systems, and software inverters, provide better efficiency, reduced weight and lower cost for its OEM customers. The control modules, containing as much as one million lines of software code, are key components that enable the integration and operation of powertrain products throughout the vehicle.

The e-Propulsion & Drivetrain segment's battery products include high-performance lithium-ion battery modules and systems for electrified applications that provide long battery life with a high power output for safe, reliable and durable operation.

The e-Propulsion & Drivetrain segment's friction and mechanical products for automatic transmissions include dual clutch modules, friction clutch modules, friction and separator plates, transmission bands, torque converter clutches, one-way clutches and torsional vibration dampers. Controls products for automatic transmissions feature electro-hydraulic solenoids for standard and high pressure hydraulic systems, transmission solenoid modules and dual clutch control modules.

The e-Propulsion & Drivetrain segment's torque management products include rear-wheel drive ("RWD")-all-wheel drive ("AWD") transfer case systems, front-wheel drive ("FWD")-AWD coupling systems and cross-axle coupling systems. The segment is developing electronically controlled torque management devices and systems that will benefit vehicle energy efficiency and vehicle dynamics.

Fuel Systems

The Fuel Systems segment develops and manufactures gasoline and diesel fuel injection components and systems. Its highly-engineered fuel injection systems portfolio includes pumps, injectors, evaporative canisters, fuel delivery modules, fuel rails and fuel rail assemblies, engine control units, and complete systems, including associated software and calibration services, that deliver greater efficiency and improve fuel economy for traditional and hybrid vehicles. The Company's gasoline direct injection, or GDi, technology provides high-precision fuel delivery for optimized combustion, which lowers emissions and improves fuel economy. Its diesel fuel injection systems portfolio provides enhanced emission and engine performance at an attractive value. The Company's common rail fuel injection system is the core technology for both on and off-highway commercial and light vehicle applications.

Aftermarket

The Aftermarket segment sells products and services to independent aftermarket customers and original equipment service customers with both new and remanufactured products. Its product portfolio includes a wide range of solutions covering the fuel injection, electronics and engine management, starters and alternators, maintenance, test equipment and vehicle diagnostics categories. The aftermarket segment's business provides a recurring and stable revenue base, as replacement of many of these products is non-discretionary in nature.

Joint Ventures

As of December 31, 2022, the Company had ten joint ventures in which it had a less-than-100% ownership interest. Results from the seven joint ventures in which the Company is the majority owner and has a controlling financial interest are consolidated as part of the Company's results. Results from the three joint ventures in which the Company exercises significant influence but does not have a controlling financial interest, were reported by the Company using the equity method of accounting pursuant to which the Company records its proportionate share of each joint venture's income or loss each period.

Management of the unconsolidated joint ventures is shared with the Company's respective joint venture partners. Certain information concerning the Company's joint ventures is set forth below:

Joint venture	Products	Year organized	Percentage owned by the Company	Location of operation	Joint venture partner
Unconsolidated:					
NSK-Warner K.K.	Transmission components	1964	50 %	Japan/ China	NSK Ltd.
Turbo Energy Private Limited	Turbochargers	1987	32.6 %	India	Sundaram Finance Limited; Brakes India Limited
Delphi-TVS Diesel Systems Ltd	Fuel injection equipment	2001	52.5 %	India	Cheema TVS Industrial Ventures Private Limited
Consolidated:					
Delphi Powertrain Systems Korea Ltd.	Valvetrain and fuel injection equipment	1977	70 %	Korea	BU RA DA Company Limited
BorgWarner Transmission Systems Korea Ltd.[1]	Transmission components	1987	60 %	Korea	NSK-Warner
Beijing Delphi Wan Yuan Engine Management Systems Co. Ltd.	Engine management systems	1999	51 %	China	Beijing Wan Yuan Industry Corporation
Borg-Warner Shenglong (Ningbo) Co. Ltd.	Fans and fan drives	1999	70 %	China	Ningbo Shenglong Automotive Powertrain Systems Co., Ltd.
BorgWarner TorqTransfer Systems Beijing Co. Ltd.	Transfer cases	2000	80 %	China	Beijing Hainachuan Automotive Parts Holding Co., Ltd.
SeohanWarner Turbo Systems Ltd.	Turbochargers	2003	71 %	Korea	Korea Flange Company
BorgWarner United Transmission Systems Co. Ltd.	Transmission components	2009	66 %	China	China Automobile Development United Investment Co., Ltd.

[1] BorgWarner Inc. owns 50% of NSK-Warner, which has a 40% interest in BorgWarner Transmission Systems Korea Ltd. This ownership gives the Company an additional indirect effective ownership percentage of 20% in BorgWarner Transmission Systems Korea Ltd., resulting in a total effective ownership interest of 80%.

Financial Information About Geographic Areas

The Company has a global presence. During the year ended December 31, 2022, approximately 19% of the Company's net sales were generated in the United States, and 81% were generated outside the United States. Refer to Note 24, "Reporting Segments and Related Information," to the Consolidated Financial Statements in Item 8 of this report for additional financial information about geographic areas.

Product Lines and Customers

During the year ended December 31, 2022, approximately 76% of the Company's net sales were for light-vehicle applications; approximately 12% were for commercial-vehicle applications; approximately 4% were for off-highway vehicle applications; and approximately 8% were to distributors of aftermarket replacement parts.

The Company's worldwide net sales to the following customers (including their subsidiaries) were approximately as follows:

	Year Ended December 31,		
Customer	2022	2021	2020
Ford	13 %	10 %	13 %
Volkswagen	8 %	9 %	11 %

No other single customer accounted for more than 10% of the Company's consolidated net sales in any of the years presented. Sales to the Company's top ten customers represented 62% of sales for the year ended December 31, 2022.

The Company's automotive products are generally sold directly to OEMs, substantially pursuant to negotiated annual contracts, long-term supply agreements or terms and conditions as may be modified by the parties. Deliveries are subject to periodic authorizations based upon OEM production schedules. The Company typically ships its products directly from its plants to the OEMs.

Sales and Marketing

Each of the Company's businesses within its reporting segments has its own sales function. Account executives for each of the Company's businesses are assigned to serve specific customers for one or more businesses' products. Account executives spend the majority of their time in direct contact with customers' purchasing and engineering employees and are responsible for servicing existing business and for identifying and obtaining new business. Because of their close relationship with customers, account executives are able to identify and meet customers' needs based upon their knowledge of the Company's product design and manufacturing capabilities. Upon securing a new order, account executives participate in product launch team activities and serve as a key interface with customers. In addition, sales and marketing employees of the Company's reporting segments often work together to explore cross-development opportunities where appropriate.

Seasonality

The Company's operations are directly related to the automotive and commercial-vehicle industry. Consequently, the Company's segments may experience seasonal fluctuations to the extent vehicle production slows, such as in the summer months when many customer plants typically close for model year changeovers or vacations. Historically, model changeovers or vacations have generally resulted in lower sales volume in the Company's third quarter.

Research and Development

The Company conducts advanced propulsion research. This advanced engineering function seeks to leverage know-how and expertise across product lines to create new electrified propulsion systems and modules that can be commercialized. This function oversees the Company's investments in certain venture capital funds that provide seed money for start-up businesses developing new technologies pertinent to the automotive industry and the Company's propulsion strategies.

In addition, each of the Company's businesses within its Air Management, e-Propulsion & Drivetrain and Fuel Systems reporting segments has its own research and development ("R&D") organization, including engineers and technicians, engaged in R&D activities at facilities worldwide. The Company also operates testing facilities such as prototype, measurement and calibration, life-cycle testing and dynamometer laboratories.

By working closely with OEMs and anticipating their future product needs, the Company's R&D personnel conceive, design, develop and manufacture new proprietary components and systems. R&D personnel also work to improve current products and production processes. The Company believes its commitment to R&D will allow it to continue to obtain new orders from its OEM customers.

The Company's net R&D expenditures are primarily included in selling, general and administrative expenses of the Consolidated Statements of Operations. Customer reimbursements are netted against gross R&D expenditures as they are considered a recovery of cost. Customer reimbursements for prototypes are recorded net of prototype costs based on customer contracts, typically either when the prototype is shipped or when it is accepted by the customer. Customer reimbursements for engineering services are recorded when performance obligations are satisfied in accordance with the contract. Financial risks and rewards transfer upon shipment, acceptance of a prototype component by the customer or upon completion of the performance obligation as stated in the respective customer agreement.

	Year Ended December 31,		
(in millions)	2022	2021	2020
Gross R&D expenditures	$ 968	$ 930	$ 533
Customer reimbursements	(182)	(223)	(57)
Net R&D expenditures	$ 786	$ 707	$ 476

Net R&D expenditures as a percentage of net sales were 5.0%, 4.8% and 4.7% for the years ended December 31, 2022, 2021 and 2020, respectively.

Intellectual Property

The Company has approximately 7,800 active domestic and foreign patents and patent applications pending or under preparation and receives royalties from licensing patent rights to others. While it considers its patents on the whole to be important, the Company does not consider any single patent, any group of related patents or any single license essential to its operations in the aggregate or to the operations of any of the Company's business groups individually. The expiration of the patents individually and in the aggregate is not expected to have a material effect on the Company's financial position or future operating results. The Company owns numerous trademarks, some of which are valuable, but none of which are essential to its business in the aggregate.

The Company owns the "BorgWarner" trade name and numerous BORGWARNER trademarks which are material to the Company's business.

Competition

The Company's reporting segments compete worldwide with a number of other manufacturers and distributors that produce and sell similar products. Many of these competitors are larger and have greater resources than the Company. Technological innovation, application engineering development, quality, price, delivery and program launch support are the primary methods of competition.

The Company's major non-OEM competitors are Robert Bosch GmbH, Denso Corporation, Hitachi, Ltd., Magna Powertrain (an operating unit of Magna International Inc.), Valeo, Schaeffler Group and Vitesco Technologies. The Company also competes with certain start-ups in electrification.

In addition, a number of the Company's major OEM customers manufacture, for their own use and for others, products that compete with the Company's products. Other current OEM customers could elect to manufacture products to meet their own requirements or to compete with the Company. There is no assurance that the Company's business will not be adversely affected by increased competition in the markets in which it operates.

For many of its products, the Company's competitors include suppliers in parts of the world that enjoy economic advantages such as lower labor costs, lower health care costs, lower tax rates and, in some cases, export subsidies and/or raw materials subsidies. Also, see Item 1A, "Risk Factors."

Human Capital Management

The Company's ability to sustain and grow its business requires it to hire, retain and develop a highly skilled and diverse management team and workforce worldwide. The Company believes the skills, experience, and industry knowledge of its employees significantly benefit its operations and performance.

The Company's Compensation Committee oversees human capital management and assesses whether environmental, social and governance ("ESG") goals and milestones, as appropriate, are effectively reflected in executive compensation. The full Board of Directors oversees talent reviews and succession planning for the Company.

As of December 31, 2022, the Company had a salaried and hourly workforce as follows:

Americas	17,400
Asia	14,200
Europe	21,100
Total Employees	52,700
Salaried	16,700
Hourly	36,000
Total Employees	52,700

The Company uses an array of practices to attract, develop and retain highly qualified talent, including the following:

- *Diversity, Equity & Inclusion ("DE&I")*. The Company cultivates a culture where employees are treated with respect and their differences are valued. The Company is continually reviewing its policies, programs and processes to ensure alignment with its DE&I strategy. The Company undertakes targeted recruitment that serves as a strategic opportunity to build a diverse talent and leadership pipeline. In 2022, the Company set goals to advance diversity, equity, and inclusion and support its commitment to creating an inclusive and sustainable workforce of the future. Those goals include:

- 35% of global workforce are women by 2026
- 30% of U.S. workforce are racially/ethnically diverse by 2026
- Pay parity for all by 2026
- 80% or above on the BorgWarner Beliefs index score from the Company's employee engagement survey by 2026

In 2022, the Company also continued the rollout of Unconscious Bias Awareness training to its workforce and promoted the continued development of Employee Belonging Groups. Ultimate responsibility for diversity at BorgWarner lies with the Company's CEO, while the Board of Directors monitors initiatives and performance. As of December 31, 2022:

- Four of eight board members were women and/or racially/ethnically diverse.
- Three of 11 executive management team members were women and/or racially/ethnically diverse.
- Women compose 16% of the Company's leadership (those who participate in the management incentive plan), 24% of the Company's salaried workforce, 40% of the Company's new hires and 31% of the Company's global workforce.
- Racial/ethnic minorities compose 21% of the Company's U.S. leadership (those who participate in the management incentive plan), 23% of the Company's U.S. salaried workforce, 43% of the Company's U.S. new hires and 27% of the Company's total U.S. workforce.
- The Company is committed to the principle of equal pay for equal work and seeks to ensure employees are paid equitably for substantially similar work. The Company's latest pay equity analysis identified that, on average, women received compensation 98.9% of that received by men across the Company's global workforce for substantially similar work. In the U.S., racial/ethnic minorities received compensation of 99.0% or more compared to compensation received by non-minorities for substantially similar work.[1] An annual salary review process is in place to evaluate and address discrepancies in pay, if identified.

- *Engagement & Retention.* The Company actively deploys strategies to attract, engage and retain the brightest and best talent. It recognizes and rewards employee contributions with competitive pay and benefits. The Company closely monitors employee turnover as part of its efforts to improve retention and to spot any potential opportunities for improvement. In the year ended December 31, 2022, annual voluntary employee turnover was 17%.

- *Education & Development.* The Company is committed to preparing its workforce for the transition from combustion to electrification. In 2022, the Company delivered training programs created in partnership with elite universities to increase knowledge, skills and improve time-to-productivity for engineers in new roles in an electrification environment. The Company provides formal development opportunities at all levels and stages of the career journey of its employees. These opportunities are delivered in a variety of formats to make its portfolio of solutions flexible, accessible, scalable and translatable to meet the needs of our evolving workplace and workforce. The Company provided more than 112,000 hours of training to salaried employees in the year ended December 31, 2022.

- *Health & Safety.* The safety of the Company's employees is vitally important, and the Company is dedicated to continuously improving safety performance. Evidence of the Company's dedication is in its results:
    - The Company's global workforce accident total recordable incident rate through December 31, 2022 was 0.37, while, in comparison, the top quartile for motor vehicle parts manufacturing was lower than or equal to 1.1, and the mean was 2.4 according to the U.S. Bureau of Labor Statistics (the "BLS").

---

[1] The Company's most recent pay equity study was conducted in 2022 based on compensation as of December 31, 2021. The analysis included employees from salaried early-in-career through vice president roles and included employees acquired as part of the Delphi Technologies acquisition.

- The Company's global workforce accident lost time incident rate through December 31, 2022 was 0.18, while in comparison the top quartile for motor vehicle parts manufacturing was lower than or equal to 0.1, and the mean was 0.6 according to the BLS.
- Additionally, the Company has a formal audited health and safety management system in place at all of its manufacturing and technical centers.

Approximately 13% of the Company's U.S. workforce is unionized. These employees, located at one facility in the state of New York, are covered by a collective bargaining agreement that expires in September 2024. Employees at certain international facilities are also unionized. The Company believes the present relations with its workforce to be satisfactory. The Company recognizes that, in many of the locations where it operates, employees have freedom of association rights with third-party organizations such as labor unions. The Company respects and supports those rights, including the right to collective bargaining, in accordance with local laws.

Raw Materials

The Company uses a variety of raw materials in the production of its products including aluminum, copper, nickel, plastic resins, steel, certain alloy elements and semiconductor chips. Manufacturing operations for each of the Company's operating segments are dependent upon natural gas, fuel oil and electricity.

The Company uses a variety of tactics in an attempt to limit the impact of supply shortages and inflationary pressures. The Company's global procurement organization works to accelerate cost reductions, purchase from lower cost regions, optimize the supply base, mitigate risk and collaborate on its buying activities. In addition, the Company uses long-term contracts, cost sharing arrangements, design changes, customer buy programs and limited financial instruments to help control costs. The Company intends to use similar measures in 2023 and beyond. Refer to Note 17, "Financial Instruments," to the Consolidated Financial Statements in Item 8 of this report for information related to the Company's hedging activities.

For 2023, the Company believes there will be continued inflationary pressures in certain raw materials, labor and energy. The Company also believes there will continue to be supply constraints related to semiconductor chips. Supplies of other raw materials are adequate and available from multiple sources to support its manufacturing requirements.

Regulations

The Company operates in a constantly evolving global regulatory environment and is subject to numerous and varying regulatory requirements for its product performance and material content. The Company's practice is to identify potential regulatory and quality risks early in the design and development process and proactively manage them throughout the product lifecycle through the use of routine assessments, protocols, standards, performance measures and audits. New regulations and changes to existing regulations are managed in collaboration with the Company's OEM customers and implemented through its global systems and procedures designed to ensure compliance with existing laws and regulations. The Company demonstrates material content compliance through the International Material Data System ("IMDS"), which is the automotive industry material data system. In the IMDS, all materials used for automobile manufacturing are archived and maintained to meet the obligations placed on the automobile manufacturers, and thus on their suppliers, by national and international standards, laws and regulations.

The Company works collaboratively with a number of stakeholder groups including government agencies, such as the National Highway Traffic Safety Administration, its customers and its suppliers to proactively engage in federal, state and international public policy processes.

Refer to Item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” for a discussion of the impact of environmental regulations on the Company’s business. Also, see Item 1A, “Risk Factors.”

Available Information

Through its Internet website (www.borgwarner.com), the Company makes available, free of charge, its Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, all amendments to those reports, and other filings with the Securities and Exchange Commission as soon as reasonably practicable after they are filed or furnished. The Company also makes the following documents available on its Internet website: the Audit Committee Charter; the Compensation Committee Charter; the Corporate Governance Committee Charter; the Company’s Corporate Governance Guidelines; the Company’s Code of Ethical Conduct; and the Company’s Code of Ethics for CEO and Senior Financial Officers. You may also obtain a copy of any of the foregoing documents, free of charge, if you submit a written request to Investor Relations, 3850 Hamlin Road, Auburn Hills, Michigan 48326. You can also find our public filings at a website maintained by the SEC, http://www.sec.gov, which contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC.

Information About Executive Officers of the Company

Set forth below are the names, ages, positions and certain other information concerning the executive officers of the Company as of February 9, 2023.

Name (Age)	Present Position (Effective Date)	Positions Held During the Past Five Years (Effective Date)
Frederic B. Lissalde (55)	President and Chief Executive Officer (2018)	• Executive Vice President and Chief Operating Officer of the Company (2018) • Autoliv, Inc., Member of Board of Directors (2020 – Present)
Kevin A. Nowlan (51)	Executive Vice President, Chief Financial Officer (2019)	• Meritor Inc., Senior Vice President, President, Trailer, Components and Chief Financial Officer (2018 – 2019) • Meritor Inc., Senior Vice President and Chief Financial Officer (2013 – 2018) • Federal Reserve Bank of Chicago – Detroit Branch, Member of Board of Directors (2022 – Present)
Tonit M. Calaway (55)	Executive Vice President, Chief Administrative Officer, General Counsel and Secretary (2020)	• Executive Vice President, Chief Legal Officer and Secretary of the Company (2018 - 2020) • Chief Human Resources Officer of the Company (2016 – 2018) • Air Products & Chemicals, Inc., Member of Board of Directors (2022 – Present) • W.P. Carey Inc., Member of Board of Directors (2020 – Present)
Tania Wingfield (56)	Executive Vice President, Chief Human Resources Officer (2022)	• Vice President and General Manager, North America Aftermarket (2021 – 2022) • Vice President and Integration Champion of the Company (2020 – 2021) • Vice President, Engineering, PowerDrive Systems (2015 – 2020)
Craig D. Aaron (45)	Vice President and Controller (2022)	• Vice President and Treasurer (2019 – 2022) • Vice President of Finance of BorgWarner Morse Systems (2016 – 2019)
Stefan Demmerle (58)	Vice President and President and General Manager, PowerDrive Systems (2015)	• Vice President of the Company and President and General Manager of BorgWarner PowerDrive Systems (2015 – Present)
Brady D. Ericson (51)	Vice President and President and General Manager, Fuel Systems and Aftermarket (2022)	• Vice President and President and General Manager, Morse Systems (2019 – 2022) • Executive Vice President and Chief Strategy Officer of the Company (2017 – 2019)
Daniel R. Etue (49)	Vice President and Treasurer (2022)	• Vice President and Controller (2020 – 2022) • Meritor, Inc., Vice President, Finance (2013 – 2020)
Joseph F. Fadool (56)	Vice President and President and General Manager, Emissions, Thermal and Turbo Systems (2019)	• Vice President of the Company and President and General Manager of Turbo Systems LLC (2019) • Vice President of the Company and President and General Manager of BorgWarner Emissions Systems LLC and BorgWarner Thermal Systems Inc. (2017 – 2019)
Paul A. Farrell (56)	Executive Vice President and Chief Strategy Officer (2020)	• Delphi Technologies PLC, Senior Vice President Strategy, Sales and Corporate Development (2020) • Delphi Technologies PLC, Senior Vice President Strategy and Corporate Development (2019 – 2020) • Delphi Technologies PLC, Senior Vice President Strategic Planning and Product Marketing (2017 – 2019)
Davide Girelli (51)	Vice President and President and General Manager, Morse Systems (2022)	• Vice President and President and General Manager, Fuel Systems (formerly known as Fuel Injection Systems) (2020 – 2022) • Vice President and General Manager Europe and South America BorgWarner Emissions, Thermal and Turbo Systems (2019 – 2020) • Vice President and General Manager Europe and South America of BorgWarner Turbo Systems (2018 – 2019)

Volker Weng (52)	Vice President and President and General Manager, Drivetrain & Battery Systems (formerly known as Drivetrain Systems) (2019)	• Vice President of the Company and President and General Manager of BorgWarner Emissions Systems LLC and BorgWarner Thermal Systems Inc. (2019) • Vice President and General Manager, Europe for BorgWarner Emissions Systems LLC and BorgWarner Thermal Systems Inc. (2017 – 2019)

Item 1A. Risk Factors

The following risk factors and other information included in this Annual Report on Form 10-K should be considered. The risks and uncertainties described below are not the only ones we face. Additional risks and uncertainties not presently known to us or that we currently deem immaterial also may impact our business operations. If any of the following risks occur, our business including our financial performance, financial condition, operating results and cash flows could be adversely affected.

Risks related to our strategy

Our Charging Forward strategy may prove unsuccessful.

In 2021, we announced our strategy to aggressively grow our electrification product portfolio over time through organic investments and technology-focused acquisitions. We believe we are well positioned for the industry's anticipated migration to EV. We are targeting revenue from products for pure electric vehicles to be over 25% of total revenue by 2025 and approximately 45% of total revenue by 2030. We believe we are on track to exceed our 2025 organic EV-related sales target and over the last two years have announced or completed five acquisitions. As discussed above, on December 6, 2022, we announced our intention to execute a tax-free spin-off of our Fuel Systems and Aftermarket segments into a separate, publicly traded company. The intended separation of our Fuel Systems and Aftermarket segments would be an important next step in furthering our pivot to EV and advancing our vision of a clean, energy-efficient world, while at the same time creating a new, focused company with strong financials to support the new company's future.

We may not meet our goals due to many factors, including any of the risks identified in the paragraph that follows, failure to develop new products that our customers will purchase, and technology changes that could render our products obsolete, or the introduction of new technology to which we do not have access, among other things. Additionally, there is no certainty that we will be able to dispose of certain internal combustion assets on favorable terms, if at all, and the disposition process is expected to consume significant management resources.

We expect to continue to pursue business ventures, acquisitions, and strategic alliances that leverage our technology capabilities and enhance our customer base, geographic representation, and scale to complement our current businesses. We regularly evaluate potential growth opportunities, some of which could be material. While we believe that such transactions are an integral part of our long-term strategy, there are risks and uncertainties related to these activities. Assessing a potential growth opportunity involves extensive due diligence. However, the amount of information we can obtain about a potential growth opportunity can be limited, and we can give no assurance that past or future business ventures, acquisitions, and strategic alliances will positively affect our financial performance or will perform as planned. Assessing a price for potential transactions is inexact, particularly in a market that generally favors sellers and attaches a high multiple or premium on technology. We may not be able to successfully assimilate or integrate companies that we have acquired or will acquire in the future, including their personnel, financial systems, distribution, operations and general operating procedures. Failure to execute our growth strategy could adversely affect our business.

The failure to realize the expected benefits of acquisitions and other risks associated with acquisitions could adversely affect our business.

The success of our acquisitions is dependent, in part, on our ability to realize the expected benefits from combining our businesses and businesses that we acquire. To realize these anticipated benefits, both companies must be successfully combined, which is subject to our ability to consolidate operations, corporate cultures and systems and to eliminate redundancies and costs. If we are unsuccessful in combining companies, the anticipated benefits of the acquisitions may not be realized fully or at all or may take longer to realize than expected. Further, there is potential for unknown or inestimable liabilities relating to the acquired businesses. In addition, the actual integration may result in additional and unforeseen expenses, which could reduce the anticipated benefits of the acquisitions.

The combination of independent businesses is a complex, costly and time-consuming process that requires significant management attention and resources. It is possible that the integration process could result in the loss of key employees, the disruption of our operations, the inability to maintain or increase our competitive presence, inconsistencies in standards, controls, procedures and policies, difficulties in achieving anticipated cost savings, synergies, business opportunities and growth prospects from the acquisition, the diversion of management's attention to integration matters and/or difficulties in the assimilation of employees and corporate cultures. Any or all of these factors could adversely affect our ability to maintain relationships with customers and employees or to achieve the anticipated benefits of the acquisition and could have an adverse effect on the combined company. In addition, many of these factors are outside of our control, and any one of these factors could result in increased costs, decreases in the amount of expected revenues and additional diversion of management's time and energy, which could materially adversely impact our business, financial condition and results of operations.

We may not be able to execute dispositions of assets or businesses successfully.

When we decide to dispose of assets or a business, we may have difficulty finding buyers or alternative exit strategies on acceptable terms in a timely manner, which could delay our ability to achieve our strategic objectives. We may also dispose of a business at a price or on terms that are less desirable than we had anticipated. Buyers of the assets or business may from time to time agree to indemnify us for operations of such businesses after the closing. We cannot be assured that any of these indemnification provisions will fully protect us, and as a result may face unexpected liabilities that adversely affect our business, financial condition and results of operations. In addition, we may experience fewer synergies than expected, and the impact of the disposition on our financial results may be larger than projected.

After reaching an agreement for the disposition of a business, we are subject to satisfaction of pre-closing conditions as well as necessary regulatory and governmental approvals on acceptable terms, which, if not satisfied or obtained, may prevent us from completing the transaction. Such regulatory and governmental approvals may be required in jurisdictions around the world, and any delays in the timing of such approvals could materially delay or prevent the transaction.

Goodwill and indefinite-lived intangible assets, which are subject to periodic impairment evaluations, represent a significant portion of our total assets. An impairment charge on these assets could have a material adverse impact on our financial condition and results of operations.

We have recorded goodwill and indefinite-lived intangible assets related to acquisitions. We periodically assess these assets to determine if they are impaired. Significant negative industry or macroeconomic trends, disruptions to our business, inability to effectively integrate acquired businesses, unexpected significant changes or planned changes in use of the assets, dispositions, and market capitalization declines may impair these assets, and any of these factors may be exacerbated by the ongoing COVID-19 pandemic.

We review goodwill and indefinite-lived intangible assets for impairment either annually or whenever changes in circumstances indicate that the carrying value may not be recoverable. The risk of impairment to goodwill and indefinite-lived intangible assets is higher during the early years following an acquisition. This is because the fair values of these assets align very closely with what was paid to acquire the reporting units to which these assets are assigned. As a result, the difference between the carrying value of the reporting unit and its fair value (typically referred to as "headroom") is smaller at the time of acquisition. Until this headroom grows over time, due to business growth or lower carrying value of the reporting unit, a relatively small decrease in reporting unit fair value can trigger impairment charges. When impairment charges are triggered, they tend to be material due to the size of the assets involved. Future acquisitions could present similar risks. Any charges relating to such impairments could adversely affect our results of operations in the periods recognized.

Risks related to the intended separation of the Fuel Systems and Aftermarket Segments

The intended separation of our Fuel Systems and Aftermarket segments may not be completed in accordance with the expected plans or anticipated timeline, or at all, and may not achieve the expected results.

On December 6, 2022, we announced our intention to execute a tax-free spin-off of our Fuel Systems and Aftermarket segments into a separate, publicly traded company ("NewCo"). The transaction is intended to qualify as a tax-free spin-off for U.S. federal income tax purposes. We expect to complete the transaction in late 2023, subject to satisfaction of customary conditions, including among others, final approval from the BorgWarner Board of Directors, filing and effectiveness of a registration statement on Form 10 with the Securities and Exchange Commission, receipt of a tax opinion, satisfactory completion of financing, completion of information and consultations processes with works councils and other employee representative bodies, as required, and receipt of necessary consents and other regulatory approvals. There can be no assurance regarding the ultimate timing of the intended transaction or that it will be completed at all.

Unanticipated developments or changes, including but not limited to, changes in the general or financial market conditions, possible delays in obtaining various regulatory and tax approvals, changes in the law, and challenges in executing the intended separation, could delay or prevent the completion of the spin-off, or cause the spin-off to occur on terms or conditions that are different or less favorable than initially expected. These or other developments could cause us not to realize some or all of the expected benefits of the spin-off or to realize them on a different timeline than expected. If the spin-off does not occur, we could pursue other transactions involving our Fuel Systems and Aftermarket segments, including a potential sale.

The spin-off may not achieve the anticipated benefits and may expose us to additional risks.

We may not realize the anticipated strategic, financial, operational or other benefits of the spin-off. We cannot predict with certainty when the benefits expected from the spin-off will occur or the extent to which they will be achieved. There is no assurance that following the spin-off each separate company will be successful. Whether or not the spin-off is completed, we may face material challenges in connection with the intended separation, including but not limited to, the diversion of management time on matters relating to the spin-off; the impact of having to operate under the terms of any transition service agreements; the impact on our ability to retain talent; and potential impacts on our relationships with customers, suppliers, employees and other counterparties. In addition, we will incur one-time costs and ongoing costs in connection with, or as a result of, the spin-off, including costs of operating as independent, publicly-traded companies that the separate businesses will no longer be able to share. Those costs may exceed our estimates or could negate some of the benefits we expect to realize. Further, while it is intended that the transaction will be tax-free to the Company's stockholders for U.S.

federal income tax purposes, there is no assurance that the transaction will qualify for this treatment. If the spin-off is ultimately determined to be taxable, either the Company, NewCo, or the Company's stockholders could incur income tax liabilities that could be significant. If we do not realize the anticipated benefits of the spin-off it could adversely affect our business, results of operations, cash flows and financial condition.

Following the intended separation of our Fuel Systems and Aftermarket segments, the trading price of our common stock may fluctuate significantly.

We cannot predict whether the market value of our common stock after the intended separation will be, in the aggregate, less than, equal to or greater than the market value of our common stock prior to the separation. The trading price of our common stock may be more volatile around the time of the intended separation.

Risks related to our industry

Conditions in the automotive industry may adversely affect our business.

Our financial performance depends on conditions in the global automotive industry. Automotive and truck production and sales are cyclical and sensitive to general economic conditions and other factors including interest rates, consumer credit, and consumer spending and preferences. Economic declines that result in significant reduction in automotive or truck production would have an adverse effect on our sales to OEMs.

We face strong competition.

We compete globally with a number of other manufacturers and distributors that produce and sell similar products. Price, quality, delivery, technological innovation, engineering development and program launch support are the primary elements of competition. Our competitors include vertically integrated units of our major OEM customers, as well as a large number of independent domestic and international suppliers. Additionally, our competitors include start-ups that may be well funded, with the result that they could have more operational and financial flexibility than we have. A number of our competitors are larger than we are, and some competitors have greater financial and other resources than we do. Although OEMs have indicated that they will continue to rely on outside suppliers, a number of major OEM customers manufacture products for their own uses that directly compete with our products. These OEMs could elect to manufacture such products for their own uses in place of the products we currently supply. Our traditional OEM customers, faced with intense international competition, have continued to expand their global sourcing of components. As a result, we have experienced competition from suppliers in other parts of the world that enjoy economic advantages, such as lower labor costs, lower health care costs, lower tax rates and, in some cases, export or raw materials subsidies. Increased competition could adversely affect our business. In addition, any of our competitors may foresee the course of market development more accurately than we do, develop products that are superior to our products, produce similar products at a cost that is lower than our cost, or adapt more quickly than we do to new technologies or evolving customer requirements. As a result, our products may not be able to compete successfully with our competitors' products, and we may not be able to meet the growing demands of customers. These trends may adversely affect our sales as well as the profit margins on our products.

If we do not respond appropriately, the evolution of the automotive industry could adversely affect our business.

The automotive industry is increasingly focused on improved vehicle efficiency and reduced emissions, including the development of hybrid and electric vehicles, largely as a result of changing consumer preferences and increasingly stringent global regulatory requirements related to climate change, and of

advanced driver assistance technologies, with the goal of developing and introducing a commercially viable, fully automated driving experience. There has also been an increase in consumer preferences for mobility on demand services, such as car and ride sharing, as opposed to automobile ownership, which may result in a long-term reduction in the number of vehicles per capita. In addition, some industry participants are exploring transportation through alternatives to automobiles. These evolving areas have also attracted increased competition from entrants outside the traditional automotive industry. While we are focused on driving growth through our ability to capitalize on certain potential trends, such as the move toward hybrid and electric vehicles, some of the focuses and trends are not part of our product line or strategy, which could have an adverse impact on our results of operations. If we do not continue to innovate and develop, or acquire, new and compelling products that capitalize upon new technologies in response to OEM and consumer preferences, this could have an adverse impact on our results of operations.

We may be subject to potential governmental investigations and related proceedings relating to vehicle emissions standards.

In recent years, within the automotive industry, there have been governmental investigations and related proceedings relating to alleged or actual violations of vehicle emissions standards. Alleged violations by BorgWarner of existing or future emissions standards could result in government investigations and other legal proceedings, the recall of one or more of our products, negotiated remedial actions, fines, disgorgement of profits, restricted product offerings, reputational harm or a combination of any of those items. Any of these actions could have a material adverse effect on our business and financial results. For example, as previously reported, German authorities announced a diesel defeat device investigation in 2022, which we believe is focused on two of our light vehicle OEM customers, and searched two of our facilities seeking information relating to sources of software for these OEM customers. We are cooperating with that investigation which is ongoing.

Risks related to our business

We are under substantial pressure from OEMs to reduce the prices of our products.

There is substantial and continuing pressure on OEMs to reduce costs, including costs of products we supply. OEM customers expect annual price reductions in our business. To maintain our profit margins, we seek price reductions from our suppliers, improved production processes to increase manufacturing efficiency, and streamlined product designs to reduce costs, and we attempt to develop new products, the benefits of which support stable or increased prices. Our ability to pass through increased raw material costs to our OEM customers is limited, with cost recovery often less than 100% and often on a delayed basis. Inability to reduce costs in an amount equal to annual price reductions, increases in raw material costs, and increases in employee wages and benefits could have an adverse effect on us.

We continue to face volatile costs of commodities used in the production of our products and elevated levels of inflation.

We use a variety of commodities (including aluminum, copper, nickel, plastic resins, steel, other raw materials and energy) and materials purchased in various forms such as castings, powder metal, forgings, stampings and bar stock. Beginning in 2021, we have experienced price increases for base metals (e.g., steel, aluminum and nickel), precious metals (e.g., palladium) and raw materials that are primarily used in batteries for electric vehicles (e.g., lithium and cobalt). Increasing commodity costs negatively impact our operating margins and results. We have sought to alleviate the impact of increasing costs by including a material pass-through provision in our customer contracts wherever possible and by selectively hedging certain commodity exposures. The discontinuation or lessening of our ability to pass through or hedge increasing commodity costs could adversely affect our business.

From time to time, commodity prices may also fall rapidly. If this happens, suppliers may withdraw capacity from the market until prices improve which may cause periodic supply interruptions. The same may be true of transportation carriers and energy providers. If these supply interruptions occur, it could adversely affect our business.

In addition, during 2022, many global economies, including the United States, experienced elevated levels of inflation more generally, which drove an increase in input costs. Following non-contractual negotiations, we reached cost-recovery agreements with various customers in 2022, but these agreements did not enable us to recover 100 percent of our increased costs, and as a result, our operating margins were negatively impacted. While we will continue to negotiate the pass through and recovery of higher costs with our customers, continued increasing levels of inflation could adversely affect our business.

Changes in U.S. administrative policy, including changes to existing trade agreements and any resulting changes in international trade relations, may have an adverse effect on us.

The United States has maintained tariffs on certain imported steel, aluminum and items originating from China. These tariffs have increased the cost of raw materials and components we purchase. The imposition of tariffs by the United States has resulted in retaliatory tariffs from a number of countries, including China, which increase the cost of products we sell. If the U.S. or other countries impose additional tariffs, that will have a further adverse impact on us.

We use important intellectual property in our business. If we are unable to protect our intellectual property or if a third party makes assertions against us or our customers relating to intellectual property rights, our business could be adversely affected.

We own important intellectual property, including patents, trademarks, copyrights, and trade secrets and are involved in numerous licensing arrangements. Our intellectual property plays an important role in maintaining our competitive position in a number of the markets that we serve. Our competitors may develop technologies that are similar or superior to our proprietary technologies or design around the patents we own or license. Further, as we expand our operations in jurisdictions where the enforcement of intellectual property rights is less robust, the risk of others duplicating our proprietary technologies increases, despite efforts we undertake to protect them. Our inability to protect or enforce our intellectual property rights or claims that we are infringing intellectual property rights of others could adversely affect our business and our competitive position.

We are subject to business continuity risks associated with increasing centralization of our information technology ("IT") systems.

To improve efficiency and reduce costs, we have regionally centralized the information systems that support our business processes such as invoicing, payroll, and general management operations. If the centralized systems are disrupted or disabled, key business processes could be interrupted, which could adversely affect our business.

A failure of or disruption in our information technology infrastructure, including a disruption related to cybersecurity, could adversely impact our business and operations.

We rely on the capacity, reliability and security of our IT systems and infrastructure. IT systems are vulnerable to disruptions, including those resulting from natural disasters, cyber-attacks or failures in third-party provided services. Disruptions and attacks on our IT systems pose a risk to the security of our systems and our ability to protect our networks and the confidentiality, availability and integrity of information and data and that of third parties, including our employees. Some cyber-attacks depend on human error or manipulation, including phishing attacks or schemes that use social engineering to gain access to systems or carry out disbursement of funds or other frauds, which raise the risks from such

events and the costs associated with protecting against such attacks. Although we have implemented security policies, processes, and layers of defense designed to help identify and protect against intentional and unintentional misappropriation or corruption of our systems and information, and disruptions of our operations, we have been, and likely will continue to be, subjected to such attacks or disruptions. Future attacks or disruptions could potentially lead to the inappropriate disclosure of confidential information, including our intellectual property, improper use of our systems and networks, access to and manipulation and destruction of our or third-party data, production downtimes, lost revenues, inappropriate disbursement of funds and both internal and external supply shortages. In addition, we may be required to incur significant costs to protect against damage caused by such attacks or disruptions in the future. These consequences could cause significant damage to our reputation, affect our relationships with our customers and suppliers, lead to claims against us and ultimately adversely affect our business.

Our business success depends on attracting and retaining qualified personnel.

Our ability to sustain and grow our business requires us to hire, retain and develop a highly skilled and diverse management team and workforce worldwide. In particular, any unplanned turnover or inability to attract and retain key employees and employees with engineering, technical and software capabilities in numbers sufficient for our needs could adversely affect our business.

Our profitability and results of operations may be adversely affected by program launch difficulties.

The launch of new business is a complex process, the success of which depends on a wide range of factors, including the production readiness of our manufacturing facilities and manufacturing processes and those of our suppliers, as well as factors related to tooling, equipment, employees, initial product quality and other factors. Our failure to successfully launch new business, or our inability to accurately estimate the cost to design, develop and launch new business, could have an adverse effect on our profitability and results of operations.

To the extent we are not able to successfully launch new business, vehicle production at our customers could be significantly delayed or shut down. Such situations could result in significant financial penalties to us or a diversion of personnel and financial resources to improving launches rather than investment in continuous process improvement or other growth initiatives and could result in our customers shifting work away from us to a competitor, all of which could result in loss of revenue or loss of market share and could have an adverse effect on our profitability and cash flows.

Part of our workforce is unionized which could subject us to work stoppages.

As of December 31, 2022, approximately 13% of our U.S. workforce was unionized. We have a domestic collective bargaining agreement for one facility in New York, which expires in September 2024. The workforce at certain of our international facilities is also unionized. A prolonged dispute with our employees could have an adverse effect on our business.

Work stoppages, production shutdowns and similar events could significantly disrupt our business.

Because the automotive industry relies heavily on just-in-time delivery of components during the assembly and manufacture of vehicles, a work stoppage or production shutdown at one or more of our manufacturing and assembly facilities could have adverse effects on our business. Similarly, if one or more of our customers were to experience a work stoppage or production shutdown, that customer would likely halt or limit purchases of our products, which could result in the shutdown of the related manufacturing facilities. A significant disruption in the supply of a key component due to supply

constraints, such as the constraints experienced in 2021 and 2022 related to semiconductor chips, or due to a work stoppage or production shutdown at one of our suppliers or any other supplier could have the same consequences and, accordingly, have an adverse effect on our financial results.

Changes in interest rates and asset returns could increase our pension funding obligations and reduce our profitability.

We have unfunded obligations under certain of our defined benefit pension and other postretirement benefit plans. The valuation of our future payment obligations under the plans and the related plan assets is subject to significant adverse changes if the credit and capital markets cause interest rates and projected rates of return to decline. Such declines could also require us to make significant additional contributions to our pension plans in the future. Additionally, a material deterioration in the funded status of the plans could significantly increase our pension expenses and reduce profitability in the future.

We also sponsor post-employment medical benefit plans in the U.S. that are unfunded. If medical costs continue to increase or actuarial assumptions are modified, this could have an adverse effect on our business.

We are subject to extensive environmental regulations that are subject to change and involve significant risks.

Our operations are subject to laws governing, among other things, emissions to air, discharges to waters, and the generation, management, transportation and disposal of waste and other materials. The operation of automotive parts manufacturing plants entails risks in these areas, and we cannot assure that we will not incur material costs or liabilities as a result. Through various acquisitions over the years, we have acquired a number of manufacturing facilities, and we cannot assure that we will not incur material costs and liabilities relating to activities that predate our ownership. In addition, potentially significant expenditures could be required to comply with evolving interpretations of existing environmental, health and safety laws and regulations or any new such laws and regulations (including concerns about global climate change and its impact) that may be adopted in the future. Costs associated with failure to comply with such laws and regulations could have an adverse effect on our business.

Our operations may be affected by greenhouse emissions and climate change and related regulations.

Climate change is receiving increasing attention worldwide, which has led to significant legislative and regulatory efforts to limit greenhouse gas emissions. Our manufacturing plants use energy, including electricity and natural gas, and certain of our plants emit amounts of greenhouse gas that may be affected by these legislative and regulatory efforts. Greenhouse gas regulation could increase the price of the electricity we purchase, increase costs for use of natural gas, potentially restrict access to or the use of natural gas, require us to purchase allowances to offset our own emissions or result in an overall increase in costs of raw materials, any one of which could increase our costs, reduce competitiveness in a global economy or otherwise negatively affect our financial condition, results of operations and reputation. Many of our suppliers face similar circumstances. Supply disruptions would raise market rates and jeopardize the continuity of production and could have an adverse effect on our financial results.

Climate changes could also disrupt our operations by impacting the availability and cost of materials within our supply chain, and could also increase insurance and other operating costs. These factors may impact our decisions to construct new facilities.

We have liabilities related to environmental, product warranties, litigation and other claims.

We and certain of our current and former direct and indirect corporate predecessors, subsidiaries and divisions have been identified by the United States Environmental Protection Agency and certain state environmental agencies and private parties as potentially responsible parties at various hazardous waste disposal sites under the Comprehensive Environmental Response, Compensation and Liability Act and equivalent state laws, and, as such, may be liable for the cost of clean-up and other remedial activities at such sites. While responsibility for clean-up and other remedial activities at such sites is typically shared among potentially responsible parties based on an allocation formula, we could have greater liability under applicable statutes. Refer to Note 21, “Contingencies,” to the Consolidated Financial Statements in item 8 of this report for further discussion.

We provide product warranties to our customers for some of our products. Under these product warranties, we may be required to bear costs and expenses for the repair or replacement of these products. As suppliers become more integrally involved in the vehicle design process and assume more of the vehicle assembly functions, auto manufacturers are increasingly looking to their suppliers for contribution when faced with recalls and product warranty claims. A recall claim brought against us, or a product warranty claim brought against us, could adversely impact our results of operations. In addition, a recall claim could require us to review our entire product portfolio to assess whether similar issues are present in other product lines, which could result in significant disruption to our business and could have an adverse impact on our results of operations. We cannot assure that costs and expenses associated with these product warranties will not be material or that those costs will not exceed any amounts accrued for such product warranties in our financial statements.

We are currently, and may in the future become, subject to legal proceedings and commercial or contractual disputes. These claims typically arise in the normal course of business and may include, but not be limited to, commercial or contractual disputes with our customers and suppliers, intellectual property matters, personal injury, product liability, environmental and employment claims. There is a possibility that such claims may have an adverse impact on our business that is greater than we anticipate. While we maintain insurance for certain risks, the amount of insurance may not be adequate to cover all insured claims and liabilities. The incurrence of significant liabilities for which there is no, or insufficient, insurance coverage could adversely affect our business.

Compliance with and changes in laws could be costly and could affect our operating results.

We have operations in multiple countries that can be impacted by expected and unexpected changes in the legal and business environments in which we operate. Compliance-related issues in certain countries associated with laws such as the Foreign Corrupt Practices Act and other anti-corruption laws could adversely affect our business. We have internal policies and procedures relating to compliance with such laws; however, there is a risk that such policies and procedures will not always protect us from the improper acts of employees, agents, business partners, joint venture partners, or representatives, particularly in the case of recently acquired operations that may not have significant training in applicable compliance policies and procedures. Violations of these laws, which are complex, may result in criminal penalties, sanctions and/or fines that could have an adverse effect on our business, financial condition, and results of operations and reputation.

Changes that could impact the legal environment include new legislation, new regulations, new policies, investigations and legal proceedings, and new interpretations of existing legal rules and regulations, in particular, changes in import and export control laws or exchange control laws, additional restrictions on doing business in countries subject to sanctions, additional limitations on greenhouse gas emissions or other matters related to climate change and other changes in laws in countries where we operate or intend to operate.

Changes in tax laws or tax rates taken by taxing authorities and tax audits could adversely affect our business.

Changes in tax laws or tax rates, the resolution of tax assessments or audits by various tax authorities, and the inability to fully utilize our tax loss carryforwards and tax credits could adversely affect our operating results. In addition, we may periodically restructure our legal entity organization.

If taxing authorities were to disagree with our tax positions in connection with any such restructurings, our effective tax rate could be materially affected. Our tax filings for various periods are subject to audit by the tax authorities in most jurisdictions where we conduct business. We have received tax assessments from various taxing authorities and are currently at varying stages of appeals and/or litigation regarding these matters. These audits may result in assessment of additional taxes that are resolved with the authorities or through the courts. We believe these assessments may occasionally be based on erroneous and even arbitrary interpretations of local tax law. Resolution of any tax matters involves uncertainties, and there are no assurances that the outcomes will be favorable.

We are subject to risks related to our international operations.

We have manufacturing and technical facilities in many regions including Europe, Asia, and the Americas. For 2022, approximately 81% of our consolidated net sales were outside the U.S. Consequently, our results could be affected by changes in trade, monetary and fiscal policies, trade restrictions or prohibitions, import or other charges or taxes, fluctuations in foreign currency exchange rates, limitations on the repatriation of funds, changing economic conditions, unreliable intellectual property protection and legal systems, insufficient infrastructures, social unrest, political instability and disputes, international terrorism and other factors that may be discrete to a particular country or geography. Compliance with multiple and potentially conflicting laws and regulations of various countries is challenging, burdensome and expensive.

The financial statements of foreign subsidiaries are translated to U.S. Dollars using the period-end exchange rate for assets and liabilities and an average exchange rate for each period for revenues, expenses and capital expenditures. The local currency is typically the functional currency for our foreign subsidiaries. Significant foreign currency fluctuations and the associated translation of those foreign currencies to U.S. Dollars could adversely affect our business. Additionally, significant changes in currency exchange rates, particularly the Euro, Korean Won and Chinese Renminbi, could cause fluctuations in the reported results of our businesses’ operations that could negatively affect our results of operations.

Because we are a U.S. holding company, one significant source of our funds is distributions from our non-U.S. subsidiaries. Certain countries in which we operate have adopted or could institute currency exchange controls that limit or prohibit our non-U.S. subsidiaries' ability to convert local currency into U.S. Dollars or to make payments outside the country. This could subject us to the risks of local currency devaluation and business disruption.

Our business in China is subject to aggressive competition and is sensitive to economic, political, and market conditions.

Maintaining a strong position in the Chinese market is a key component of our global growth strategy. The automotive supply market in China is highly competitive, with competition from many of the largest global manufacturers and numerous smaller domestic manufacturers. As the Chinese market evolves, we anticipate that market participants will act aggressively to increase or maintain their market share. Increased competition may result in price reductions, reduced margins and our inability to gain or hold market share. In addition, our business in China is sensitive to economic, political, social and market conditions that drive sales volumes in China. If we are unable to maintain our position in the Chinese

market or if vehicle sales in China decrease, our business and financial results could be adversely affected.

A downgrade in the ratings of our debt could restrict our ability to access the debt capital markets.

Changes in the ratings that rating agencies assign to our debt may ultimately impact our access to the debt capital markets and the costs we incur to borrow funds. If ratings for our debt fall below investment grade, our access to the debt capital markets could become restricted and our cost of borrowing or the interest rate for any subsequently issued debt would likely increase.

Our revolving credit agreement includes an increase in interest rates if the ratings for our debt are downgraded. The interest cost on our revolving credit agreement is based on a rating grid. Further, an increase in the level of our indebtedness and related interest costs may increase our vulnerability to adverse general economic and industry conditions and may affect our ability to obtain additional financing.

We could incur additional restructuring charges as we continue to execute actions in an effort to improve future profitability and competitiveness and to optimize our product portfolio and may not achieve the anticipated savings and benefits from these actions.

We have initiated and may continue to initiate restructuring actions designed to improve the competitiveness of our business and sustain our margin profile, optimize our product portfolio or create an optimal legal entity structure. We may not realize anticipated savings or benefits from past or future actions in full or in part or within the time periods we expect. We are also subject to the risks of labor unrest, negative publicity and business disruption in connection with our actions. Failure to realize anticipated savings or benefits from our actions could have an adverse effect on our business.

Risks related to our customers

We rely on sales to major customers.

We rely on sales to OEMs around the world of varying credit quality and manufacturing demands. Supply to several of these customers requires significant investment by us. We base our growth projections, in part, on commitments made by our customers. These commitments generally renew yearly during a program life cycle. Among other things, the level of production orders we receive is dependent on the ability of our OEM customers to design and sell products that consumers desire to purchase. If actual production orders from our customers do not approximate such commitments due to a variety of factors including non-renewal of purchase orders, a customer's financial hardship or other unforeseen reasons, it could adversely affect our business.

Some of our sales are concentrated. Our worldwide sales in 2022 to Ford and Volkswagen constituted approximately 13% and 8% of our 2022 consolidated net sales, respectively. Sales to the Company’s top ten customers represented 62% of sales for the year ended December 31, 2022.

We are sensitive to the effects of our major customers' labor relations.

All three of our primary North American customers, Ford, Stellantis, and General Motors, have major union contracts with the United Automobile, Aerospace and Agricultural Implement Workers of America. Because of domestic OEMs' dependence on a single union, we are affected by labor difficulties and work stoppages at OEMs' facilities. Similarly, a majority of our global customers' operations outside of North America are also represented by various unions. Any extended work stoppage at one or more of our customers could have an adverse effect on our business.

Risks related to our suppliers

We could be adversely affected by supply shortages of components from our suppliers.

In an effort to manage and reduce the cost of purchased goods and services, we have been rationalizing our supply base. As a result, we remain dependent on fewer sources of supply for certain components used in the manufacture of our products. We select suppliers based on total value (including total landed price, quality, delivery, and technology), taking into consideration their production capacities and financial condition. We expect that they will deliver to our stated written expectations.

However, there can be no assurance that capacity limitations, industry shortages, labor or social unrest, weather emergencies, commercial disputes, government actions, riots, wars, such as Russia's invasion of Ukraine in 2022, sabotage, cyber-attacks, non-conforming parts, acts of terrorism, "Acts of God," or other problems that our suppliers experience will not result in occasional shortages or delays in their supply of components to us. During 2021, and to a lesser extent in 2022, trailing impacts of the shutdowns and production declines related, in part, to COVID-19, created supply constraints of certain components, particularly semiconductor chips. These supply constraints have had, and are expected to continue to have, significant impacts on global industry production levels. If we experience a prolonged shortage of critical components from any of our suppliers and cannot procure the components from other sources, we may be unable to meet the production schedules for some of our key products and could miss customer delivery expectations. In addition, with fewer sources of supply for certain components, each supplier may perceive that it has greater leverage and, therefore, some ability to seek higher prices from us at a time that we face substantial pressure from OEMs to reduce the prices of our products, which could adversely affect our customer relations and business.

Suppliers' economic distress could result in the disruption of our operations and could adversely affect our business.

Rapidly changing industry conditions such as volatile production volumes; our need to seek price reductions from our suppliers as a result of the substantial pressure we face from OEMs to reduce the prices of our products; credit tightness; changes in foreign currency exchange rates; raw material, commodity, tariffs, transportation, and energy price escalation; drastic changes in consumer preferences; and other factors could adversely affect our supply chain, and sometimes with little advance notice. These conditions could also result in increased commercial disputes and supply interruption risks. In certain instances, it would be difficult and expensive for us to change suppliers that are critical to our business. On occasion, we must provide financial support to distressed suppliers or take other measures to protect our supply lines. We cannot predict with certainty the potential adverse effects these costs might have on our business.

We are subject to possible insolvency of financial counterparties.

We engage in numerous financial transactions and contracts including insurance policies, letters of credit, credit line agreements, financial derivatives, and investment management agreements involving various counterparties. We are subject to the risk that one or more of these counterparties may become insolvent and, therefore, be unable to meet its obligations under such contracts.

Risks related to COVID-19

We face risks related to COVID-19 that could adversely affect our business and financial performance.

The impact of COVID-19, including changes in consumer behavior, pandemic fears and market downturns, and restrictions on business and individual activities, has created significant volatility in the global economy. In 2022, COVID-19 outbreaks in certain regions caused intermittent COVID-19-related disruptions in our supply chain and local manufacturing operations. For a significant portion of the second quarter of 2022, China imposed lockdowns in many cities due to an increase in COVID-19 cases in the region, which contributed to a decline in industry production in China during the quarter. As a result, we experienced, and may continue to experience, delays in the production and distribution of our products and the loss of sales. If the global economic effects caused by COVID-19 continue or increase, overall customer demand may decrease, which could further adversely affect our business, results of operations, and financial condition. Furthermore, COVID-19 has impacted and may further impact the broader economies of affected countries, including negatively impacting economic growth, traditional functioning of financial and capital markets, foreign currency exchange rates, and interest rates.

During 2021, and to a lesser extent in 2022, trailing impacts of the shutdowns and production declines related, in part, to COVID-19 created supply constraints of certain components, particularly semiconductor chips. These supply constraints have had and are expected to continue to have significant impacts on global industry production levels. Due to the uncertainty of its duration and the timing of recovery, at this time, we are unable to predict the extent to which COVID-19, including its existing and future variants that may emerge, may have an adverse effect on our business, financial condition, operating results or cash flows. The extent of the impact of COVID-19 on our operational and financial performance, including our ability to execute business strategies and initiatives in the expected time frames, will depend on future developments, including, but not limited to, the duration and spread of COVID-19, including variants, its severity, COVID-19 containment and treatment efforts, including the availability, efficacy, and acceptance of the vaccines and any related restrictions on travel. Furthermore, the duration, timing and severity of the impact on customer production, including any recession resulting from COVID-19, are uncertain and unpredictable. An extended period of global supply chain and economic disruption as a result of COVID-19 would have a further material negative impact on our business, results of operations, access to sources of liquidity and financial condition, although the full extent and duration are uncertain.

Other risks

A variety of other factors could adversely affect our business.

Any of the following could materially and adversely affect our business: the loss of or changes in supply contracts or sourcing strategies of our major customers or suppliers; start-up expenses associated with new vehicle programs or delays or cancellation of such programs; low levels of utilization of our manufacturing facilities, which can be dependent on a single product line or customer; inability to recover engineering and tooling costs; market and financial consequences of recalls that may be required on products we supplied; delays or difficulties in new product development; the possible introduction of similar or superior technologies by others; global excess capacity and vehicle platform proliferation; and the impact of fire, flood, or other natural disasters including pandemics and quarantines.

Item 1B. Unresolved Staff Comments

The Company has received no written comments regarding its periodic or current reports from the staff of the Securities and Exchange Commission that were issued 180 days or more preceding the end of its 2022 fiscal year that remain unresolved.

Item 2. Properties

As of December 31, 2022, the Company had 92 manufacturing, assembly and technical locations worldwide. The Company's worldwide headquarters are located in a leased facility in Auburn Hills, Michigan. In general, the Company believes its facilities to be suitable and adequate to meet its current and reasonably anticipated needs.

The following is additional information concerning principal manufacturing, assembly and technical facilities operated by the Company, its subsidiaries, and affiliates.

Segments	Americas	Europe	Asia	Total
Air Management	14	15	17	46
e-Propulsion & Drivetrain	14	6	11	31
Fuel Systems	2	5	6	13
Aftermarket	1	1	—	2

The table above excludes unconsolidated joint ventures as of December 31, 2022 and administrative offices. Of the facilities noted above, 40 have leased land rights or a leased facility.

Item 3. Legal Proceedings

The Company is subject to a number of claims and judicial and administrative proceedings (some of which involve substantial amounts) arising out of the Company's business or relating to matters for which the Company may have a contractual indemnity obligation. See Note 21, "Contingencies," to the Consolidated Financial Statements in Item 8 of this report for a discussion of environmental, product liability, derivative and other litigation, which is incorporated herein by reference.

Item 4. Mine Safety Disclosures

Not applicable.

PART II

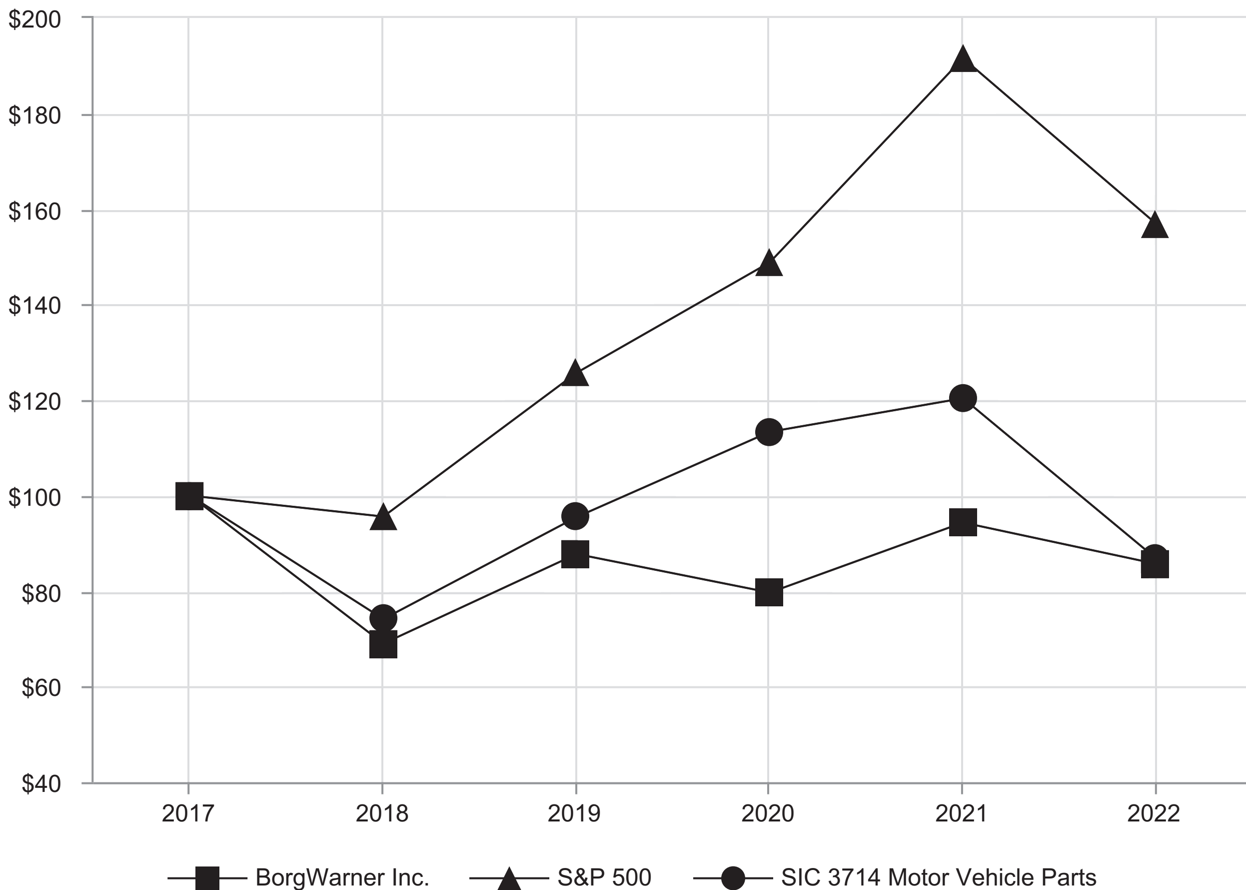
Item 5. Market for Registrant’s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

The Company’s common stock is listed for trading on the New York Stock Exchange under the symbol BWA. As of February 3, 2023, there were 1,488 holders of record of common stock.

While the Company currently expects that quarterly cash dividends will continue to be paid in the future at levels comparable to recent historical levels, the dividend policy is subject to review and change at the discretion of the Board of Directors.

The line graph below compares the cumulative total shareholder return on the Company’s Common Stock with the cumulative total return of companies on the Standard & Poor’s (S&P’s) 500 Stock Index, and companies within Standard Industrial Code (“SIC”) 3714 - Motor Vehicle Parts.

COMPARISON OF 5 YEAR CUMULATIVE TOTAL RETURN*
Among BorgWarner Inc., the S&P 500 Index, and SIC 374 Motor Vehicle Parts



*$100 invested on 12/31/2017 in stock or index, including reinvestment of dividends. Fiscal year ending December 31.
Copyright© 2023 Standard & Poor’s, a division of S&P Global. All rights reserved.

BWA and S&P 500 data are from Capital IQ; SIC Code Index data is from Research Data Group

	December 31,					
	2017	2018	2019	2020	2021	2022
BorgWarner Inc.[1]	$ 100.00	$ 69.03	$ 87.78	$ 79.71	$ 94.37	$ 85.71
S&P 500[2]	$ 100.00	$ 95.62	$ 125.72	$ 148.85	$ 191.58	$ 156.89
SIC Code Index[3]	$ 100.00	$ 74.17	$ 95.51	$ 113.36	$ 120.39	$ 86.80

[1] BorgWarner Inc.
[2] S&P 500 — Standard & Poor's 500 Total Return Index
[3] Standard Industrial Code ("SIC") 3714-Motor Vehicle Parts

Purchase of Equity Securities

In January 2020, the Company's Board of Directors authorized the purchase of up to $1 billion of the Company's common stock, which replaced the previous share repurchase program. This share repurchase authorization does not expire. As of December 31, 2022, the Company had repurchased $456 million of common stock under this repurchase program. Shares purchased under this authorization may be repurchased in the open market at prevailing prices and at times and in amounts to be determined by management as market conditions and the Company's capital position warrant. The Company may use Rule 10b5-1 and 10b-18 plans to facilitate share repurchases. Repurchased shares will be deemed common stock held in treasury and may subsequently be reissued.

Employee transactions include restricted stock withheld to offset statutory minimum tax withholding that occurs upon vesting of restricted stock. The BorgWarner Inc. 2018 Stock Incentive Plan provides that the withholding obligations be settled by the Company retaining stock that is part of the award. Withheld shares will be deemed common stock held in treasury and may subsequently be reissued for general corporate purposes.

The following table provides information about the Company's purchases of its equity securities that are registered pursuant to Section 12 of the Securities Exchange Act of 1934, as amended (the "Exchange Act") during the quarter ended December 31, 2022:

Issuer Purchases of Equity Securities

Period	Total number of shares purchased	Average price per share	Total number of shares purchased as part of publicly announced plans or programs	Approximate dollar value of shares that may yet be purchased under plans or programs (in millions)
October 1, 2022 - October 31, 2022				
Common Stock Repurchase Program	—	$ —	—	$ 544
Employee transactions	2,630	$ 33.18	—	
November 1, 2022 - November 30, 2022				
Common Stock Repurchase Program	—	$ —	—	$ 544
Employee transactions	4,848	$ 41.59	—	
December 1, 2022 - December 31, 2022				
Common Stock Repurchase Program	—	$ —	—	$ 544
Employee transactions	—	$ —	—	

Equity Compensation Plan Information

As of December 31, 2022, the number of shares of options, warrants and rights outstanding under the Company's equity compensation plans, the weighted average exercise price of outstanding options, restricted common stock, warrants and rights and the number of securities remaining available for issuance were as follows:

Plan category	Number of securities to be issued upon exercise of outstanding options, warrants and rights (a)	Weighted average exercise price of outstanding options, warrants and rights (b)	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a)) (c)
Equity compensation plans approved by security holders	1,835,424	$ 48.40	2,247,280
Equity compensation plans not approved by security holders	—	$ —	—
Total	1,835,424	$ 48.40	2,247,280

Item 6. [Reserved]

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

INTRODUCTION

BorgWarner Inc. and Consolidated Subsidiaries (the "Company" or "BorgWarner") is a global product leader in clean and efficient technology solutions for combustion, hybrid and electric vehicles. BorgWarner's products help improve vehicle performance, propulsion efficiency, stability and air quality. These products are manufactured and sold worldwide, primarily to original equipment manufacturers ("OEMs") of light vehicles (passenger cars, sport-utility vehicles ("SUVs"), vans and light trucks). The Company's products are also sold to other OEMs of commercial vehicles (medium-duty trucks, heavy-duty trucks and buses) and off-highway vehicles (agricultural and construction machinery and marine applications). The Company also manufactures and sells its products to certain tier one vehicle systems suppliers and into the aftermarket for light, commercial and off-highway vehicles. The Company operates manufacturing facilities serving customers in Europe, the Americas and Asia and is an original equipment supplier to nearly every major automotive OEM in the world.

Charging Forward - Electrification Portfolio Strategy

In 2021, the Company announced its strategy to aggressively grow its electrification product portfolio over time through organic investments and technology-focused acquisitions. The Company believes it is well positioned for the industry's anticipated migration to electric vehicles ("EV"). The Company is targeting its revenue from products for pure electric vehicles to be over 25% of its total revenue by 2025 and approximately 45% of its total revenue by 2030. The Company believes it is on track to exceed its 2025 organic EV-related sales target and over the last two years has announced or completed five acquisitions. On December 6, 2022, the Company announced its intention to execute a tax-free spin-off of its Fuel Systems and Aftermarket segments into a separate, publicly traded company. The intended separation of its Fuel Systems and Aftermarket segments would support optimizing the Company's combustion portfolio and advancing its electrification journey, while at the same time creating a new, focused company that would be able to pursue growth opportunities in alternative fuels, such as hydrogen, and in Aftermarket. The Company expects to complete the transaction in late 2023, subject to satisfaction of customary conditions. In 2022, the Company's EV-related revenue was approximately $870 million, or 6%, of its total revenue. Based on new business awards and actions announced to date, the Company believes it is on track to achieve $4.3 billion of EV revenue by 2025.

Acquisitions

Hubei Surpass Sun Electric Charging Business

On September 20, 2022, the Company announced that it had entered into an Equity Transfer Agreement under which BorgWarner will acquire the electric vehicle solution, smart grid and smart energy businesses of Hubei Surpass Sun Electric. The transaction has an enterprise value up to ¥410 million ($60 million), of which approximately ¥267 million ($39 million) will be delivered at or soon after closing, and up to ¥143 million ($21 million) could be paid in the form of contingent payments over approximately two years following the closing. The acquisition complements the Company's existing European and North American charging footprint by adding a presence in China. The transaction is subject to satisfaction of customary closing conditions and is expected to close in the first quarter of 2023.

Drivetek AG

On December 1, 2022, the Company acquired Drivetek AG, an engineering and product development company located in Switzerland. This acquisition strengthens the Company's power electronics capabilities in auxiliary inverters, which it expects to accelerate the growth of the High Voltage eFan business. The Company paid ₣27 million ($29 million) at closing, and up to ₣10 million ($10 million) could be paid in the form of contingent payments over the three years following closing.

Rhombus Energy Solutions

On July 29, 2022, the Company acquired Rhombus Energy Solutions ("Rhombus"), a provider of charging solutions in the North American market. The acquisition complements the Company's existing European charging footprint to accelerate organic growth and adds North American regional presence to its charging business. The Company paid $131 million at closing, and up to $30 million could be paid in the form of contingent payments over the three years following closing.

Santroll Automotive Components

On March 31, 2022, the Company acquired Santroll Automotive Components ("Santroll"), a carve-out of Santroll Electric Auto's eMotor business. The acquisition strengthens the Company's vertical integration, scale and portfolio breadth in light vehicle eMotors while allowing for increased speed to market. The total final consideration was $192 million, which reflects a reduction of approximately $20 million in the base purchase price since the acquisition closing date resulting from an amendment to the Equity Transfer Agreement and finalization of post-closing adjustments. The consideration includes approximately ¥1.0 billion ($152 million) of base purchase price and ¥0.25 billion ($40 million) of originally estimated earn-out payments. The Company paid approximately $157 million of base purchase price in the year ended December 31, 2022 and expects to recapture approximately $5 million of post-closing adjustments through a reduction of the payment of the second earn-out. As of December 31, 2022, the Company's estimate of the earn-out payments was approximately $21 million. The net amount of the earn-out payment and post-closing adjustments is recorded in Other current liabilities in the Company's Consolidated Balance Sheet.

AKASOL

On June 4, 2021, the Company completed a voluntary public takeover offer for shares of AKASOL AG ("AKASOL"), resulting in ownership of 89% of AKASOL's outstanding shares. The Company paid approximately €648 million ($788 million) to settle the offer. During 2021, the Company increased its ownership to 93% through the subsequent purchase of additional shares. On February 10, 2022, the Company completed a merger squeeze-out process (the "Squeeze Out") to obtain the remaining shares, resulting in 100% ownership. The acquisition further strengthens BorgWarner's commercial vehicle and industrial electrification capabilities, which positions the Company to capitalize on what it believes to be a fast-growing battery module and pack market.

Refer to Note 2, “Acquisitions and Dispositions,” to the Consolidated Financial Statements in Item 8 of this report for more information. Results of operations for these acquisitions are included in the Company’s financial information following their respective dates of acquisition.

Key Trends and Economic Factors

COVID-19 and Supplier Disruptions. The impact of COVID-19, including changes in consumer behavior, pandemic fears and market downturns, and restrictions on business and individual activities, has created significant volatility in the global economy. Recent COVID-19 outbreaks in certain regions continue to cause intermittent COVID-19-related disruptions in the Company’s supply chain and local manufacturing operations. For a significant portion of the second quarter of 2022, China imposed lock-downs in many cities due to an increase in COVID-19 cases in the region, which contributed to a decline in industry production in China during the quarter. The Company also continues to face supplier disruptions due to a global semiconductor shortage in the automotive industry. Further, actions taken by Russia in Ukraine have impacted the automotive industry particularly in Europe, including the Company’s suppliers, its customers and its operations more generally. In 2022, the Company wound down its Aftermarket operation in Russia, which involved purchasing the noncontrolling interest of a joint venture. The Russia operations were not material to the Company’s financial statements.

Commodities and Other Inflationary Impacts. Prices for commodities remain volatile, and since the beginning of 2021, the Company has experienced price increases for base metals (e.g., steel, aluminum and nickel), precious metals (e.g., palladium), and raw materials that are primarily used in batteries for electric vehicles (e.g., lithium and cobalt). In addition, many global economies, including the United States, are experiencing elevated levels of inflation more generally, which is driving an increase in other input costs. As a result, the Company has experienced, and is continuing to experience, higher costs.

In 2022, following non-contractual negotiations, the Company reached agreement for the pass through and recovery of higher costs with various customers. These agreements did not enable the Company to recover 100 percent of its increased costs, and as a result, the Company’s operating margins were negatively impacted.

Foreign Currency Impacts. The rapid strengthening of the U.S. Dollar in 2022 relative to major foreign currencies, including the Euro, Korean Won and Chinese Renminbi, and related translation of these currencies to the U.S. Dollar, unfavorably impacted the Company’s net sales, earnings and cash flows. Continued significant fluctuations of foreign currencies against the U.S. Dollar may further negatively impact the Company’s financial results.

Outlook

The Company expects global industry production to be flat to a modest increase year over year in 2023. The Company also expects net new business-related sales growth, due to the increased penetration of BorgWarner products and increasing electric vehicle revenue, to drive a sales increase in excess of the growth in industry production outlook. As a result, the Company expects increased revenue in 2023, excluding the impact of foreign currencies. The Company expects the earnings benefit of this revenue growth to be partially offset by a planned increase in electrification-related Research & Development (“R&D”) expenditures during 2023. This planned R&D increase is to support growth in the Company’s electric vehicle-related products and is primarily related to supporting the launch of recently awarded programs.

The Company maintains a positive long-term outlook for its global business and is committed to new product development and strategic investments to enhance its product leadership strategy. There are several trends that are driving the Company’s long-term growth that management expects to continue,

including adoption of product offerings for electrified vehicles and increasingly stringent global emissions standards that support demand for the Company's products driving vehicle efficiency.

RESULTS OF OPERATIONS

A detailed comparison of the Company's 2020 operating results to its 2021 operating results can be found in the Management's Discussion and Analysis of Financial Condition and Results of Operations section in the Company's 2021 Annual Report on Form 10-K filed February 15, 2022.

The following table presents a summary of the Company's operating results:

(in millions, except per share data)	Year Ended December 31, 2022			2021		
			% of net sales			% of net sales
Net sales						
Air Management	$	7,129	45.1 %	$	6,820	46.0 %
e-Propulsion & Drivetrain		5,625	35.6		5,086	34.3
Fuel Systems		2,314	14.6		2,237	15.1
Aftermarket		1,285	8.2		1,212	8.2
Inter-segment eliminations		(552)	(3.5)		(517)	(3.5)
Total net sales		15,801	100.0		14,838	100.0
Cost of sales		12,700	80.4		11,983	80.8
Gross profit		3,101	19.6		2,855	19.2
Selling, general and administrative expenses - R&D, net		786	5.0		707	4.8
Selling, general and administrative expenses - Other		824	5.2		753	5.1
Restructuring expense		59	0.4		163	1.1
Other operating expense, net		58	0.4		81	0.5
Operating income		1,374	8.7		1,151	7.8
Equity in affiliates' earnings, net of tax		(38)	(0.2)		(48)	(0.3)
Unrealized loss on debt and equity securities		73	0.5		362	2.4
Interest expense, net		52	0.3		93	0.6
Other postretirement income		(31)	(0.2)		(45)	(0.3)
Earnings before income taxes and noncontrolling interest		1,318	8.3		789	5.3
Provision for income taxes		292	1.8		150	1.0
Net earnings		1,026	6.5		639	4.3
Net earnings attributable to the noncontrolling interest, net of tax		82	0.5		102	0.7
Net earnings attributable to BorgWarner Inc.	$	944	6.0 %	$	537	3.6 %
Earnings per share attributable to BorgWarner Inc. — diluted	$	3.99		$	2.24	

Net sales

Net sales for the year ended December 31, 2022 totaled $15,801 million, an increase of $963 million, or 6%, from the year ended December 31, 2021. The change in net sales for the year ended December 31, 2022 was primarily driven by the following:

- Favorable volume, mix and net new business increased sales approximately $1,235 million, or 8%. This increase was primarily driven by higher weighted average market production as estimated by the Company, which was up approximately 4% from the year ended December 31, 2021. The remaining increase primarily reflects the sales growth above market production, which the Company believes reflects higher demand for its products. Weighted average market production reflects light and commercial vehicle production as reported by IHS weighted for the Company's geographic exposure, as estimated by the Company.

- Fluctuations in foreign currencies resulted in a year-over-year decrease in sales of approximately $961 million primarily due to the weakening of the Euro, Chinese Renminbi and Korean Won relative to the U.S. Dollar.
- Customer pricing increased net sales by approximately $622 million. This includes an increase of approximately $585 million related to recoveries from the Company's customers of material cost inflation arising from non-contractual commercial negotiations with those customers and normal contractual customer commodity pass-through arrangements.
- Acquisitions, primarily AKASOL, contributed $154 million in additional sales during the year ended December 31, 2022. In December 2021, the Company sold its Water Valley, Mississippi manufacturing facility, which accounted for $177 million of net sales during the year ended December 31, 2021 that did not recur in 2022.

Cost of sales and gross profit
Cost of sales and cost of sales as a percentage of net sales were $12,700 million and 80.4%, respectively, during the year ended December 31, 2022, compared to $11,983 million and 80.8%, respectively, during the year ended December 31, 2021. The change in cost of sales for the year ended December 31, 2022 was primarily driven by the following:

- Higher sales volume, mix and net new business increased cost of sales by approximately $1,051 million.
- Fluctuations in foreign currencies resulted in a year-over-year decrease in cost of sales of approximately $780 million primarily due to the weakening of the Euro, Korean Won and Chinese Renminbi relative to the U.S. Dollar.
- Cost of sales was also impacted by material cost inflation of approximately $674 million arising from non-contractual commercial negotiations with the Company's suppliers and normal contractual supplier commodity pass-through arrangements. This impact was partially offset by $302 million of supply chain savings initiatives.
- In 2021, the Company recorded a higher warranty provision due to an unfavorable customer warranty settlement that resulted in cumulative charges of $124 million that did not repeat in 2022.

Gross profit and gross margin were $3,101 million and 19.6%, respectively, during the year ended December 31, 2022 compared to $2,855 million and 19.2%, respectively, during the year ended December 31, 2021. The increase in gross margin was primarily due to the factors discussed above.

Selling, general and administrative expenses ("SG&A")
SG&A for the year ended December 31, 2022 was $1,610 million as compared to $1,460 million for the year ended December 31, 2021. SG&A as a percentage of net sales was 10.2% and 9.8% for the years ended December 31, 2022 and 2021, respectively. The change in SG&A was primarily attributable to:

- Increased research and development ("R&D") costs of $79 million. R&D costs, net of customer reimbursements, were 5.0% of net sales in the year ended December 31, 2022, compared to 4.8% of net sales in the year ended December 31, 2021. The increase in R&D costs, net of customer reimbursements, was primarily due to increasing net investment related to the Company's electrification product portfolio. The Company will continue to invest in R&D programs, which are necessary to support short- and long-term growth. The Company's current long-term expectation for R&D spending is in the range of 5.0% to 5.5% of net sales.
- Increased administrative expenses of $34 million, primarily related to IT and travel.
- Increased employee-related costs of $29 million, primarily related to incentive compensation.

Restructuring expense was $59 million and $163 million for the years ended December 31, 2022 and 2021, respectively, primarily related to employee benefit costs. Refer to Note 4 "Restructuring" to the Consolidated Financial Statements in Item 8 of this report for more information.

During 2022, the Company approved individual restructuring actions that primarily related to specific reductions in headcount. During the year ended December 31, 2022, the Company recorded $18 million of restructuring expense related to these actions.

In February 2020, the Company announced a $300 million restructuring plan to address existing structural costs. During the years ended December 31, 2022 and 2021, the Company recorded $36 million and $103 million of restructuring expense related to this plan, respectively. Cumulatively, the Company has incurred $287 million of restructuring charges related to this plan. As of December 31, 2022, the plan was substantially complete. The resulting annual gross savings are expected to be in excess of $100 million and are being utilized to sustain overall operating margin profile and cost competitiveness.

Other operating expense, net was $58 million and $81 million for the years ended December 31, 2022 and 2021, respectively.

For the years ended December 31, 2022 and 2021, merger, acquisition and divestiture expenses, net were $40 million and $50 million, respectively. During the year ended December 31, 2022, the Company recorded merger, acquisition and divestiture expense of $54 million primarily related to professional fees associated with the intended separation of its Fuel Systems and Aftermarket segments. This merger, acquisition and divestiture expense was partially offset by a $14 million gain related to a change in estimate of the expected earn-out estimate associated with the Santroll acquisition. During the year ended December 31, 2021, the Company recorded merger, acquisition and divestiture expense of $50 million primarily related to professional fees associated with the acquisition of AKASOL, professional fees for integration and other support associated with the Company's acquisition of Delphi Technologies and other specific acquisition and disposition initiatives.

During the year ended December 31, 2022, the Company recorded a pre-tax gain of $22 million in connection with the sale of its interest in BorgWarner Romeo Power LLC ("Romeo JV"), in which the Company owned a 60% interest.

During the year ended December 31, 2022, the Company recorded an impairment charge of $30 million to remove an indefinite-lived trade name as the Company no longer plans to utilize this trade name in the business.

During the year ended December 31, 2021, the Company recorded pre-tax losses of $22 million on the sale of its Water Valley, Mississippi facility and $7 million in connection with the sale of an e-Propulsion & Drivetrain technical center in Europe. During the year ended December 31, 2022, the Company recorded an additional pre-tax loss of $9 million related to a change in estimate of contingent consideration to be received for the sale of its Water Valley, Mississippi facility.

During the year ended December 31, 2021, the Company recorded an impairment charge of $14 million to reduce its carrying value of an indefinite-lived trade name to the fair value.

Other operating expense, net is primarily comprised of items included within the subtitle "Non-comparable items impacting the Company's earnings per diluted share and net earnings" below.

Equity in affiliates' earnings, net of tax was $38 million and $48 million in the years ended December 31, 2022 and 2021, respectively. This line item is driven by the results of the Company's unconsolidated joint ventures.

Unrealized loss on debt and equity securities was $73 million and $362 million for the years ended December 31, 2022 and 2021, respectively. This line item reflects the net unrealized gains or losses recognized related to valuing the Company's investments at fair value. The 2022 amount is primarily related to an unrealized loss of $45 million recognized on debt securities and an unrealized loss of $39

million related to the Company’s investment in Romeo Power, Inc (“Romeo”). During the year ended December 31, 2022, the Company entered into a strategic partnership with Wolfspeed, Inc. (“Wolfspeed”) as part of which the Company invested $500 million in convertible debt securities of Wolfspeed. The 2021 amount was primarily related to the Company’s investment in Romeo. During the year ended December 31, 2022, the Company sold all of its remaining investment in Romeo. For further details, refer to Note 1, “Summary of Significant Accounting Policies” and Note 2, “Acquisitions and Dispositions,” to the Consolidated Financial Statements in Item 8 of this report.

Interest expense, net was $52 million and $93 million in the years ended December 31, 2022 and 2021, respectively. The decrease was primarily due to higher interest rates on cash and cash equivalents balances and lower expense related to the Company’s cross-currency swaps. In addition, in 2021, the Company incurred a $20 million loss on debt extinguishment related to the early repayment of its €500 million 1.800% senior notes settled on June 18, 2021.

Other postretirement income was $31 million and $45 million in the years ended December 31, 2022 and 2021, respectively. The decrease in other postretirement income for the year ended December 31, 2022 was primarily due to higher interest cost in 2022.

Provision for income taxes was $292 million for the year ended December 31, 2022 resulting in an effective tax rate of 22%. This compared to $150 million or 19% for the year ended December 31, 2021.

In 2022, the Company recognized discrete tax benefits of $33 million, primarily related to a reduction in certain unrecognized tax benefits and accrued interest related to a matter for which the statute of limitations had lapsed and favorable provision-to-return adjustments.

In 2021, the Company recognized a $55 million tax benefit related to a reduction in certain unrecognized tax benefits and accrued interest related to a matter for which the statute of limitations had lapsed. In addition, the Company recognized a discrete tax benefit of $20 million related to an increase in its deferred tax assets as a result of an increase in the United Kingdom (“UK”) tax rate from 19% to 25%. This rate change was enacted in June 2021 and becomes effective April 2023. Further, a net discrete tax benefit of $36 million was recognized, primarily related to changes to certain withholding rates applied to unremitted earnings.

For further details, see Note 7, “Income Taxes,” to the Consolidated Financial Statements in Item 8 of this report.

Net earnings attributable to the noncontrolling interest, net of tax of $82 million for the year ended December 31, 2022 decreased by $20 million compared to the year ended December 31, 2021. The decrease was primarily due to a decline in industry production in China related to COVID-19.

Non-comparable items impacting the Company's earnings per diluted share and net earnings

The Company's earnings per diluted share were $3.99 and $2.24 for the years ended December 31, 2022 and 2021, respectively. The non-comparable items presented below are calculated after tax using the corresponding effective tax rate discrete to each item and the weighted average number of diluted shares for each of the years then ended. The Company believes the following table is useful in highlighting non-comparable items that impacted its earnings per diluted share:

	Year Ended December 31,	
Non-comparable items:	2022	2021
Restructuring expense	$ (0.20)	$ (0.58)
Merger, acquisition and divestiture expense	(0.15)	(0.19)
Asset impairments and lease modifications	(0.13)	(0.05)
Gain (loss) on sales of businesses	0.04	(0.13)
Other	(0.06)	0.01
Unrealized loss on debt and equity securities	(0.25)	(1.15)
Customer warranty settlement[1]	—	(0.26)
Loss on debt extinguishment	—	(0.06)
Tax adjustments[2]	0.14	0.50
Total impact of non-comparable items per share — diluted:	$ (0.61)	$ (1.91)

1 During the year ended December 31, 2021, the Company reached an agreement with a customer to fully resolve a warranty claim and the Company recognized cumulative charges in the amount of $124 million in connection with the warranty claim. Refer to Note 13, "Product Warranty," to the Consolidated Financial Statements in Item 8 of this report for more information.

2 In 2022, the Company recognized discrete tax benefits of $33 million, primarily related to a reduction in certain unrecognized tax benefits and accrued interest related to a matter for which the statute of limitations had lapsed and favorable provision-to-return adjustments. In 2021, the Company recognized discrete reductions to tax expense of $124 million. These reductions primarily included a $55 million tax benefit related to the lapse of the statute of limitations for a tax matter, a $20 million benefit related to an increase in deferred tax assets associated with an increase in the UK tax rate, and a $49 million of tax benefit primarily related to changes to certain withholding rates applied to unremitted earnings and other tax adjustments.

Results by Reporting Segment

The Company's business is aggregated into four reporting segments: Air Management, e-Propulsion & Drivetrain, Fuel Systems and Aftermarket.

In the first quarter of 2022, the Company announced that the starter and alternator business, previously reported in its e-Propulsion & Drivetrain segment, would transition to the Aftermarket segment. The Company also announced that the canisters and fuel delivery modules business, previously reported in its Air Management segment, would transition to the Fuel Systems segment. Both of these transitions were completed during the second quarter of 2022. Additionally, in the fourth quarter of 2022, the Company moved its battery systems business, previously reported in its Air Management segment, to the e-Propulsion & Drivetrain segment. The reporting segment disclosures have been updated accordingly which included recasting prior period information for the new reporting structure.

During the first quarter of 2022, the Company updated the definition of its measure of segment income or loss to exclude the impact of intangible asset amortization expense. The Company believes this change improves comparability of ongoing operations given the increasing operating margin impact of intangible asset amortization arising from the Company's merger and acquisition activity. The prior period information disclosed below has been recast to reflect this change. Further, the Company renamed its measure of segment income or loss from Segment Adjusted EBIT to Segment Adjusted Operating Income.

Segment Adjusted Operating Income is the measure of segment income or loss used by the Company. Segment Adjusted Operating Income is comprised of operating income adjusted for restructuring, merger, acquisition and divestiture expense, intangible asset amortization expense, impairment charges and other items not reflective of ongoing operating income or loss. The Company believes Segment Adjusted Operating Income is most reflective of the operational profitability or loss of its reporting segments.

Segment Adjusted Operating Income excludes certain corporate costs, which primarily represent headquarters' expenses not directly attributable to the individual segments. Corporate expenses not allocated to Segment Adjusted Operating Income were $289 million and $302 million for the years ended December 31, 2022 and 2021, respectively. The decrease in corporate expenses in 2022 is primarily related to cost reductions driven by synergies from acquisitions.

The following table presents net sales and Segment Adjusted Operating Income for the Company's reporting segments:

	Year ended December 31, 2022			Year ended December 31, 2021		
(in millions)	Net sales	Segment Adjusted Operating Income	% margin	Net sales	Segment Adjusted Operating Income	% margin
Air Management	$ 7,129	$ 1,068	15.0 %	$ 6,820	$ 1,064	15.6 %
e-Propulsion & Drivetrain	5,625	379	6.7 %	5,086	458	9.0 %
Fuel Systems	2,314	249	10.8 %	2,237	235	10.5 %
Aftermarket	1,285	196	15.3 %	1,212	164	13.5 %
Inter-segment eliminations	(552)	—		(517)	—	
Totals	$ 15,801	$ 1,892		$ 14,838	$ 1,921	

The **Air Management** segment's net sales for the year ended December 31, 2022 increased $309 million, or 5%, and Segment Adjusted Operating Income increased $4 million from the year ended December 31, 2021. Foreign currencies resulted in a year-over-year decrease in sales of approximately $504 million primarily due to the weakening of the Euro, Korean Won and Chinese Renminbi relative to the U.S. Dollar. The increase excluding the impact of foreign currencies was primarily due to approximately $514 million of volume, mix and net new business driven by increased demand for the Company's products and higher weighted average market production compared to the prior year and approximately $277 million from non-contractual commercial negotiations with the Company's customers and normal contractual customer commodity pass-through arrangements. Segment Adjusted Operating margin was 15.0% for the year ended December 31, 2022, compared to 15.6% in the year ended December 31, 2021. The Segment Adjusted Operating margin decrease was primarily due to higher commodity, labor and energy costs, which were partially offset by the impact of higher sales.

The **e-Propulsion & Drivetrain** segment's net sales for the year ended December 31, 2022 increased $539 million, or 11%, and Segment Adjusted Operating Income decreased $79 million, or 17%, from the year ended December 31, 2021. Acquisitions, primarily AKASOL, contributed $151 million in additional sales during the year ended December 31, 2022. In December 2021, the Company sold its Water Valley, Mississippi manufacturing facility, which accounted for $177 million of net sales during the year ended December 31, 2021. Foreign currencies resulted in a year-over-year decrease in sales of approximately $283 million primarily due to the weakening of the Euro, Chinese Renminbi and Korean Won relative to the U.S. Dollar. The increase excluding these items was primarily due to approximately $507 million of volume, mix and net new business driven by increased demand for the Company's products and higher weighted average market production compared to the prior year and approximately $221 million from non-contractual commercial negotiations with the Company's customers and normal contractual customer commodity pass-through arrangements. Segment Adjusted Operating margin was 6.7% in the year ended December 31, 2022, compared to 9.0% in the year ended December 31, 2021. The Segment

Adjusted Operating margin decrease was primarily due to approximately $137 million of increased investments in R&D.

The **Fuel Systems** segment's net sales for the year ended December 31, 2022 increased $77 million, or 3%, and Segment Adjusted Operating Income increased $14 million, or 6.0%, from the year ended December 31, 2021. Foreign currencies resulted in a year-over-year decrease in sales of approximately $132 million primarily due to the weakening of the Euro, British Pound and Chinese Renminbi relative to the U.S. Dollar. The increase excluding the impact of foreign currencies was primarily due to approximately $147 million of volume, mix and net new business driven by higher weighted average market production compared to the prior year and approximately $55 million from non-contractual commercial negotiations with the Company's customers and normal contractual customer commodity pass-through arrangements. Segment Adjusted Operating margin was 10.8% in the year ended December 31, 2022, compared to 10.5% in the year ended December 31, 2021. The Segment Adjusted Operating margin increase was primarily due to higher sales.

The **Aftermarket** segment's net sales for the year ended December 31, 2022 increased $73 million, or 6%, and Segment Adjusted Operating Income increased $32 million, or 19.5%, from the year ended December 31, 2021. Foreign currencies resulted in a year-over-year decrease in sales of approximately $42 million primarily due to the weakening of the Euro relative to the U.S. Dollar. The increase excluding the impact of foreign currencies was primarily due to approximately $67 million of volume, mix and net new business driven by increased demand for the Company's products and approximately $32 million of pricing. Segment Adjusted Operating margin was 15.3% in the year ended December 31, 2022, compared to 13.5% in the year ended December 31, 2021. The Segment Adjusted Operating margin increase was primarily due to the increased pricing and the benefit of higher volumes.

LIQUIDITY AND CAPITAL RESOURCES

The Company maintains various liquidity sources, including cash and cash equivalents and the unused portion of its multi-currency revolving credit agreement. As of December 31, 2022, the Company had liquidity of $3,333 million, comprised of cash and cash equivalent balances of $1,333 million and an undrawn revolving credit facility of $2,000 million. The Company was in full compliance with its covenants under the revolving credit facility and had full access to its undrawn revolving credit facility. Debt maturities through the end of 2023 total $62 million. Given the Company's strong liquidity position, management believes that it will have sufficient liquidity and will maintain compliance with all covenants through at least the next 12 months.

As of December 31, 2022, cash balances of $1,084 million were held by the Company's subsidiaries outside of the United States. Cash and cash equivalents held by these subsidiaries are used to fund foreign operational activities and future investments, including acquisitions. The majority of cash and cash equivalents held outside the United States is available for repatriation. The Company uses its U.S. liquidity primarily for various corporate purposes, including but not limited to debt service, share repurchases, dividend distributions, acquisitions and other corporate expenses.

The Company has a $2.0 billion multi-currency revolving credit facility, which includes a feature that allows the facility to be increased by $1.0 billion with bank group approval. This facility matures in March 2025. The credit facility agreement contains customary events of default and one key financial covenant, which is a debt-to-EBITDA (Earnings Before Interest, Taxes, Depreciation and Amortization) ratio. The Company was in compliance with the financial covenant at December 31, 2022. At December 31, 2022 and 2021, the Company had no outstanding borrowings under this facility.

The Company's commercial paper program allows the Company to issue $2.0 billion of short-term, unsecured commercial paper notes under the limits of its multi-currency revolving credit facility. Under this program, the Company may issue notes from time to time and use the proceeds for general corporate purposes. The Company had no outstanding borrowings under this program as of December 31, 2022 and 2021.

The total current combined borrowing capacity under the multi-currency revolving credit facility and commercial paper program cannot exceed $2.0 billion.

In addition to the credit facility, the Company’s universal shelf registration provides the ability to issue various debt and equity instruments subject to market conditions.

On February 9, 2022, April 27, 2022, July 28, 2022 and November 10, 2022, the Company’s Board of Directors declared quarterly cash dividends of $0.17 per share of common stock. These dividends were paid on March 15, 2022, June 15, 2022, September 15, 2022 and December 15, 2022, respectively.

From a credit quality perspective, the Company has a credit rating of BBB+ from Fitch Ratings, BBB from Standard & Poor's and Baa1 from Moody's. The current outlook from each of Fitch, Standard & Poor’s and Moody’s is stable. None of the Company’s debt agreements require accelerated repayment in the event of a downgrade in credit ratings.

Cash Flows

Operating Activities

	Year Ended December 31,	
(in millions)	2022	2021
OPERATING		
Net earnings	$ 1,026	$ 639
Adjustments to reconcile net earnings to net cash flows from operations:		
Depreciation and tooling amortization	624	684
Intangible asset amortization	97	88
Restructuring expense, net of cash paid	45	123
Stock-based compensation expense	75	62
(Gain) loss on sales of businesses	(15)	29
Loss on debt extinguishment	—	20
Unrealized loss on debt and equity securities	73	362
Deferred income tax benefit	(65)	(180)
Other non-cash adjustments	(1)	(22)
Net earnings adjustments to reconcile to net cash flows from operations	1,859	1,805
Retirement plan contributions	(26)	(30)
Changes in assets and liabilities:		
Receivables	(564)	(59)
Inventories	(215)	(268)
Accounts payable and accrued expenses	438	(134)
Other assets and liabilities	77	(8)
Net cash provided by operating activities	$ 1,569	$ 1,306

Net cash provided by operating activities was $1,569 million and $1,306 million in the years ended December 31, 2022 and 2021, respectively. The increase for the year ended December 31, 2022, compared with the year ended December 31, 2021, was primarily due to higher net earnings adjusted for non-cash charges and improved working capital.

Investing Activities

(in millions)	Year Ended December 31, 2022	2021
INVESTING		
Capital expenditures, including tooling outlays	$ (723)	$ (666)
Capital expenditures for damage to property, plant and equipment	—	(2)
Insurance proceeds received for damage to property, plant and equipment	—	5
Payments for businesses acquired, net of cash and restricted cash acquired	(312)	(759)
Proceeds from sale of businesses, net of cash divested	27	22
Proceeds from settlement of net investment hedges, net	40	11
Payments for investments in debt and equity securities, net	(473)	(20)
Proceeds from asset disposals and other, net	23	14
Net cash used in investing activities	$ (1,418)	$ (1,395)

Net cash used in investing activities was $1,418 million and $1,395 million in the years ended December 31, 2022 and 2021, respectively. In 2022, the Company acquired Rhombus Energy Solutions, Santroll Automotive Components and Drivetek AG. Additionally, in 2022, the Company invested $500 million in Wolfspeed convertible debt securities. These impacts were partially offset by proceeds related to the liquidation of the Company's investment in Romeo Power, Inc., the sale of the Company's 60% interest in BorgWarner Romeo Power LLC and proceeds from net investment hedges. As a percentage of sales, capital expenditures were 4.6% and 4.5% for the years ended December 31, 2022 and 2021, respectively.

Financing Activities

(in millions)	Year Ended December 31, 2022	2021
FINANCING		
Net decrease in notes payable	$ —	$ (8)
Additions to debt	5	1,286
Repayments of debt, including current portion	(13)	(699)
Payments for debt issuance costs	—	(11)
Payments for purchase of treasury stock	(240)	—
Payments for stock-based compensation items	(18)	(15)
Purchase of noncontrolling interest	(59)	(33)
Dividends paid to BorgWarner stockholders	(161)	(162)
Dividends paid to noncontrolling stockholders	(81)	(72)
Net cash (used in) provided by financing activities	$ (567)	$ 286

Net cash used in financing activities was $567 million during the year ended December 31, 2022 compared to net cash provided by financing activities of $286 million in the year ended December 31, 2021. Net cash used in financing activities during the year ended December 31, 2022 was primarily related to the $240 million of BorgWarner share repurchases, $161 million in dividends paid to the Company's stockholders, $57 million paid to settle the AKASOL Squeeze Out and purchase the remaining outstanding shares and $81 million in dividends paid to noncontrolling stockholders of the Company's consolidated joint ventures.

Contractual Obligations

The Company's significant cash requirements for contractual obligations as of December 31, 2022, primarily consisted of the principal and interest payments on its notes payable and long-term debt, non-cancelable lease obligations, capital spending obligations and purchase obligations. The principal amount of notes payable and long-term debt was $4,196 million as of December 31, 2022. The projected interest payments over the terms of that debt were $1,052 million as of December 31, 2022. Refer to Note 14, "Notes Payable and Debt," to the Consolidated Financial Statements in Item 8 of this report for more information.

As of December 31, 2022, non-cancelable lease obligations were $239 million. Refer to Note 22, "Leases and Commitments," to the Consolidated Financial Statements in Item 8 of this report for more information. Capital spending obligations were $241 million as of December 31, 2022.

On November 16, 2022, the Company entered into a strategic partnership with Wolfspeed in which the Company invested $500 million in Wolfspeed's convertible debt securities and simultaneously entered into an agreement under which Wolfspeed agreed to provide a silicon carbide manufacturing capacity corridor to the Company. Under this agreement, beginning in 2024, the Company will purchase silicon carbide parts with an aggregate total price equal to or greater than the corridor amount totaling a minimum of $184 million, annually through 2029.

Management believes that the combination of cash from operations, cash balances, available credit facilities, and the universal shelf registration capacity will be sufficient to satisfy the Company's cash needs for its current level of operations and its planned operations for the foreseeable future. Management will continue to balance the Company's needs for organic growth, inorganic growth, debt reduction, cash conservation and return of cash to shareholders.

Pension and Other Postretirement Employee Benefits

The Company's policy is to fund its defined benefit pension plans in accordance with applicable government regulations and to make additional contributions when appropriate. At December 31, 2022, all legal funding requirements had been met. The Company contributed $22 million, $24 million and $174 million to its defined benefit pension plans in the years ended December 31, 2022, 2021 and 2020, respectively. On October 1, 2020, as a result of the acquisition of Delphi Technologies, the Company assumed all of the retirement-related liabilities of Delphi Technologies, the most significant of which was the Delphi Technologies Pension Scheme (the "Scheme") in the United Kingdom. On December 12, 2020, the Company entered into a Heads of Terms Agreement (the "Agreement") with the Trustees of the Scheme related to the future funding of the Scheme. Under the Agreement, the Company eliminated the prior schedule of contributions between Delphi Technologies and the Scheme in exchange for a $137 million (£100 million) one-time contribution into the Scheme Plan by December 31, 2020, which was paid on December 15, 2020. The Agreement also contained other provisions regarding the implementation of a revised asset investment strategy as well as a funding progress test that will be performed every three years to determine if additional contributions need to be made into the Scheme by the Company.

The Company expects to contribute a total of $20 million to $30 million into its defined benefit pension plans during 2023. Of the $20 million to $30 million in projected 2023 contributions, $7 million are contractually obligated, while any remaining payments would be discretionary.

The funded status of all pension plans was a net unfunded position of $173 million and $184 million at December 31, 2022 and 2021, respectively. The increase in the net unfunded position was a result of a lower projected benefit obligation which is primarily due to actuarial gains during the period. The main driver of these gains was the increase of 2.97% in the weighted average discount rate for Non-U.S. plans. Of the total net unfunded amounts, $34 million and $89 million at December 31, 2022 and 2021, respectively, were related to plans in Germany, where there is no tax deduction allowed under the

applicable regulations to fund the plans; hence, the common practice is to make contributions as benefit payments become due.

Other postretirement employee benefits primarily consist of postretirement health care benefits for certain employees and retirees of the Company's U.S. operations. The Company funds these benefits as retiree claims are incurred. Other postretirement employee benefits had an unfunded status of $37 million and $54 million at December 31, 2022 and 2021, respectively.

The Company believes it will be able to fund the requirements of these plans through cash generated from operations or other available sources of financing for the foreseeable future.

Refer to Note 18, "Retirement Benefit Plans," to the Consolidated Financial Statements in Item 8 of this report for more information regarding costs and assumptions for employee retirement benefits.

OTHER MATTERS

Contingencies

In the normal course of business, the Company is party to various commercial and legal claims, actions and complaints, including matters involving warranty claims, intellectual property claims, general liability and other risks. It is not possible to predict with certainty whether or not the Company will ultimately be successful in any of these commercial and legal matters or, if not, what the impact might be. The Company's management does not expect that an adverse outcome in any of these commercial and legal claims, actions and complaints that are currently pending will have a material adverse effect on the Company's results of operations, financial position or cash flows. An adverse outcome could, nonetheless, be material to the results of operations or cash flows.

Environmental

The Company and certain of its current and former direct and indirect corporate predecessors, subsidiaries and divisions have been identified by the United States Environmental Protection Agency and certain state environmental agencies and private parties as potentially responsible parties ("PRPs") at various hazardous waste disposal sites under the Comprehensive Environmental Response, Compensation and Liability Act ("Superfund") and equivalent state laws and, as such, may presently be liable for the cost of clean-up and other remedial activities at 26 such sites. Responsibility for clean-up and other remedial activities at a Superfund site is typically shared among PRPs based on an allocation formula.

The Company believes that none of these matters, individually or in the aggregate, will have a material adverse effect on its results of operations, financial position or cash flows. Generally, this is because either the estimates of the maximum potential liability at a site are not material or the liability will be shared with other PRPs, although no assurance can be given with respect to the ultimate outcome of any such matter.

Refer to Note 21, "Contingencies," to the Consolidated Financial Statements in Item 8 of this report for further details and information respecting the Company's environmental liability.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

The consolidated financial statements are prepared in conformity with accounting principles generally accepted in the United States (“GAAP”). In preparing these financial statements, management has made its best estimates and judgments of certain amounts included in the financial statements, giving due consideration to materiality. Critical accounting policies are those that are most important to the portrayal of the Company’s financial condition and results of operations. Some of these policies require management's most difficult, subjective or complex judgments in the preparation of the financial statements and accompanying notes. Management makes estimates and assumptions about the effect of matters that are inherently uncertain, relating to the reporting of assets, liabilities, revenues, expenses and the disclosure of contingent assets and liabilities. The Company’s most critical accounting policies are discussed below.

Business combinations The Company allocates the cost of an acquired business to the assets acquired and liabilities assumed based on their estimated fair values at the date of acquisition. The excess value of the cost of an acquired business over the estimated fair value of the assets acquired and liabilities assumed is recognized as goodwill. The valuation of the acquired assets and liabilities will impact the determination of future operating results. The Company uses a variety of information sources to determine the value of acquired assets and liabilities, including third-party appraisers for the values and lives of property, identifiable intangibles and inventories, and actuaries for defined benefit retirement plans. Goodwill is assigned to reporting units as of the date of the related acquisition. If goodwill is assigned to more than one reporting unit, the Company utilizes a method that is consistent with the manner in which the amount of goodwill in a business combination is determined. Costs related to the acquisition of a business are expensed as incurred.

Acquired intangible assets include customer relationships, developed technology and trade names. The Company estimates the fair value of acquired intangible assets using various valuation techniques. The primary valuation techniques used include forms of the income approach, specifically the relief-from-royalty and multi-period excess earnings valuation methods. Under these valuation approaches, the Company is required to make estimates and assumptions from a market participant perspective which may include revenue growth rates, estimated earnings, royalty rates, obsolescence factors, contributory asset charges, customer attrition and discount rates. Under the multi-period excess earnings method, value is estimated as the present value of the benefits anticipated from ownership of the asset, in excess of the returns required on the investment in contributory assets that are necessary to realize those benefits. The intangible asset’s estimated earnings are determined as the residual earnings after quantifying estimated earnings from contributory assets. When the Company estimates fair value using the relief-from-royalty method, it calculates the cost savings associated with owning rather than licensing the assets. Assumed royalty rates are applied to projected revenue for the remaining useful lives of the assets to estimate the royalty savings.

While the Company uses its best estimates and assumptions, fair value estimates are inherently uncertain and subject to refinement. As a result, during the measurement period, which may be up to one year from the acquisition date, the Company may record adjustments to the assets acquired and liabilities assumed, with the corresponding offset to goodwill. Any adjustments required after the measurement period are recorded in the consolidated statement of earnings.

Future changes in the judgments, assumptions and estimates that are used in acquisition valuations and intangible asset and goodwill impairment testing, including discount rates or future operating results and related cash flow projections, could result in significantly different estimates of the fair values in the future. An increase in discount rates, a reduction in projected cash flows or a combination of the two could lead to a reduction in the estimated fair values, which may result in impairment charges that could materially affect the Company’s financial statements in any given year.

Impairment of long-lived assets, including definite-lived intangible assets The Company reviews the carrying value of its long-lived assets, whether held for use or disposal, including other amortizing intangible assets, when events and circumstances warrant such a review under ASC Topic 360. In assessing long-lived assets for an impairment loss, assets are grouped with other assets and liabilities at the lowest level for which identifiable cash flows are largely independent of the cash flows of other assets and liabilities. In assessing long-lived assets for impairment, management generally considers individual facilities to be the lowest level for which identifiable cash flows are largely independent. A recoverability review is performed using the undiscounted cash flows if there is a triggering event. If the undiscounted cash flow test for recoverability identifies a possible impairment, management will perform a fair value analysis. Management determines fair value under ASC Topic 820 using the appropriate valuation technique of market, income or cost approach. If the carrying value of a long-lived asset is considered impaired, an impairment charge is recorded for the amount by which the carrying value of the long-lived asset exceeds its fair value.

Management believes that the estimates of future cash flows and fair value assumptions are reasonable; however, changes in assumptions underlying these estimates could affect the valuations. Significant judgments and estimates used by management when evaluating long-lived assets for impairment include (i) an assessment as to whether an adverse event or circumstance has triggered the need for an impairment review; (ii) undiscounted future cash flows generated by the asset; and (iii) fair valuation of the asset. Events and conditions that could result in impairment in the value of long-lived assets include changes in the industries in which the Company operates, particularly the impact of a downturn in the global economy, as well as competition and advances in technology, adverse changes in the regulatory environment, or other factors leading to reduction in expected long-term sales or profitability.

Goodwill and other indefinite-lived intangible assets During the fourth quarter of each year, the Company tests goodwill for impairment by either performing a qualitative assessment or a quantitative analysis. The qualitative assessment evaluates various events and circumstances, such as macroeconomic conditions, industry and market conditions, cost factors, relevant events and financial trends, that may impact a reporting unit's fair value. Using this qualitative assessment, the Company determines whether it is more-likely-than-not the reporting unit's fair value exceeds its carrying value. If it is determined that it is not more-likely-than-not the reporting unit's fair value exceeds the carrying value, or upon consideration of other factors, including recent acquisition, restructuring or disposal activity or to refresh the fair values, the Company performs a quantitative goodwill impairment analysis. In addition, the Company may test goodwill in between annual test dates if an event occurs or circumstances change that could more-likely-than-not reduce the fair value of a reporting unit below its carrying value.

During the fourth quarter of 2022, the Company performed a quantitative analysis on each reporting unit to refresh its respective fair value. Prior to 2022, the estimated fair value was determined based on the income approach. The income approach is based on discounted future cash flows and requires significant assumptions, including estimates regarding future revenue, profitability, capital requirements and discount rates. The basis of the income approach is the Company's annual budget and long-range plan ("LRP"). The annual budget and LRP includes a five-year projection of future cash flows based on actual new products and customer commitments. Because the projections are estimated over a significant future period of time, those estimates and assumptions are subject to uncertainty. For 2022, the estimated fair value was determined using a combined income and market approach. The market approach is based on market multiples (revenue and "EBITDA", defined as earnings before interest, taxes, depreciation and amortization) and requires an estimate of appropriate multiples based on market data for comparable companies. The market valuation models and other financial ratios used by the

Company require certain assumptions and estimates regarding the applicability of those models to the Company's facts and circumstances.

The Company believes the assumptions and estimates used to determine the estimated fair value are reasonable. Different assumptions could materially affect the estimated fair value. The primary assumptions affecting the Company's 2022 goodwill quantitative impairment review are as follows:

- **Discount rates:** the Company used a range of 11.0% to 14.5% weighted average cost of capital ("WACC") as the discount rates for future cash flows. The WACC is intended to represent a rate of return that would be expected by a market participant.

- **Operating income margin:** the Company used historical and expected operating income margins, which may vary based on the projections of the reporting unit being evaluated.

- **Revenue growth rates:** the Company used a global automotive market industry growth rate forecast adjusted to estimate its own market participation for product lines.

In addition to the above primary assumptions, the Company notes the following risks to volume and operating income assumptions that could have an impact on the discounted cash flow models:

- The automotive industry is cyclical, and the Company's results of operations could be adversely affected by industry downturns.
- The automotive industry is evolving, and if the Company does not respond appropriately, its results of operations could be adversely affected.
- The Company is dependent on market segments that use its key products and could be affected by decreasing demand in those segments.
- The Company is subject to risks related to international operations.

Based on the assumptions outlined above, the impairment testing conducted in the fourth quarter of 2022 indicated the Company's goodwill assigned to the respective reporting units was not impaired. Future changes in the judgments, assumptions and estimates from those used in acquisition-related valuations and goodwill impairment testing, including discount rates or future operating results and related cash flow projections, could result in significantly different estimates of the fair values in the future. Due to the Company's recent acquisitions, there is less headroom (the difference between the carrying value and the fair value) associated with certain of the Company's reporting units. Based on the impairment testing conducted in 2022, the amounts by which the estimated fair values of the Company's goodwill reporting units exceeded their carrying values ranged from 25% to 153%. An increase in discount rates, a reduction in projected cash flows or a combination of the two could lead to a reduction in the estimated fair values, which may result in impairment charges that could materially affect the Company's financial statements in any given year.

Similar to goodwill, the Company can elect to perform the impairment test for indefinite-lived intangibles other than goodwill (primarily trade names) using a qualitative analysis, considering similar factors as outlined in the goodwill discussion, in order to determine if it is more-likely-than-not that the fair value of the trade names is less than the respective carrying values. If the Company elects to perform or is required to perform a quantitative analysis, the test consists of a comparison of the fair value of the indefinite-lived intangible asset to the carrying value of the asset as of the impairment testing date. The Company estimates the fair value of indefinite-lived intangibles using the relief-from-royalty method, which it believes is an appropriate and widely used valuation technique for such assets. The fair value derived from the relief-from-royalty method is measured as the discounted cash flow savings realized from owning such trade names and not being required to pay a royalty for their use. During the year ended December 31, 2022, the Company decided it would no longer utilize a certain trade name in the business and recognized an impairment charge of $30 million.

Refer to Note 12, “Goodwill and Other Intangibles,” to the Consolidated Financial Statements in Item 8 of this report for more information regarding goodwill.

Product warranties The Company provides warranties on some, but not all, of its products. The warranty terms are typically from one to three years. Provisions for estimated expenses related to product warranty are made at the time products are sold. These estimates are established using historical information about the nature, frequency and average cost of warranty claim settlements as well as product manufacturing and industry developments and recoveries from third parties. Management actively studies trends of warranty claims and takes action to improve product quality and minimize warranty claims. Costs of product recalls, which may include the cost of the product being replaced as well as the customer’s cost of the recall, including labor to remove and replace the recalled part, are accrued as part of the Company’s warranty accrual at the time an obligation becomes probable and can be reasonably estimated. Management believes that the warranty accrual is appropriate; however, actual claims incurred could differ from the original estimates, requiring adjustments to the accrual:

	Year Ended December 31,	
(in millions)	2022	2021
Net sales	$ 15,801	$ 14,838
Warranty provision	$ 117	$ 225
Warranty provision as a percentage of net sales	0.7 %	1.5 %

The following table illustrates the sensitivity of a 25 basis-point change (as a percentage of net sales) in the assumed warranty trend on the Company’s accrued warranty liability:

	December 31,	
(in millions)	2022	2021
25 basis point decrease (income)/expense	$ (40)	$ (37)
25 basis point increase (income)/expense	$ 40	$ 37

At December 31, 2022, the total accrued warranty liability was $245 million. The accrual is represented as $142 million in Other current liabilities and $103 million in Other non-current liabilities on the Consolidated Balance Sheets.

Refer to Note 13, “Product Warranty,” to the Consolidated Financial Statements in Item 8 of this report for more information regarding product warranties.

Pension and other postretirement defined benefits The Company provides postretirement defined benefits to a number of its current and former employees. Costs associated with postretirement defined benefits include pension and postretirement health care expenses for employees, retirees and surviving spouses and dependents.

The Company’s defined benefit pension and other postretirement plans are accounted for in accordance with ASC Topic 715. The determination of the Company’s obligation and expense for its pension and other postretirement employee benefits, such as retiree health care, is dependent on certain assumptions used by actuaries in calculating such amounts. Certain assumptions, including the expected long-term rate of return on plan assets, discount rate, rates of increase in compensation and health care costs trends are described in Note 18, “Retirement Benefit Plans,” to the Consolidated Financial Statements in Item 8 of this report. The effects of any modification to those assumptions, or actual results that differ from assumptions used, are either recognized immediately or amortized over future periods in accordance with GAAP.

The primary assumptions affecting the Company's accounting for employee benefits under ASC Topics 712 and 715 as of December 31, 2022 are as follows:

- **Expected long-term rate of return on plan assets**: The expected long-term rate of return is used in the calculation of net periodic benefit cost. The required use of the expected long-term rate of return on plan assets may result in recognized returns that are greater or less than the actual returns on those plan assets in any given year. Over time, however, the expected long-term rate of return on plan assets is designed to approximate actual earned long-term returns. The expected long-term rate of return for pension assets has been determined based on various inputs, including historical returns for the different asset classes held by the Company's trusts and its asset allocation, as well as inputs from internal and external sources regarding expected capital market return, inflation and other variables. The Company also considers the impact of active management of the plans' invested assets. In determining its pension expense for the year ended December 31, 2022, the Company used long-term rates of return on plan assets ranging from 2.3% to 7.2% outside of the U.S. and 4.8% in the U.S.

  Actual returns on U.S. pension assets were (17.9)% and 3.1% for the years ended December 31, 2022 and 2021, respectively, compared to the expected rate of return assumptions of 4.8% and 5.8%, respectively, for the same years ended.

  Actual returns on U.K. pension assets were (34.8)% and 5.4% for the years ended December 31, 2022 and 2021, respectively, compared to the expected rate of return assumption of 4.1% and 4.0%, respectively, for the same years ended.

  Actual returns on German pension assets were (19.7)% and 5.4% for the years ended December 31, 2022 and 2021, respectively, compared to the expected rate of return assumptions of 4.0% and 5.0%, respectively, for the same years ended.

- **Discount rate**: The discount rate is used to calculate pension and other postretirement employee benefit ("OPEB") obligations. In determining the discount rate, the Company utilizes a full-yield approach in the estimation of service and interest components by applying the specific spot rates along the yield curve used in the determination of the benefit obligation to the relevant projected cash flows. For its significant plans, the Company used discount rates ranging from 1.7% to 12.0% to determine its pension and other benefit obligations as of December 31, 2022, including weighted average discount rates of 5.5% in the U.S., 4.9% outside of the U.S. (including 4.9% in the U.K.) and 5.4% for U.S. other postretirement health care plans. The U.S. and U.K. discount rates reflect the fact that the U.S. and U.K. pension plans have been closed for new participants.

- **Health care cost trend**: For postretirement employee health care plan accounting, the Company reviews external data and Company-specific historical trends for health care cost to determine the health care cost trend rate assumptions. In determining the projected benefit obligation for postretirement employee health care plans as of December 31, 2022, the Company used health care cost trend rates of 6.5%, declining to an ultimate trend rate of 4.75% by the year 2026.

While the Company believes that these assumptions are appropriate, significant differences in actual experience or significant changes in these assumptions may materially affect the Company's pension and OPEB and its future expense.

The sensitivity to a 25 basis-point change in the assumptions for discount rate and expected return on assets related to 2023 pre-tax pension expense for Company sponsored U.S. and non-U.S. pension plans is expected to be negligible.

The following table illustrates the sensitivity to a change in discount rate for Company sponsored U.S. and non-U.S. pension plans on its pension obligations:

(in millions)	Impact on U.S. PBO	Impact on Non-U.S. PBO
25 basis point decrease in discount rate	$ 3	$ 45
25 basis point increase in discount rate	$ (3)	$ (42)

The sensitivity to a 25 basis-point change in the discount rate assumption and to the assumed health care cost trend related to the Company's OPEB obligation and service and interest cost is expected to be negligible.

Refer to Note 18, "Retirement Benefit Plans," to the Consolidated Financial Statements in Item 8 of this report for more information regarding the Company's retirement benefit plans.

Restructuring Restructuring costs may occur when the Company takes action to exit or significantly curtail a part of its operations or implements a reorganization that affects the nature and focus of operations. A restructuring charge can consist of severance costs associated with reductions to the workforce, costs to terminate an operating lease or contract, professional fees and other costs incurred related to the implementation of restructuring activities.

The Company generally records costs associated with voluntary separations at the time of employee acceptance. Costs for involuntary separation programs are recorded when management has approved the plan for separation, the employees are identified and aware of the benefits they are entitled to and it is unlikely that the plan will change significantly. When a plan of separation requires approval by or consultation with the relevant labor organization or government, the costs are recorded upon agreement. Costs associated with benefits that are contingent on the employee continuing to provide service are accrued over the required service period.

Income taxes The Company accounts for income taxes in accordance with ASC Topic 740. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between financial statement carrying amounts of existing assets and liabilities and their respective tax bases and operating loss and tax credit carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. Deferred tax assets are reduced by a valuation allowance if, based on the weight of available evidence, it is more-likely-than-not that some portion or all of the deferred tax assets will not be realized.

Accounting for income taxes is complex, in part because the Company conducts business globally and, therefore, files income tax returns in numerous tax jurisdictions. Management judgment is required in determining the Company's worldwide provision for income taxes and recording the related assets and liabilities, including accruals for unrecognized tax benefits and assessing the need for valuation allowances. In calculating the provision for income taxes on an interim basis, the Company uses an estimate of the annual effective tax rate based upon the facts and circumstances known at each interim period. In determining the need for a valuation allowance, the historical and projected financial performance of the operation recording the net deferred tax asset is considered along with any other pertinent information. Since future financial results may differ from previous estimates, periodic adjustments to the Company's valuation allowance may be necessary.

The Company is subject to income taxes in the U.S. at the federal and state level and numerous non-U.S. jurisdictions. The determination of accruals for unrecognized tax benefits includes the application of complex tax laws in a multitude of jurisdictions across the Company's global operations. Management judgment is required in determining the accruals for unrecognized tax benefits. In the ordinary course of the Company's business, there are many transactions and calculations where the ultimate tax

determination is less than certain. Accruals for unrecognized tax benefits are established when, despite the belief that tax positions are supportable, there remain certain positions that do not meet the minimum probability threshold, which is a tax position that is more-likely-than-not to be sustained upon examination by the applicable taxing authority. The Company has certain U.S. state income tax returns and certain non-U.S. income tax returns that are currently under various stages of audit by applicable tax authorities. At December 31, 2022, the Company had a liability for tax positions the Company estimates are not more-likely-than-not to be sustained based on the technical merits, which is included in Other non-current liabilities. Nonetheless, the amounts ultimately paid, if any, upon resolution of the issues raised by the taxing authorities may differ materially from the amounts accrued for each year.

The Company records valuation allowances to reduce the carrying value of certain deferred tax assets to amounts that it expects are more-likely-than-not to be realized. Existing deferred tax assets, net operating losses and tax credits by jurisdiction and expectations of the ability to utilize these tax attributes are assessed through a review of past, current and estimated future taxable income and tax planning strategies.

Estimates of future taxable income, including income generated from prudent and feasible tax planning strategies resulting from actual or planned business and operational developments, could change in the near term, perhaps materially, which may require the Company to consider any potential impact to the assessment of the recoverability of the related deferred tax asset. Such potential impact could be material to the Company's consolidated financial condition or results of operations for an individual reporting period.

The Tax Cuts and Jobs Act of 2017 (the "Tax Act") that was signed into law in December 2017 constituted a major change to the U.S. tax system. The impact of the Tax Act on the Company is based on management's current interpretations of the Tax Act, recently issued regulations and related analysis. The Company's tax liability may be materially different based on regulatory developments or enacted changes to the U.S. tax law. In future periods, its effective tax rate could be subject to additional uncertainty as a result of regulatory or legislative developments related to U.S. tax law.

Refer to Note 7, "Income Taxes," to the Consolidated Financial Statements in Item 8 of this report for more information regarding income taxes.

New Accounting Pronouncements

Refer to Note 1, "Summary of Significant Accounting Policies," to the Consolidated Financial Statements in Item 8 of this report for more information regarding new applicable accounting pronouncements.

QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

The Company's primary market risks include fluctuations in interest rates and foreign currency exchange rates. The Company is also affected by changes in the prices of commodities used or consumed in its manufacturing operations. Some of its commodity purchase price risk is covered by supply agreements with customers and suppliers. Other commodity purchase price risk is occasionally addressed by hedging strategies, which include forward contracts. The Company enters into derivative instruments only with high credit quality counterparties and diversifies its positions across such counterparties in order to reduce its exposure to credit losses. The Company does not engage in any derivative instruments for purposes other than hedging specific operating risks.

The Company has established policies and procedures to manage sensitivity to interest rate, foreign currency exchange rate and commodity purchase price risk, which include monitoring the level of exposure to each market risk. For quantitative disclosures about market risk, refer to Note 17, "Financial

Instruments," to the Consolidated Financial Statements in Item 8 of this report for information with respect to interest rate risk, foreign currency exchange rate risk and commodity purchase price risk.

Interest Rate Risk

Interest rate risk is the risk that the Company will incur economic losses due to adverse changes in interest rates. The Company manages its interest rate risk by monitoring its exposure to fixed and variable rates while attempting to optimize its interest costs. The Company selectively uses interest rate swaps to reduce market value risk associated with changes in interest rates (fair value hedges). At December 31, 2022, all of the Company's long-term debt had fixed interest rates.

Foreign Currency Exchange Rate Risk

Foreign currency exchange rate risk is the risk that the Company will incur economic losses due to adverse changes in foreign currency exchange rates. Currently, the Company's most significant currency exposures relate to the Brazilian Real, British Pound, Chinese Renminbi, Euro, Korean Won, Mexican Peso, Polish Zloty, Singapore Dollar, Thailand Baht and Turkish Lira. The Company mitigates its foreign currency exchange rate risk by establishing local production facilities and related supply chain participants in the markets it serves, by invoicing customers in the same currency as the source of the products and by funding some of its investments in foreign markets through local currency loans. The Company also monitors its foreign currency exposure in each country and implements strategies to respond to changing economic and political environments. In addition, the Company regularly enters into forward currency contracts, cross-currency swaps and foreign currency-denominated debt designated as net investment hedges to reduce exposure to translation exchange rate risk. As of December 31, 2022 and 2021, the Company recorded a deferred gain of $196 million and $10 million, respectively, both before taxes, for designated net investment hedges within accumulated other comprehensive income (loss).

The significant foreign currency translation adjustments, including the impact of the net investment hedges discussed above, during the years ended December 31, 2022 and 2021, are shown in the following table, which provides the percentage change in U.S. Dollars against the respective currencies and the approximate impacts of these changes recorded within other comprehensive income (loss) for the respective periods.

(in millions, except for percentages)	December 31, 2022	
Chinese Renminbi	(8)%	$ (201)
Euro	(6)%	$ (46)
British Pound	(11)%	$ (40)
Korean Won	(6)%	$ (25)
India Rupee	(10)%	$ (11)

(in millions, except for percentages)	December 31, 2021	
Korean Won	(9)%	$ (72)
Euro	(7)%	$ (55)
Brazilian Real	(7)%	$ (13)
Japanese Yen	(10)%	$ (9)
Chinese Renminbi	3 %	$ 63

Commodity Price Risk

Commodity price risk is the possibility that the Company will incur economic losses due to adverse changes in the cost of raw materials used in the production of its products. Commodity forward and option contracts are occasionally executed to offset exposure to potential change in prices mainly for various non-ferrous metals and natural gas consumption used in the manufacturing of vehicle components. As of December 31, 2022 and 2021, the Company had no outstanding commodity swap contracts.

Disclosure Regarding Forward-Looking Statements

The matters discussed in this Item 7 include forward looking statements. See "Forward Looking Statements" at the beginning of this Annual Report on Form 10-K.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

For quantitative and qualitative information regarding market risk, refer to the discussion in Item 7 of this report under the caption "Quantitative and Qualitative Disclosures about Market Risk."

For information regarding interest rate risk, foreign currency exchange risk and commodity price risk, refer to Note 17, "Financial Instruments," to the Consolidated Financial Statements in Item 8 of this report. For information regarding the levels of indebtedness subject to interest rate fluctuation, refer to Note 14, "Notes Payable and Debt," to the Consolidated Financial Statements in Item 8 of this report. For information regarding the level of business outside the United States, which is subject to foreign currency exchange rate market risk, refer to Note 24, "Reporting Segments and Related Information," to the Consolidated Financial Statements in Item 8 of this report.

Item 8. Financial Statements and Supplementary Data

Index to Financial Statements and Supplementary Data	Page No.
Report of Independent Registered Public Accounting Firm (PCAOB ID 238)	57
Consolidated Balance Sheets	60
Consolidated Statements of Operations	61
Consolidated Statements of Comprehensive Income	62
Consolidated Statements of Cash Flows	63
Consolidated Statements of Equity	64
Notes to Consolidated Financial Statements	65

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of BorgWarner Inc.

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of BorgWarner Inc. and its subsidiaries (the "Company") as of December 31, 2022 and 2021, and the related consolidated statements of operations, of comprehensive income, of equity and of cash flows for each of the three years in the period ended December 31, 2022, including the related notes (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2022, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2022 and 2021, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2022 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2022, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Management's Report on Internal Control Over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on the Company's consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

As described in Management's Report on Internal Control Over Financial Reporting, management has excluded Santroll Automotive Components, Rhombus Energy Solutions, and Drivetek AG from its assessment of internal control over financial reporting as of December 31, 2022 because they were acquired by the Company in purchase business combinations during 2022. We have also excluded Santroll Automotive Components, Rhombus Energy Solutions, and Drivetek AG from our audit of internal control over financial reporting. Santroll Automotive Components, Rhombus Energy Solutions, and Drivetek AG are wholly-owned subsidiaries whose total assets and total net sales excluded from management's assessment and our audit of internal control over financial reporting collectively represent less than 1% of the related consolidated financial statement amounts as of and for the year ended December 31, 2022.

Definition and Limitations of Internal Control over Financial Reporting

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

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

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current period audit of the consolidated financial statements that were communicated or required to be communicated to the audit committee and that (i) relate to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Goodwill Impairment Analysis for the Reporting Unit Containing the Goodwill from the Company's 2021 Acquisition of Akasol AG

As described in Notes 1 and 12 to the consolidated financial statements, the Company's goodwill balance was $3,397 million as of December 31, 2022 and the goodwill associated with the e-Propulsion & Drivetrain segment was $1,914 million. During the fourth quarter of each year, management tests goodwill for impairment by either performing a qualitative assessment or a quantitative analysis. During the fourth quarter of 2022, management performed a quantitative analysis on each reporting unit to refresh its respective fair value. The estimated fair value was determined using a combined income and market approach. The income approach is based on discounted future cash flows and requires significant assumptions, including estimates regarding the revenue growth rates, operating income margin, and discount rates. The market approach is based on market multiples (revenue and "EBITDA", defined as earnings before interest, taxes, depreciation and amortization) and requires an estimate of appropriate multiples based on market data for comparable companies.

The principal considerations for our determination that performing procedures relating to the goodwill impairment analysis for the reporting unit containing the goodwill from the Company's 2021 acquisition of Akasol AG is a critical audit matter are (i) the significant judgment by management when developing the fair value estimate of the reporting unit, (ii) a high degree of auditor judgment, subjectivity, and effort in performing procedures and evaluating management's significant assumptions related to the short-term revenue growth rate, long-term revenue growth rate, operating income margin, discount rate and the revenue market multiple, and (iii) the audit effort involved the use of professionals with specialized skill and knowledge.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to management's quantitative goodwill impairment analysis, including controls over the valuation of the reporting unit containing the goodwill from the Company's 2021 acquisition of Akasol AG. These procedures also included, among others, (i) testing management's process for developing the fair value estimate, (ii) evaluating the appropriateness of the income and market approaches, (iii) testing the completeness and accuracy of the underlying data used in the approaches, and (iv) evaluating the reasonableness of the significant assumptions used by management related to the short-term revenue growth rate, long-term revenue growth rate, operating income

margin, discount rate, and the revenue market multiple. Evaluating management's significant assumptions related to the short-term revenue growth rate, and operating income margin involved evaluating whether the assumptions used by management were reasonable considering (i) the current and past performance of the reporting unit, (ii) the consistency with external market and industry data, and (iii) whether the assumptions were consistent with evidence obtained in other areas of the audit. Professionals with specialized skill and knowledge were used to assist in evaluating (i) the appropriateness of the Company's income and market approaches and (ii) the reasonableness of the Company's assumptions related to the long-term revenue growth rate, discount rate, and the revenue market multiple.

Worldwide Provision for Income Taxes

As described in Notes 1 and 7 to the consolidated financial statements, the Company recorded income taxes from continuing operations of $292 million for the year ended December 31, 2022. Management judgment is required in determining the Company's worldwide provision for income taxes and recording the related assets and liabilities, including accruals for unrecognized tax benefits and assessing the need for valuation allowances. As disclosed by management, accounting for income taxes is complex, in part because the Company conducts business globally and, therefore, files income tax returns in numerous tax jurisdictions. The Company is subject to income taxes in the U.S. at the federal and state level and numerous non-U.S. jurisdictions. In the ordinary course of the Company's business, there are many transactions and calculations where the ultimate tax determination is less than certain. Accruals for unrecognized tax benefits are established when, despite the belief that tax positions are supportable, there remain certain positions that do not meet the minimum probability threshold, which is a tax position that is more-likely-than-not to be sustained upon examination by the applicable taxing authority. The determination of accruals for unrecognized tax benefits includes the application of complex tax laws in a multitude of jurisdictions across the Company's global operations. The Company records valuation allowances to reduce the carrying value of deferred tax assets to amounts that it expects are more-likely-than-not to be realized. The Company assesses existing deferred tax assets, net operating loss carryforwards and tax credit carryforwards by jurisdiction and expectations of its ability to utilize these tax attributes through a review of past, current, and estimated future taxable income and tax planning strategies.

The principal considerations for our determination that performing procedures relating to management's worldwide provision for income taxes is a critical audit matter are (i) the significant judgment by management when developing the worldwide provision for income taxes, (ii) a high degree of auditor judgment, subjectivity and effort in performing procedures and evaluating management's worldwide provision for income taxes, including the accruals for unrecognized tax benefits and valuation allowances on deferred tax assets, and (iii) the audit effort involved the use of professionals with specialized skill and knowledge.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to management's worldwide provision for income taxes, including controls over accruals for unrecognized tax benefits and valuation allowances on deferred tax assets. These procedures also included, among others, (i) testing the accuracy of the worldwide provision for income taxes, including the rate reconciliation and permanent and temporary differences, (ii) evaluating the completeness of the accruals for unrecognized tax benefits, (iii) evaluating the reasonableness of management's more-likely-than-not determination in consideration of the tax laws in relevant jurisdictions, and (iv) evaluating the reasonableness of management's assessment of the realizability of its deferred tax assets based on expectations of the ability to utilize its tax attributes through a review of historical and estimated future taxable income and tax planning strategies. Professionals with specialized skill and knowledge were used to assist in (i) testing the accuracy of the worldwide provision for income taxes, (ii) evaluating the completeness of the accruals for unrecognized tax benefits, (iii) evaluating the reasonableness of management's more-likely-than-not determination in consideration of the tax laws in relevant jurisdictions, and (iv) evaluating the reasonableness of management's assessment of the realizability of its deferred tax assets.

/s/ PricewaterhouseCoopers LLP

Detroit, Michigan
February 9, 2023

We have served as the Company's auditor since 2008.

BORGWARNER INC. AND CONSOLIDATED SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS

(in millions, except share and per share amounts)	December 31, 2022	December 31, 2021
ASSETS		
Cash, cash equivalents and restricted cash	$ 1,338	$ 1,844
Receivables, net	3,323	2,898
Inventories, net	1,687	1,534
Prepayments and other current assets	269	321
Total current assets	6,617	6,597
Property, plant and equipment, net	4,365	4,395
Investments and long-term receivables	896	530
Goodwill	3,397	3,279
Other intangible assets, net	1,051	1,091
Other non-current assets	668	683
Total assets	$ 16,994	$ 16,575
LIABILITIES AND EQUITY		
Notes payable and other short-term debt	$ 62	$ 66
Accounts payable	2,684	2,276
Other current liabilities	1,490	1,456
Total current liabilities	4,236	3,798
Long-term debt	4,166	4,261
Retirement-related liabilities	223	290
Other non-current liabilities	861	964
Total liabilities	9,486	9,313
Commitments and contingencies		
Capital stock:		
Preferred stock, $0.01 par value; authorized shares: 5,000,000; none issued and outstanding	—	—
Common stock, $0.01 par value; authorized shares: 390,000,000; issued shares: (2022 - 283,575,876; 2021 - 283,575,876); outstanding shares: (2022 - 234,122,211; 2021 - 239,776,892)	3	3
Non-voting common stock, $0.01 par value; authorized shares: 25,000,000; none issued and outstanding	—	—
Capital in excess of par value	2,675	2,637
Retained earnings	7,454	6,671
Accumulated other comprehensive loss	(876)	(551)
Common stock held in treasury, at cost: (2022 - 49,453,665 shares; 2021 - 43,798,984 shares)	(2,032)	(1,812)
Total BorgWarner Inc. stockholders’ equity	7,224	6,948
Noncontrolling interest	284	314
Total equity	7,508	7,262
Total liabilities and equity	$ 16,994	$ 16,575

See Accompanying Notes to Consolidated Financial Statements.

BORGWARNER INC. AND CONSOLIDATED SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS

(in millions, except per share amounts)	Year Ended December 31, 2022	2021	2020
Net sales	$ 15,801	$ 14,838	$ 10,165
Cost of sales	12,700	11,983	8,255
Gross profit	3,101	2,855	1,910
Selling, general and administrative expenses	1,610	1,460	951
Restructuring expense	59	163	203
Other operating expense, net	58	81	138
Operating income	1,374	1,151	618
Equity in affiliates' earnings, net of tax	(38)	(48)	(18)
Unrealized loss (gain) on debt and equity securities	73	362	(382)
Interest expense, net	52	93	61
Other postretirement income	(31)	(45)	(7)
Earnings before income taxes and noncontrolling interest	1,318	789	964
Provision for income taxes	292	150	397
Net earnings	1,026	639	567
Net earnings attributable to the noncontrolling interest, net of tax	82	102	67
Net earnings attributable to BorgWarner Inc.	$ 944	$ 537	$ 500
Earnings per share attributable to BorgWarner Inc. — basic	$ 4.01	$ 2.25	$ 2.35
Earnings per share attributable to BorgWarner Inc. — diluted	$ 3.99	$ 2.24	$ 2.34
Weighted average shares outstanding:			
Basic	235.5	238.1	213.0
Diluted	236.8	239.5	214.0

See Accompanying Notes to Consolidated Financial Statements.

BORGWARNER INC. AND CONSOLIDATED SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(in millions)	Year Ended December 31, 2022	2021	2020
Net earnings attributable to BorgWarner Inc.	$ 944	$ 537	$ 500
Other comprehensive (loss) income			
Foreign currency translation adjustments[1]	(327)	(102)	176
Hedge instruments[1]	4	—	—
Defined benefit postretirement plans[1]	(2)	202	(100)
Total other comprehensive (loss) income attributable to BorgWarner Inc.	(325)	100	76
Comprehensive income attributable to BorgWarner Inc.[1]	619	637	576
Net earnings attributable to noncontrolling interest, net of tax	82	102	67
Other comprehensive (loss) income attributable to the noncontrolling interest[1]	(24)	(6)	20
Comprehensive income	$ 677	$ 733	$ 663

[1] Net of income taxes.

See Accompanying Notes to Consolidated Financial Statements.

BORGWARNER INC. AND CONSOLIDATED SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS

(in millions)	Year Ended December 31, 2022	2021	2020
OPERATING			
Net cash provided by operating activities (see Note 25)	$ 1,569	$ 1,306	$ 1,184
INVESTING			
Capital expenditures, including tooling outlays	(723)	(666)	(441)
Capital expenditures for damage to property, plant and equipment	—	(2)	(20)
Insurance proceeds received for damage to property, plant and equipment	—	5	20
Payments for businesses acquired, net of cash and restricted cash acquired	(312)	(759)	(449)
Proceeds from sale of businesses, net of cash divested	27	22	—
Proceeds from settlement of net investment hedges, net	40	11	10
Payments for investments in debt and equity securities, net	(473)	(20)	(2)
Proceeds from asset disposals and other, net	23	14	16
Net cash used in investing activities	(1,418)	(1,395)	(866)
FINANCING			
Net (decrease) increase in notes payable	—	(8)	8
Additions to debt	5	1,286	1,178
Repayments of debt, including current portion	(13)	(699)	(331)
Payments for debt issuance costs	—	(11)	(10)
Payments for purchase of treasury stock	(240)	—	(216)
Payments for stock-based compensation items	(18)	(15)	(13)
(Purchase of) capital contribution from noncontrolling interest	(59)	(33)	4
Dividends paid to BorgWarner stockholders	(161)	(162)	(146)
Dividends paid to noncontrolling stockholders	(81)	(72)	(37)
Net cash (used in) provided by financing activities	(567)	286	437
Effect of exchange rate changes on cash	(90)	(3)	63
Net increase in cash, cash equivalents and restricted cash	(506)	194	818
Cash, cash equivalents and restricted cash at beginning of year	1,844	1,650	832
Cash, cash equivalents and restricted cash at end of year	$ 1,338	$ 1,844	$ 1,650

See Accompanying Notes to Consolidated Financial Statements.

BORGWARNER INC. AND CONSOLIDATED SUBSIDIARIES
CONSOLIDATED STATEMENTS OF EQUITY

	Number of shares		BorgWarner Inc. stockholder's equity					
(in millions, except share data)	Issued common stock	Common stock held in treasury	Issued common stock	Capital in excess of par value	Treasury stock	Retained earnings	Accumulated other comprehensive income (loss)	Noncontrolling interests
Balance, January 1, 2020	246,387,057	(39,979,514)	$ 3	$ 1,145	$ (1,657)	$ 5,942	$ (727)	$ 138
Dividends declared ($0.68 per share)[1]	—	—	—	—	—	(146)	—	(22)
Noncontrolling interest contributions	—	—	—	—	—	—	—	4
Acquisition of Delphi Technologies	37,188,819	197,811	—	1,477	—	—	—	89
Net issuance for executive stock plan	—	297,108	—	(8)	12	—	—	—
Net issuance of restricted stock	—	595,052	—	—	27	—	—	—
Purchase of treasury stock	—	(5,755,630)	—	—	(216)	—	—	—
Net earnings	—	—	—	—	—	500	—	67
Other comprehensive loss	—	—	—	—	—	—	76	20
Balance, December 31, 2020	283,575,876	(44,645,173)	$ 3	$ 2,614	$ (1,834)	$ 6,296	$ (651)	$ 296
Dividends declared ($0.68 per share)[1]	—	—	—	—	—	(162)	—	(84)
Net issuance for executive stock plan	—	89,787	—	19	2	—	—	—
Net issuance of restricted stock	—	756,402	—	5	20	—	—	—
Acquisition of AKASOL	—	—	—	—	—	—	—	96
Purchase and reclass of noncontrolling interest	—	—	—	(1)	—	—	—	(90)
Net earnings	—	—	—	—	—	537	—	102
Other comprehensive loss	—	—	—	—	—	—	100	(6)
Balance, December 31, 2021	283,575,876	(43,798,984)	$ 3	$ 2,637	$ (1,812)	$ 6,671	$ (551)	$ 314
Dividends declared ($0.68 per share)[1]	—	—	—	—	—	(161)	—	(85)
Net issuance for executive stock plan	—	181,212	—	28	4	—	—	—
Net issuance of restricted stock	—	583,021	—	9	16	—	—	—
Purchase of treasury stock	—	(6,418,914)	—	—	(240)	—	—	—
Purchase/sale of noncontrolling interest	—	—	—	1	—	—	—	(3)
Net earnings	—	—	—	—	—	944	—	82
Other comprehensive income	—	—	—	—	—	—	(325)	(24)
Balance, December 31, 2022	283,575,876	(49,453,665)	$ 3	$ 2,675	$ (2,032)	$ 7,454	$ (876)	$ 284

[1] Dividends declared relate to BorgWarner common stock.

See Accompanying Notes to Consolidated Financial Statements.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

INTRODUCTION

BorgWarner Inc. (together with its Consolidated Subsidiaries, the “Company”) is a Delaware corporation incorporated in 1987. The Company is a global product leader in clean and efficient technology solutions for combustion, hybrid and electric vehicles. The Company’s products help improve vehicle performance, propulsion efficiency, stability and air quality. The Company manufactures and sells these products worldwide, primarily to original equipment manufacturers (“OEMs”) of light vehicles (passenger cars, sport-utility vehicles (“SUVs”), vans and light trucks). The Company's products are also sold to OEMs of commercial vehicles (medium-duty trucks, heavy-duty trucks and buses) and off-highway vehicles (agricultural and construction machinery and marine applications). The Company also manufactures and sells its products to certain tier one vehicle systems suppliers and into the aftermarket for light, commercial and off-highway vehicles. The Company operates manufacturing facilities serving customers in Europe, the Americas and Asia and is an original equipment supplier to nearly every major automotive OEM in the world.

On December 6, 2022, the Company announced its intention to execute a tax-free spin-off of the Fuel Systems and Aftermarket segments into a separate, publicly traded company. The intended separation of its Fuel Systems and Aftermarket segments would support optimizing the Company’s combustion portfolio and advancing its electrification journey, while at the same time creating a new, focused company that would be able to pursue growth opportunities in alternative fuels, such as hydrogen, and in Aftermarket. The Company expects to complete the transaction in late 2023, subject to satisfaction of customary conditions.

COVID-19 Pandemic and Other Supply Disruptions

Throughout 2020, COVID-19 materially impacted the Company’s business and results of operations. During the first quarter of 2020, the impact of COVID-19 was initially experienced primarily by operations in China. Following the declaration of COVID-19 as a global pandemic on March 11, 2020, government authorities around the world began to impose shelter-in-place orders and other restrictions. As a result, many OEMs began suspending manufacturing operations, particularly in North America and Europe. This led to various temporary closures of, or reduced operations at, the Company’s manufacturing facilities, late in the first quarter of 2020 and throughout the second quarter of 2020. During the second half of 2020, as global management of COVID-19 evolved and government restrictions were removed or lessened, production levels improved, and substantially all of the Company’s production facilities resumed closer to normal operations by the end of the third quarter of 2020. In 2022, COVID-19 outbreaks in certain regions caused intermittent disruptions in the Company’s supply chain and local manufacturing operations. For a significant portion of the second quarter of 2022, China imposed lockdowns in many cities due to an increase in COVID-19 cases in the region, which contributed to a decline in industry production in China during the quarter.

During 2021, and to a lesser extent in 2022, trailing impacts of the shutdowns and production declines related, in part, to COVID-19 created supply constraints of certain components, particularly semiconductor chips. These supply constraints have had, and are expected to continue to have, significant impacts on global industry production levels. In addition, it is possible a resurgence of COVID-19 could result in adverse impacts in the future. Management cannot reasonably estimate the full impact the ongoing supply constraints or the COVID-19 pandemic could have on the Company’s financial condition, results of operations or cash flows in the future.

NOTE 1 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The following paragraphs briefly describe the Company's significant accounting policies.

Basis of presentation Certain prior period amounts have been reclassified to conform to current period presentation. The Company's Consolidated Financial Statements reflect the results of acquisitions following the date of the respective acquisition. Refer to Note 2, "Acquisitions and Dispositions," to the Consolidated Financial Statements for more information.

Use of estimates The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America ("GAAP") requires management to make estimates and assumptions. These estimates and assumptions affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities as of the date of the financial statements and the accompanying notes, as well as the amounts of revenues and expenses reported during the periods covered by these financial statements and accompanying notes. Actual results could differ from those estimates.

Principles of consolidation The Consolidated Financial Statements include all majority-owned subsidiaries with a controlling financial interest. All inter-company balances and transactions have been eliminated in consolidation.

Joint ventures and equity securities The Company has investments in three unconsolidated joint ventures: NSK-Warner K.K., Turbo Energy Private Limited and Delphi-TVS Diesel Systems Ltd of which the Company owns 50%, 32.6% and 52.5%, respectively. These joint ventures are non-controlled affiliates in which the Company exercises significant influence but does not have a controlling financial interest and, therefore, are accounted for under the equity method. With respect to the Company's 52.5%-owned joint venture, although the Company is the majority owner, it does not have the ability to control significant decisions or management of the entity. Generally, under the equity method, the Company's original investments in these joint ventures are recorded at cost and subsequently adjusted by the Company's share of equity in income or losses. The Company monitors its equity method investments for indicators of other-than-temporary declines in fair value on an ongoing basis. If such a decline has occurred, an impairment charge is recorded, which is measured as the difference between the carrying value and the estimated fair value. The Company's investment in these non-controlled affiliates is included within Investments and long-term receivables in the Consolidated Balance Sheets. The Company's share of equity in income or losses is included in Equity in affiliates' earnings, net of tax in the Consolidated Statements of Operations.

The Company also has certain investments for which it does not have the ability to exercise significant influence (generally when ownership interest is less than 20%). The Company's investment in these equity securities is included within Investments and long-term receivables in the Consolidated Balance Sheet. Refer to Note 10, "Other Current and Non-Current Assets," to the Consolidated Financial Statements for more information.

Interests in privately held companies that do not have readily determinable fair values are accounted for using the measurement alternative under ASC Topic 321, "Investments - Equity Securities," which includes monitoring on an ongoing basis for indicators of impairments or upward adjustments. These equity securities are measured at cost less impairments, adjusted for observable price changes in orderly transactions for the identical or similar investment of the same issuer. If the Company determines that an indicator of impairment or upward adjustment is present, an adjustment is recorded, which is measured as the difference between carrying value and estimated fair value. Estimated fair value is generally determined using an income approach on discounted cash flows or negotiated transaction values.

Equity securities that have readily determinable fair values are measured at fair value. Equity securities that do not have a readily determinable fair value and which provide a net asset value ("NAV") or its

equivalent, are valued using NAV as a practical expedient. Changes in fair value and NAV are recorded in Unrealized loss (gain) on debt and equity securities in the Consolidated Statements of Operations.

Debt securities On November 16, 2022, the Company entered into a strategic partnership with Wolfspeed, Inc. (“Wolfspeed”) as part of which the Company invested $500 million in convertible debt securities of Wolfspeed. The Company elected to classify the debt security as trading and will remeasure quarterly using fair value in accordance with ASC Topic 320, “Investments.” Refer to Note 16, “Fair Value Measurements,” to the Consolidated Financial Statements for more information regarding the fair value of the convertible debt securities.

The Company’s investment in the debt securities is included within Investments and long-term receivables in the Consolidated Balance Sheets. The changes in fair value are recorded in Unrealized loss (gain) on debt and equity securities in the Consolidated Statements of Operations.

Business combinations In accordance with ASC Topic 805, “Business Combinations,” acquisitions are recorded using the acquisition method of accounting. The Company includes the operating results of acquired entities from their respective dates of acquisition. The Company recognizes and measures the identifiable assets acquired, liabilities assumed, and any non-controlling interest at the acquisition date fair value. Various valuation techniques are used to determine the fair value of intangible assets, with the primary techniques being forms of the income approach, specifically the relief-from-royalty and multi-period excess earnings valuation methods. Under these valuation approaches, the Company is required to make estimates and assumptions from a market participant perspective that may include revenue growth rates, estimated earnings, royalty rates, obsolescence factors, contributory asset charges, customer attrition and discount rates. The excess, if any, of total consideration transferred in a business combination over the fair value of identifiable assets acquired, liabilities assumed and any non-controlling interest is recognized as goodwill. Costs incurred as a result of a business combination other than costs related to the issuance of debt or equity securities are recorded in the period the costs are incurred. During the measurement period, which may be up to one year from the acquisition date, the Company may record adjustments to assets acquired and liabilities assumed with the corresponding offset to goodwill.

Revenue recognition Revenue is recognized when performance obligations under the terms of a contract are satisfied, which generally occurs with the transfer of control of the products. For most products, transfer of control occurs upon shipment or delivery; however, a limited number of customer arrangements for highly customized products with no alternative use provide the Company with the right to payment during the production process. As a result, for these limited arrangements, revenue is recognized as goods are produced and control transfers to the customer using the input cost-to-cost method. Revenue is measured at the amount of consideration the Company expects to receive in exchange for transferring the goods. Although the Company may enter into long-term supply arrangements with its major customers, the prices and volumes are not fixed over the life of the arrangements, and a contract does not exist for purposes of applying ASC Topic 606, “Revenue from Contracts with Customers,” until volumes are contractually known.

Sales incentives and allowances (including returns) are recognized as a reduction to revenue at the time of the related sale. The Company estimates the allowances based on an analysis of historical experience. Taxes assessed by a governmental authority collected by the Company concurrent with a specific revenue-producing transaction are excluded from net sales. Shipping and handling fees billed to customers are included in sales, while costs of shipping and handling are included in cost of sales. The Company has elected to apply the accounting policy election available under ASC Topic 606 and accounts for shipping and handling activities as a fulfillment cost.

The Company has a limited number of arrangements with customers where the price paid by the customer is dependent on the volume of product purchased over the term of the arrangement. In other arrangements, the Company will provide a rebate to customers based on the volume of products

purchased during the course of the arrangement. The Company estimates the volumes to be sold over the term of the arrangement and recognizes revenue based on the estimated amount of consideration to be received from these arrangements.

The Company continually seeks business development opportunities and at times provides customer incentives for new program awards. The Company evaluates the underlying economics of each amount of consideration payable to a customer to determine the proper accounting by understanding the reasons for the payment, the rights and obligations resulting from the payment, the nature of the promise in the contract, and other relevant facts and circumstances. When the Company determines that the payments are incremental and incurred only if the new business is obtained and expects to recover these amounts from the customer over the term of the new business arrangement, the Company capitalizes these amounts. The Company recognizes a reduction to revenue as products that the upfront payments are related to are transferred to the customer, based on the total amount of products expected to be sold over the term of the arrangement (generally three to seven years). The Company evaluates the amounts capitalized each period end for recoverability and expenses any amounts that are no longer expected to be recovered over the term of the business arrangement.

Refer to Note 3, “Revenue from Contracts with Customers,” to the Consolidated Financial Statements for more information.

Cost of sales The Company includes materials, direct labor and manufacturing overhead within cost of sales. Manufacturing overhead is comprised of indirect materials, indirect labor, factory operating costs, warranty costs and other such costs associated with manufacturing products for sale.

Cash and cash equivalents Cash and cash equivalents are valued at fair market value. It is the Company's policy to classify all highly liquid investments with original maturities of three months or less as cash and cash equivalents. Cash and cash equivalents are maintained with several financial institutions. Deposits held with banks may exceed the amount of insurance provided on such deposits. Generally, these deposits may be redeemed upon demand and are maintained with financial institutions of reputable credit and, therefore, bear minimal risk.

Restricted cash Restricted cash includes amounts designated for uses other than current operations and is related to the Company’s commitment to acquire or invest in certain companies. As of December 31, 2022 and 2021, the Company had restricted cash of $5 million and $3 million, respectively.

Receivables, net and long-term receivables Accounts receivable and long-term receivables are stated at cost less an allowance for credit losses. An allowance for credit losses is recorded for amounts that may become uncollectible in the future. The allowance for credit losses is an estimate based on expected losses, current economic and market conditions, and a review of the current status of each customer’s accounts receivable.

Sales of receivables are accounted for in accordance with the ASC Topic 860, “Transfers and Servicing.” Agreements which result in true sales of the transferred receivables, as defined in ASC Topic 860, which occur when receivables are transferred to a third party without recourse to the Company, are excluded from amounts reported in the consolidated balance sheets. Cash proceeds received from such sales are included in operating cash flows. The expenses associated with receivables factoring are recorded in the consolidated statements of operations within interest expense. Refer to Note 8, “Receivables, Net,” to the Consolidated Financial Statements for more information.

Inventories, net The majority of inventory is measured using first-in, first-out (“FIFO”) or average-cost methods at the lower of cost or net realizable value, with the exception of certain U.S. inventories that are determined using the last-in, first-out (“LIFO”) method at the lower of cost or market. Inventory held by U.S. operations using the LIFO method was $184 million and $178 million at December 31, 2022 and

2021, respectively. Such inventories, if valued at current cost instead of LIFO, would have been greater by $25 million as of each of December 31, 2022 and 2021. Refer to Note 9, “Inventories, net,” to the Consolidated Financial Statements for more information.

Pre-production costs related to long-term supply arrangements Engineering, research and development and other design and development costs for products sold on long-term supply arrangements are expensed as incurred unless the Company has a contractual guarantee for reimbursement from the customer. Costs for molds, dies and other tools used to make products sold on long-term supply arrangements for which the Company has title to the assets are capitalized in property, plant and equipment and amortized to cost of sales over the shorter of the term of the arrangement or over the estimated useful lives of the assets, typically three to five years. Costs for molds, dies and other tools used to make products sold on long-term supply arrangements for which the Company has a contractual guarantee for lump sum reimbursement from the customer are capitalized in prepayments and other current assets.

Property, plant and equipment, net Property, plant and equipment is valued at cost less accumulated depreciation. Expenditures for maintenance, repairs and renewals of relatively minor items are generally charged to expense as incurred. Renewals of significant items are capitalized. Depreciation is generally computed on a straight-line basis over the estimated useful lives of the assets. Useful lives for buildings range from 15 to 40 years, and useful lives for machinery and equipment range from three to 12 years. For income tax purposes, accelerated methods of depreciation are generally used. Refer to Note 11, “Property, Plant and Equipment, Net,” to the Consolidated Financial Statements for more information.

Impairment of long-lived assets, including definite-lived intangible assets The Company reviews the carrying value of its long-lived assets, whether held for use or disposal, including other amortizing intangible assets, when events and circumstances warrant such a review under ASC Topic 360, “Property, Plant and Equipment.” In assessing long-lived assets for an impairment loss, assets are grouped with other assets and liabilities at the lowest level for which identifiable cash flows are largely independent of the cash flows of other assets and liabilities. In assessing long-lived assets for impairment, management generally considers individual facilities to be the lowest level for which identifiable cash flows are largely independent. A recoverability review is performed using the undiscounted cash flows if there is a triggering event. If the undiscounted cash flow test for recoverability identifies a possible impairment, management will perform a fair value analysis. Management determines fair value under ASC Topic 820, “Fair Value Measurement,” using the appropriate valuation technique of market, income or cost approach. If the carrying value of a long-lived asset is considered impaired, an impairment charge is recorded for the amount by which the carrying value of the long-lived asset exceeds its fair value.

Management believes that the estimates of future cash flows and fair value assumptions are reasonable; however, changes in assumptions underlying these estimates could affect the valuations. Significant judgments and estimates used by management when evaluating long-lived assets for impairment include (i) an assessment as to whether an adverse event or circumstance has triggered the need for an impairment review; (ii) undiscounted future cash flows generated by the asset; and (iii) fair valuation of the asset.

Goodwill and other intangible assets During the fourth quarter of each year, the Company tests goodwill for impairment by either performing a qualitative assessment or a quantitative analysis. The qualitative assessment evaluates various events and circumstances, such as macroeconomic conditions, industry and market conditions, cost factors, relevant events and financial trends, that may impact a reporting unit's fair value. Using this qualitative assessment, the Company determines whether it is more-likely-than-not the reporting unit's fair value exceeds its carrying value. If it is determined that it is not more-likely-than-not the reporting unit's fair value exceeds the carrying value, or upon consideration of other factors, including recent acquisition, restructuring or disposal activity or to refresh the fair values, the Company performs a quantitative goodwill impairment analysis. In addition, the Company may test goodwill in between annual test dates if an event occurs or circumstances change that could more-likely-than-not reduce the fair value of a reporting unit below its carrying value.

The Company has definite-lived intangible assets related to patents and developed technology, customer relationships and trade names. The Company amortizes definite-lived intangible assets over their estimated useful lives. The Company also has intangible assets related to acquired trade names that are classified as indefinite-lived when there are no foreseeable limits on the periods of time over which they are expected to contribute cash flows. Costs to renew or extend the term of acquired intangible assets are recognized as expense as incurred.

Similar to goodwill, the Company can elect to perform the impairment test for indefinite-lived intangibles other than goodwill (primarily trade names) using a qualitative analysis, considering similar factors as outlined in the goodwill discussion, in order to determine if it is more-likely-than-not that the fair value of the trade names is less than the respective carrying values. If the Company elects to perform or is required to perform a quantitative analysis, the test consists of a comparison of the fair value of the indefinite-lived intangible asset to the carrying value of the asset as of the impairment testing date. The Company estimates the fair value of indefinite-lived intangibles using the relief-from-royalty method, which it believes is an appropriate and widely used valuation technique for such assets. The fair value derived from the relief-from-royalty method is measured as the discounted cash flow savings realized from owning such trade names and not being required to pay a royalty for their use.

Refer to Note 12, “Goodwill and Other Intangibles,” to the Consolidated Financial Statements for more information.

Assets and liabilities held for sale The Company classifies assets and liabilities (disposal groups) to be sold as held for sale in the period in which all of the following criteria are met: management, having the authority to approve the action, commits to a plan to sell the disposal group; the disposal group is available for immediate sale in its present condition subject only to terms that are usual and customary for sales of such disposal groups; an active program to locate a buyer and other actions required to complete the plan to sell the disposal group have been initiated; the sale of the disposal group is probable, and transfer of the disposal group is expected to qualify for recognition as a completed sale within one year, except if events or circumstances beyond the Company’s control extend the period of time required to sell the disposal group beyond one year; the disposal group is being actively marketed for sale at a price that is reasonable in relation to its current fair value; and actions required to complete the plan indicate that it is unlikely that significant changes to the plan will be made or that the plan will be withdrawn.

The Company initially measures a disposal group that is classified as held for sale at the lower of its carrying value or fair value less any costs to sell. Any loss resulting from this measurement is recognized in the period in which the held for sale criteria are met. Conversely, gains are not recognized on the sale of a disposal group until the date of sale. The Company assesses the fair value of a disposal group, less any costs to sell, each reporting period it remains classified as held for sale and reports any subsequent changes as an adjustment to the carrying value of the disposal group, as long as the new carrying value does not exceed the carrying value of the disposal group at the time it was initially classified as held for

sale. Additionally, depreciation is not recorded during the period in which the long-lived assets, included in the disposal group, are classified as held for sale.

Upon determining that a disposal group meets the criteria to be classified as held for sale, the Company reports the assets and liabilities of the disposal group, if material, in the line items assets held for sale and liabilities held for sale in the Consolidated Balance Sheets.

Product warranties The Company provides warranties on some, but not all, of its products. The warranty terms are typically from one to three years. Provisions for estimated expenses related to product warranty are made at the time products are sold. These estimates are established using historical information about the nature, frequency and average cost of warranty claim settlements as well as product manufacturing and industry developments and recoveries from third parties. Management actively studies trends of warranty claims and takes action to improve product quality and minimize warranty claims. Costs of product recalls, which may include the cost of the product being replaced as well as the customer's cost of the recall, including labor to remove and replace the recalled part, are accrued as part of the Company's warranty accrual at the time an obligation becomes probable and can be reasonably estimated. Management believes that the warranty accrual is appropriate; however, actual claims incurred could differ from the original estimates, requiring adjustments to the accrual. The product warranty accrual is allocated to current and non-current liabilities in the Consolidated Balance Sheets.

Refer to Note 13, "Product Warranty," to the Consolidated Financial Statements for more information.

Other loss accruals and valuation allowances The Company has numerous other loss exposures, such as customer claims, workers' compensation claims, litigation and recoverability of certain assets. Establishing loss accruals or valuation allowances for these matters requires the use of estimates and judgment in regard to the risk exposure and ultimate realization. The Company estimates losses using consistent and appropriate methods; however, changes to its assumptions could materially affect the recorded accrued liabilities for loss or asset valuation allowances.

Environmental contingencies The Company accounts for environmental costs in accordance with ASC Topic 450, "Contingencies." Costs related to environmental assessments and remediation efforts at operating facilities are accrued when it is probable that a liability has been incurred and the amount of that liability can be reasonably estimated. Estimated costs are recorded at undiscounted amounts, based on experience and assessments and are regularly evaluated. The liabilities are recorded in Other current and Other non-current liabilities in the Company's Consolidated Balance Sheets.

Refer to Note 21, "Contingencies," to the Consolidated Financial Statements for more information.

Government grants The Company periodically receives government grants representing assistance provided by a government. These government grants are generally received in cash and typically provide reimbursement related to acquisition of property and equipment, product development or local governmental economic relief. The government grants are generally amortized using a systematic and rational method over the life of the grant. As of December 31, 2022, the Company recorded government grant related liabilities of $3 million in Other current liabilities and $53 million in Other non-current liabilities in the Company's Consolidated Balance Sheet. During the year ended December 31, 2022, the Company recorded $52 million and $9 million of government grant-related credits in Selling, general and administrative expenses and Cost of sales, respectively, in the Company's Consolidated Statement of Operations.

Derivative financial instruments The Company recognizes that certain normal business transactions and foreign currency operations generate risk. Examples of risks include exposure to exchange rate risk related to transactions denominated in currencies other than the functional currency, changes in commodity costs and interest rates. It is the objective of the Company to assess the impact of these transaction risks and offer protection from selected risks through various methods, including financial

derivatives. Virtually all derivative instruments held by the Company are designated as hedges, have high correlation with the underlying exposure and are highly effective in offsetting underlying price movements. Accordingly, gains and losses from changes in qualifying hedge fair values are matched with the underlying transactions. Hedge instruments are generally reported gross, with no right to offset, on the Consolidated Balance Sheets at their fair value based on quoted market prices for contracts with similar maturities. The Company does not engage in any derivative transactions for purposes other than hedging specific operational risks.

Refer to Note 17, “Financial Instruments,” to the Consolidated Financial Statements for more information.

Foreign currency The financial statements of foreign subsidiaries are translated to U.S. Dollars using the period-end exchange rate for assets and liabilities and an average exchange rate for each period for revenues, expenses and capital expenditures. The local currency is the functional currency for substantially all of the Company's foreign subsidiaries. Translation adjustments for foreign subsidiaries are recorded as a component of accumulated other comprehensive income (loss) in equity. The Company recognizes transaction gains and losses arising from fluctuations in currency exchange rates on transactions denominated in currencies other than the functional currency in earnings as incurred.

Refer to Note 20, “Accumulated Other Comprehensive Loss,” to the Consolidated Financial Statements for more information.

Pensions and other postretirement employee defined benefits The Company’s defined benefit pension and other postretirement employee benefit plans are accounted for in accordance with ASC Topic 715, “Compensation - Retirement Benefits.” Disability, early retirement and other postretirement employee benefits are accounted for in accordance with ASC Topic 712, “Compensation - Nonretirement Postemployment Benefits.”

Pensions and other postretirement employee benefit costs and related liabilities and assets are dependent upon assumptions used in calculating such amounts. These assumptions include discount rates, expected returns on plan assets, health care cost trends, compensation and other factors. In accordance with GAAP, actual results that differ from the assumptions used are accumulated and amortized over future periods, and accordingly, generally affect recognized expense in future periods.

Refer to Note 18, “Retirement Benefit Plans,” to the Consolidated Financial Statements for more information.

Restructuring Restructuring costs may occur when the Company takes action to exit or significantly curtail a part of its operations or implements a reorganization that affects the nature and focus of operations. A restructuring charge can consist of severance costs associated with reductions to the workforce, costs to terminate an operating lease or contract, professional fees and other costs incurred related to the implementation of restructuring activities.

The Company generally records costs associated with voluntary separations at the time of employee acceptance. Costs for involuntary separation programs are recorded when management has approved the plan for separation, the employees are identified and aware of the benefits they are entitled to and it is unlikely that the plan will change significantly. When a plan of separation requires approval by or consultation with the relevant labor organization or government, the costs are recorded upon agreement. Costs associated with benefits that are contingent on the employee continuing to provide service are accrued over the required service period.

Refer to Note 4, “Restructuring,” to the Consolidated Financial Statements for more information.

Income taxes In accordance with ASC Topic 740, “Income Taxes,” the Company’s income tax expense is calculated based on expected income and statutory tax rates in the various jurisdictions in which the Company operates and requires the use of management’s estimates and judgments. Accounting for income taxes is complex, in part because the Company conducts business globally and, therefore, files income tax returns in numerous tax jurisdictions. Management judgment is required in determining the Company’s worldwide provision for income taxes and recording the related assets and liabilities, including accruals for unrecognized tax benefits and assessing the need for valuation allowances.

The determination of accruals for unrecognized tax benefits includes the application of complex tax laws in a multitude of jurisdictions across the Company’s global operations. Management judgment is required in determining the gross unrecognized tax benefits’ related liabilities. In the ordinary course of the Company’s business, there are many transactions and calculations where the ultimate tax determination is less than certain. Accruals for unrecognized tax benefits are established when, despite the belief that tax positions are supportable, there remain certain positions that do not meet the minimum probability threshold, which is a tax position that is more-likely-than-not to be sustained upon examination by the applicable taxing authority.

The Company records valuation allowances to reduce the carrying value of deferred tax assets to amounts that it expects are more-likely-than-not to be realized. The Company assesses existing deferred tax assets, net operating losses and tax credit carryforwards by jurisdiction and expectations of its ability to utilize these tax attributes through a review of past, current and estimated future taxable income and tax planning strategies.

Refer to Note 7, “Income Taxes,” to the Consolidated Financial Statements for more information.

New Accounting Pronouncements

Recently Adopted Accounting Standards

In November 2021, the FASB issued ASU No. 2021-10, “Government Assistance (Topic 832): Disclosures by Business Entities about Government Assistance.” It is expected to increase transparency in financial reporting by requiring business entities to disclose information about certain types of government assistance they receive. The amendments require the following annual disclosures about transactions with a government: (i) information about the nature of the transactions and the related accounting policy used to account for the transactions; (ii) the line items on the balance sheet and income statement that are affected by the transactions, and the amounts applicable to each financial statement line item; and (iii) significant terms and conditions of the transactions, including commitments and contingencies. This guidance was effective for annual reporting periods beginning after December 15, 2021. The Company adopted this guidance prospectively as of January 1, 2022, and there was no impact on the Consolidated Financial Statements; however, the Company has included the required disclosures. Refer to Note 1, “Summary of Significant Accounting Policies,” to the Consolidated Financial Statements above for more detail.

Accounting Standards Not Yet Adopted

In October 2021, the FASB issued ASU No. 2021-08, “Business Combinations (Topic 805): Accounting for Contract Assets and Contract Liabilities from Contracts with Customers.” It requires entities to apply Topic 606 to recognize and measure contract assets and contract liabilities in a business combination. The amendments improve comparability after the business combination by providing consistent recognition and measurement guidance for revenue contracts with customers acquired in a business combination and revenue contracts with customers not acquired in a business combination. This guidance is effective for interim and annual reporting periods beginning after December 15, 2022. The Company does not expect this guidance to have a material impact on its Consolidated Financial Statements.

NOTE 2 ACQUISITIONS AND DISPOSITIONS

Acquisitions

In accordance with ASC Topic 805, “Business Combinations,” acquisitions are recorded using the acquisition method of accounting. The Company recognizes and measures the acquisition date fair value of the identifiable assets acquired, liabilities assumed, and any non-controlling interest using a range of methodologies as indicated by generally accepted valuation practices. Various valuation techniques are used to determine the fair value of intangible assets, with the primary techniques being forms of the income approach, specifically the relief-from-royalty and multi-period excess earnings valuation methods. Under these valuation approaches, the Company is required to make estimates and assumptions from a market participant perspective and may include revenue growth rates, estimated earnings, royalty rates, obsolescence factors, contributory asset charges, customer attrition and discount rates. For each acquisition disclosed below, management used a third-party valuation firm to assist in the determination of the provisional purchase accounting fair values; however, management ultimately oversees the third-party valuation firm to ensure that the transaction-specific assumptions are appropriate for the Company.

Due to the insignificant size of the 2022 and 2021 acquisitions, both individually and in the aggregate, relative to the Company, supplemental pro forma financial information for the current and prior reporting periods is not provided.

Hubei Surpass Sun Electric Charging Business

On September 20, 2022, the Company announced that it had entered into an Equity Transfer Agreement under which BorgWarner will acquire the electric vehicle solution, smart grid and smart energy businesses of Hubei Surpass Sun Electric. The transaction has an enterprise value up to ¥410 million ($60 million), of which approximately ¥267 million ($39 million) will be delivered at or soon after closing, and up to ¥143 million ($21 million) could be paid in the form of contingent payments over approximately two years following the closing. The acquisition complements the Company’s existing European and North American charging footprint by adding a presence in China. The transaction is subject to satisfaction of customary closing conditions and is expected to close in the first quarter of 2023.

Drivetek AG

On December 1, 2022, the Company completed its acquisition of 100% of Drivetek AG (“Drivetek”), an engineering and product development company located in Switzerland. This acquisition strengthens the Company’s power electronics capabilities in auxiliary inverters, which it expects to accelerate the growth of the High Voltage eFan business. The Company paid ₣27 million ($29 million) at closing, and up to ₣10 million ($10 million) could be paid in the form of contingent earn-out payments over the three years following closing. The earn-out payments are contingent upon achievement of estimated future sales targets associated with newly awarded business and future turnover rate targets. As of December 31, 2022, the Company’s estimate of the earn-out payments was approximately $10 million, which is recorded in Other non-current liabilities in the Company’s Consolidated Balance Sheet.

The purchase price was allocated on a provisional basis as of December 1, 2022. Assets acquired and liabilities assumed were recorded at estimated fair values based on management’s estimates, available information, and supportable assumptions that management considered reasonable. Certain estimated values for the acquisition, including goodwill, tangible and intangible assets and deferred taxes, are not yet finalized, and the provisional purchase price allocations are subject to change as the Company completes its analysis of the fair value at the date of acquisition. The final valuation of assets acquired and liabilities assumed may be materially different from the estimated values shown below.

The estimated fair values of assets acquired and liabilities assumed as of December 1, 2022 were assets of $49 million, including goodwill and intangibles of $40 million, and liabilities of $10 million.

Any excess of the purchase price over the estimated fair value of net assets was recognized as goodwill. Goodwill of $22 million was recorded within the Company's Air Management segment. The goodwill consists of the Company's expected future economic benefits that will be realized from expanding the Company's electric vehicle portfolio as electric vehicle production continues to increase. The goodwill is not expected to be deductible for tax purposes.

In connection with the acquisition, the Company preliminarily recorded $18 million for intangible assets, primarily for developed technology and customer relationships. As described above, the provisional fair value of intangible assets was valued using the income approach.

The impact of the Drivetek acquisition on net sales and net earnings was immaterial for the year ended December 31, 2022.

Rhombus Energy Solutions

On July 29, 2022, the Company completed its acquisition of 100% of Rhombus Energy Solutions ("Rhombus"), a provider of charging solutions in the North American market, pursuant to the terms of an Agreement and Plan of Merger (the "Agreement"). The acquisition complements the Company's existing European charging footprint to accelerate organic growth and adds North American regional presence to its charging business.

The Company paid $131 million at closing. Pursuant to the Agreement, the Company is obligated to remit up to $30 million of earn-out payments, payable in 2025, contingent upon achievement of certain sales dollars, sales volume, and gross margin targets. The Company's current estimates indicate that the minimum thresholds for these earn-out targets will not be achieved, thus no amount for the earn-out payments has been included in the purchase consideration or in the Company's Consolidated Balance Sheet. Additionally, pursuant to the Agreement, the Company is obligated to remit up to $25 million over the three years following closing in key employee retention related payments, which include certain performance targets. The amounts will be accounted for as post-combination expense.

The purchase price was allocated on a preliminary basis as of July 29, 2022. Assets acquired and liabilities assumed were recorded at estimated fair values based on management's estimates, available information, and supportable assumptions that management considered reasonable. Certain estimated values for the acquisition, including goodwill and deferred taxes, are not yet finalized, and the preliminary purchase price allocations are subject to change as the Company completes its analysis of the fair value at the date of acquisition. The final valuation of assets acquired and liabilities assumed may be materially different from the estimated values shown below.

The following table summarizes the estimated fair values of assets acquired and liabilities assumed as of July 29, 2022, the acquisition date:

(in millions)	Initial Allocation	Measurement Period Adjustments	Revised Allocation
ASSETS			
Current assets	$ 7	$ —	$ 7
Goodwill	104	—	104
Other intangible assets, net	27	—	27
Other non-current assets	4	—	4
Total assets acquired	142	—	142
LIABILITIES			
Current liabilities	3	—	3
Other non-current liabilities	8	—	8
Total liabilities assumed	11	—	11
Net assets acquired	$ 131	$ —	$ 131

Any excess of the purchase price over the estimated fair value of net assets was recognized as goodwill. Goodwill of $104 million was recorded within the Company’s Air Management segment. The goodwill consists of the Company’s expected future economic benefits that will be realized from expanding the Company’s electric vehicle portfolio as electric vehicle production continues to increase. The goodwill is not expected to be deductible for tax purposes.

The following table summarizes the other intangible assets acquired:

(in millions)	Estimated Life	Estimated Fair Value
Developed technology	13 years	$ 22
Customer relationships	8 years	5
Total other intangible assets		$ 27

Goodwill and identifiable intangible assets were valued using the income approach.

The impact of the Rhombus acquisition on net sales and net earnings was immaterial for the year ended December 31, 2022.

Santroll Automotive Components

On March 31, 2022, the Company completed its acquisition of 100% of Santroll Automotive Components (“Santroll”), a carve-out of Santroll Electric Auto’s eMotor business, pursuant to the terms of an Equity Transfer Agreement (“ETA”). The acquisition strengthens the Company’s vertical integration, scale and portfolio breadth in light vehicle eMotors while allowing for increased speed to market.

The total final consideration was $192 million, which reflects a reduction of approximately $20 million in the base purchase price since the acquisition closing date resulting from an amendment to the ETA and finalization of post-closing adjustments. The consideration includes approximately ¥1.0 billion ($152 million) of base purchase price and ¥0.25 billion ($40 million) of originally estimated earn-out payments. The Company paid approximately $157 million of base purchase price in the year ended December 31, 2022 and expects to recapture approximately $5 million of post-closing adjustments through a reduction of the payment of the second earn-out. Pursuant to the ETA, the obligation of the Company to remit up to ¥0.3 billion (approximately $47 million) of earn-out payments is contingent upon achievement of certain sales volume targets and certain estimated future volume targets associated with newly awarded business. As of December 31, 2022, the Company’s estimate of the earn-out payments was approximately $21 million. The net amount of the earn-out payment and post-closing adjustments is recorded in Other current liabilities in the Company’s Consolidated Balance Sheet.

The purchase price was allocated on a preliminary basis as of March 31, 2022. Assets acquired and liabilities assumed were recorded at estimated fair values based on management's estimates, available information, and supportable assumptions that management considered reasonable. Certain estimated values for the acquisition, including goodwill and deferred taxes, are not yet finalized, and the preliminary purchase price allocations are subject to change as the Company completes its analysis of the fair value at the date of acquisition. The final valuation of assets acquired and liabilities assumed may be materially different from the estimated values shown below.

The following table summarizes the estimated fair values of assets acquired and liabilities assumed as of March 31, 2022, the acquisition date:

(in millions)	Initial Allocation	Measurement Period Adjustments	Revised Allocation
ASSETS			
Current assets	$ 8	$ (2)	$ 6
Property, plant and equipment, net	9	2	11
Goodwill	132	(20)	112
Other intangible assets, net	87	—	87
Total assets acquired	236	(20)	216
LIABILITIES			
Current liabilities	2	—	2
Other non-current liabilities	22	—	22
Total liabilities assumed	24	—	24
Net assets acquired	$ 212	$ (20)	$ 192

Any excess of the purchase price over the estimated fair value of net assets was recognized as goodwill. Goodwill of $112 million was recorded within the Company's e-Propulsion & Drivetrain segment. The goodwill consists of the Company's expected future economic benefits that will arise from future product sales and the added capabilities from vertical integration of eMotors. The goodwill is not expected to be deductible for tax purposes in China.

The following table summarizes the other intangible assets acquired:

(in millions)	Estimated Life	Estimated Fair Value
Customer relationships	12 years	$ 62
Manufacturing processes (know-how)	10 years	25
Total other intangible assets		$ 87

Goodwill and identifiable intangible assets were valued using the income approach.

The impact of the Santroll acquisition on net sales and net earnings was immaterial for the year ended December 31, 2022.

AKASOL AG

On June 4, 2021, the Company completed its voluntary public takeover offer for shares of AKASOL AG ("AKASOL"), resulting in ownership of 89% of AKASOL's outstanding shares. The Company paid approximately €648 million ($788 million) to settle the offer from current cash balances, which included proceeds received from its public offering of 1.00% Senior Notes due 2031 completed on May 19, 2021. Refer to Note 14, "Notes Payable and Debt," to the Consolidated Financial Statements for more information. Following the settlement of the offer, AKASOL became a consolidated majority-owned subsidiary of the Company. The Company also consolidated approximately €64 million ($77 million) of gross debt of AKASOL. Subsequent to the completion of the voluntary public takeover offer, the Company purchased additional shares of AKASOL for €28 million ($33 million) increasing its ownership to 93% as of December 31, 2021.

On August 2, 2021, the Company initiated a merger squeeze-out process under German law for the purpose of acquiring 100% of AKASOL. On December 17, 2021, the shareholders of AKASOL voted to mandatorily transfer to ABBA BidCo. AG, a wholly owned indirect subsidiary of the Company, each issued and outstanding share of AKASOL held by shareholders that did not tender their shares in the Company's previously completed exchange offer for AKASOL shares (the "Squeeze Out"). In exchange for the AKASOL shares transferred in the Squeeze Out, the Company paid appropriate cash compensation, in the amount of €119.16 per share, which was determined after an assessment by a third-party valuation firm, the adequacy of which was examined by an independent, court-appointed auditor. At December 31, 2021, the noncontrolling interest in AKASOL of approximately €51 million ($58 million) to be acquired through the Squeeze Out was reclassified to Other current liabilities in the Company's Consolidated Balance Sheet as it was deemed mandatorily redeemable. No shareholder objections were filed during the statutory contestation period, and on February 10, 2022, the Company completed the registration of the Squeeze Out resulting in 100% ownership. The Company settled the Squeeze Out with AKASOL minority shareholders in the first quarter of 2022.

The acquisition further strengthens BorgWarner's commercial vehicle and industrial electrification capabilities, which positions the Company to capitalize on what it believes to be a fast-growing battery module and pack market. Following the June 4, 2021 acquisition date, AKASOL's operations had net sales of $67 million for the year ended December 31, 2021. The impact on net earnings was immaterial for the year ended December 31, 2021.The Company finalized its valuation of the assets and liabilities of the AKASOL acquisition during the second quarter of 2022.

The following table summarizes the estimated fair values of assets acquired and liabilities assumed as of the acquisition date and subsequent measurement period adjustments:

(in millions)	Initial Allocation	Measurement Period Adjustments	Final Allocation
ASSETS			
Cash and cash equivalents (including restricted cash of $16 million)	$ 29	$ —	$ 29
Receivables, net	16	—	16
Inventories, net	42	(2)	40
Prepayments and other current assets	5	—	5
Property, plant and equipment, net	106	(3)	103
Goodwill	707	(3)	704
Other intangible assets, net	130	—	130
Other non-current assets	—	7	7
Total assets acquired	1,035	(1)	1,034
LIABILITIES			
Notes payable and other short-term debt	8	—	8
Accounts payable	22	—	22
Other current liabilities	13	6	19
Long-term debt	69	—	69
Other non-current liabilities	39	(7)	32
Total liabilities assumed	151	(1)	150
Noncontrolling interests	96	—	96
Net assets and noncontrolling interest acquired	$ 788	$ —	$ 788

Any excess of the purchase price over the estimated fair value of net assets was recognized as goodwill. Goodwill of $704 million, including the impact of measurement period adjustments, was initially recorded within the Company's Air Management segment. In 2022, the goodwill was moved to the e-Propulsion & Drivetrain segment following the inter-segment transition of this business. Both before and after this transition, this business was evaluated for impairment as a standalone goodwill reporting unit. The goodwill consists of the Company's expected future economic benefits that will arise from acquiring this business, which is established in making next-generation products for electric vehicles and the potential development and deployment of future technologies, across a global customer base, in this market and across adjacent industries. The goodwill is not deductible for tax purposes.

The following table summarizes the other intangible assets acquired:

(in millions)	Estimated Life	Estimated Fair Value
Amortized intangible assets:		
Developed technology	5 years	$ 70
Customer relationships	11 years	25
Total amortized intangible assets		95
Unamortized trade names	Indefinite	35
Total other intangible assets		$ 130

The property, plant and equipment acquired were valued using a combination of cost and market approaches. Goodwill and identifiable intangible assets were valued using the income approach. Noncontrolling interests were valued using a market approach.

Delphi Technologies PLC

On October 1, 2020, the Company completed its acquisition of 100% of the outstanding ordinary shares of Delphi Technologies PLC (“Delphi Technologies”) from the shareholders of Delphi Technologies pursuant to the terms of the Transaction Agreement, dated January 28, 2020, as amended on May 6, 2020, by and between the Company and Delphi Technologies (the “Transaction Agreement”). Pursuant to the terms of the Transaction Agreement, the Company issued, in exchange for each Delphi Technologies share, 0.4307 of a share of common stock of the Company, par value $0.01 per share and cash in lieu of any fractional share. In the aggregate, the Company delivered consideration of approximately $2.4 billion. The acquisition has strengthened the Company’s electronics and power electronics products, strengthened its capabilities and scale, enhanced key combustion, commercial vehicle and aftermarket product offerings, and positioned the Company for greater growth as electrified propulsion systems gain momentum. Upon closing, the Company also assumed approximately $800 million (par value) in aggregate principal amount of Delphi Technologies’ outstanding 5.0% Senior Notes due October 2025.

The following table summarizes the purchase price for Delphi Technologies:

(in millions, except for share data)		
BorgWarner common stock issued for purchase of Delphi Technologies		37,188,819
BorgWarner share price at October 1, 2020	$	39.54
Fair value of stock consideration	$	1,470
Stock compensation consideration		7
Total stock consideration	$	1,477
Cash consideration		18
Repayment of Delphi Technologies’ debt		896
Total consideration	$	2,391

During the three months ended December 31, 2020, the Company incurred $27 million of expense related to the amortization of the inventory fair value adjustment.

The following table summarizes the net sales and earnings related to Delphi Technologies’ operations that have been included in the Company’s Consolidated Statement of Operations for the year ended December 31, 2020, following the October 1, 2020 acquisition date:

(in millions)		
Net sales	$	1,120
Net earnings attributable to BorgWarner Inc.	$	30

Pro forma financial information (unaudited): The following table summarizes, on a pro forma basis, the combined results of operations of the Company and Delphi Technologies business as though the acquisition and the related financing had occurred as of January 1, 2019. The pro forma results are not necessarily indicative of either the actual consolidated results had the acquisition of Delphi Technologies occurred on January 1, 2019 or of future consolidated operating results. Actual operating results for the year ended December 31, 2022 and 2021 have been included in the table below for comparative purposes.

	Actual		Pro forma (unaudited)
	Year Ended December 31,		
(in millions)	2022	2021	2020
Net sales	$ 15,801	$ 14,838	$ 12,792
Net earnings attributable to BorgWarner Inc.	$ 944	$ 537	$ 616

These pro forma amounts have been calculated after applying the Company's accounting policies and the results presented above primarily reflect (i) depreciation adjustments relating to fair value adjustments to property, plant and equipment; (ii) amortization adjustments relating to fair value estimates of intangible assets; (iii) incremental interest expense, net on debt related transactions; (iv) cost of goods sold adjustments relating to fair value adjustments to inventory; and (v) stock-based compensation that was accelerated and settled on the date of acquisition.

In 2020, the Company incurred $89 million of acquisition-related costs. These expenses are included in Other operating expense, net in the Company's Consolidated Statement of Operations for the year ended December 31, 2020.

Romeo Power, Inc.

In May 2019, the Company invested $50 million in exchange for a 20% equity interest in Romeo Systems, Inc., now known as Romeo Power, Inc., ("Romeo"), a technology-leading battery module and pack supplier that was then privately held. On December 29, 2020, through the business combination of Romeo Systems, Inc. and special purpose acquisition company RMG Acquisition Corporation, a new entity, Romeo Power, Inc., became a publicly listed company. The Company's ownership in Romeo was reduced to 14%, and the investment was recorded at fair value on an ongoing basis with changes in fair value being recognized in Unrealized loss (gain) on debt and equity securities in the Consolidated Statements of Operations. During the years ended December 31, 2021 and 2020, the Company recorded a loss of $362 million and a gain of $382 million, respectively, to adjust the carrying value of the Company's investment to fair value. As of December 31, 2021, the investment's fair value was $70 million, which was reflected in Investments and long-term receivables in the Company's Consolidated Balance Sheets. During the year ended December 31, 2022, the Company recorded a loss of $39 million and liquidated its investment in Romeo shares at a fair value of $31 million. As of March 17, 2022, the Company no longer held any investment in Romeo.

In September 2019, the Company and Romeo contributed total equity of $10 million and formed a new joint venture, BorgWarner Romeo Power LLC ("Romeo JV"), in which the Company owned a 60% interest. Romeo JV was a variable interest entity focusing on producing battery module and pack technology. The Company was the primary beneficiary of Romeo JV and had consolidated Romeo JV in its consolidated financial statements. On October 25, 2021, the Company delivered written notice to Romeo that the Company was electing to exercise its right to put its ownership stake in Romeo JV to Romeo. Based on an independent appraisal, the Company's interest in Romeo JV was valued at $30 million. As the estimated fair value, less costs to sell, of the Company's investment exceeded its carrying value, no adjustment to the carrying value was required at December 31, 2021. In February 2022, the Company completed the sale of its 60% interest in the Romeo JV for $29 million, the fair value of $30 million reduced by a 5% discount pursuant to the joint venture agreement. During the year ended December 31, 2022, the Company recorded a gain of $22 million in Other operating expense, net, which represented the difference between the Company's book value of its interest in Romeo JV compared to the fair value of consideration received. As a result of the sale, the Company has no further rights in or involvement with Romeo JV.

Water Valley Divestiture

In 2021, the Company announced its strategy to aggressively grow its electrification product portfolio over time through organic investments and technology-focused acquisitions. Additionally, the Company announced a plan to dispose of certain internal combustion assets in support of that strategy. In December 2021, the Company entered into a definitive agreement to sell its Water Valley, Mississippi manufacturing facility ("Water Valley") and the associated solenoid, transmission control module and stop/start accumulator system business for an estimated $57 million. The consideration consisted of $39 million in cash and notes and up to $30 million in potential earn-out payments. The Company included $18 million as contingent consideration in the proceeds, which reflected its original estimate of the payout pursuant to the earn-out. During the year ended December 31, 2022, the Company changed its estimate of the expected earn-out and recorded a pre-tax loss of $9 million in Other operating expense, net. The contingent consideration and promissory note were included in Receivables, net and Investments and long-term receivables on the Consolidated Balance Sheet.

Water Valley had net sales of $177 million during the year ended December 31, 2021 and was included in the Company's e-Propulsion & Drivetrain segment. On December 31, 2021, upon the closing of the transaction, based upon the final transaction price agreed to in the fourth quarter of 2021, the Company recorded a loss on divestiture of $22 million. As a result of this transaction, assets of $99 million, including allocated goodwill of $12 million, and liabilities of $20 million were removed from the Company's Consolidated Balance Sheet as of December 31, 2021.

NOTE 3 REVENUE FROM CONTRACTS WITH CUSTOMERS

The Company manufactures and sells products, primarily to OEMs of light vehicles and, to a lesser extent, to other OEMs of commercial vehicles and off-highway vehicles, to certain tier one vehicle systems suppliers and into the aftermarket. The Company's payment terms are based on customary business practices and vary by customer type and products offered. The Company has evaluated the terms of its arrangements and determined that they do not contain significant financing components.

Generally, revenue is recognized upon shipment or delivery; however, a limited number of the Company's customer arrangements for its highly customized products with no alternative use provide the Company with the right to payment during the production process. As a result, for these limited arrangements, revenue is recognized as goods are produced and control transfers to the customer using the input cost-to-cost method. The Company recorded a contract asset of $16 million and $17 million at December 31, 2022 and 2021, respectively, for these arrangements. These amounts are reflected in Prepayments and other current assets in the Company's Consolidated Balance Sheets.

In limited instances, certain customers have provided payments in advance of receiving related products, typically at the onset of an arrangement prior to the beginning of production. These contract liabilities are reflected as Other current liabilities in the Consolidated Balance Sheets and were $16 million at December 31, 2022 and $21 million at December 31, 2021, respectively. These amounts are reflected as revenue over the term of the arrangement (typically three to seven years) as the underlying products are shipped and represent the Company's remaining performance obligations as of the end of the period.

The Company continually seeks business development opportunities and at times provides customer incentives for new program awards. When the Company determines that the payments are incremental and incurred only if the new business is obtained and expects to recover these amounts from the customer over the term of the new business arrangement, the Company capitalizes these amounts. As of December 31, 2022 and 2021, the Company recorded customer incentive payments of $34 million and $36 million, respectively, in Prepayments and other current assets, and $99 million and $137 million, respectively, in Other non-current assets in the Consolidated Balance Sheets.

The following table represents a disaggregation of revenue from contracts with customers by reporting segment and region for the years ended December 31, 2022, 2021, and 2020. The balances for the years ended December 31, 2021 and 2020 have been recast for inter-segment transitions of certain businesses that were completed during 2022. Refer to Note 24, Reporting Segments and Related Information to the Consolidated Financial Statements for more information.

	Year ended December 31, 2022				
(in millions)	Air Management	e-Propulsion & Drivetrain	Fuel Systems	Aftermarket	Total
North America	$ 1,989	$ 1,868	$ 473	$ 711	$ 5,041
Europe	2,845	1,195	913	401	5,354
Asia	2,018	2,377	599	64	5,058
Other	182	—	67	99	348
Total	$ 7,034	$ 5,440	$ 2,052	$ 1,275	$ 15,801

	Year ended December 31, 2021				
(in millions)	Air Management	e-Propulsion & Drivetrain	Fuel Systems	Aftermarket	Total
North America	$ 1,664	$ 1,616	$ 302	$ 643	$ 4,225
Europe	2,805	973	1,004	423	5,205
Asia	2,103	2,329	627	61	5,120
Other	148	—	63	77	288
Total	$ 6,720	$ 4,918	$ 1,996	$ 1,204	$ 14,838

	Year ended December 31, 2020				
(in millions)	Air Management	e-Propulsion & Drivetrain	Fuel Systems	Aftermarket	Total
North America	$ 1,358	$ 1,284	$ 67	$ 348	$ 3,057
Europe	2,458	733	277	91	3,559
Asia	1,585	1,631	180	15	3,411
Other	95	—	13	30	138
Total	$ 5,496	$ 3,648	$ 537	$ 484	$ 10,165

NOTE 4 RESTRUCTURING

The Company’s restructuring activities are undertaken as necessary to execute management’s strategy and streamline operations, consolidate and take advantage of available capacity and resources, and ultimately achieve net cost reductions. Restructuring activities include efforts to integrate and rationalize the Company’s business and to relocate operations to best-cost locations.

The Company's restructuring expenses consist primarily of employee termination benefits (principally severance and/or other termination benefits) and other costs, which are primarily professional fees and costs related to facility closures and exits.

(in millions)	Air Management	e-Propulsion & Drivetrain	Fuel Systems	Aftermarket	Corporate	Total
Year ended December 31, 2022						
Employee termination benefits	$ 24	$ 13	$ 3	$ —	$ —	$ 40
Other	2	9	8	—	—	19
Total restructuring expense	$ 26	$ 22	$ 11	$ —	$ —	$ 59
Year ended December 31, 2021						
Employee termination benefits	$ 34	$ 12	$ 53	$ —	$ —	$ 99
Other	18	43	1	—	2	64
Total restructuring expense	$ 52	$ 55	$ 54	$ —	$ 2	$ 163
Year ended December 31, 2020						
Employee termination benefits	$ 50	$ 54	$ 8	$ 1	$ 44	$ 157
Other	29	16	—	—	1	46
Total restructuring expense	$ 79	$ 70	$ 8	$ 1	$ 45	$ 203

The following table displays a rollforward of the restructuring liability recorded within the Company's Consolidated Balance Sheets and the related cash flow activity:

(in millions)	Employee termination benefits	Other	Total
Balance at January 1, 2021	$ 160	$ 13	$ 173
Restructuring expense, net	99	64	163
Cash payments	(128)	(61)	(189)
Foreign currency translation adjustment and other	(5)	(3)	(8)
Balance at December 31, 2021	126	13	139
Restructuring expense, net	40	19	59
Cash payments	(99)	(28)	(127)
Foreign currency translation adjustment and other	(8)	5	(3)
Balance at December 31, 2022	$ 59	$ 9	$ 68
Less: Non-current restructuring liability	22	—	22
Current restructuring liability at December 31, 2022	$ 37	$ 9	$ 46

During the year ended December 31, 2022, the Company recorded $18 million of restructuring costs for individually approved restructuring actions that primarily related to reductions in headcount.

2020 Structural Costs Plan In February 2020, the Company announced a $300 million restructuring plan to address existing structural costs. During the years ended December 31, 2022 and 2021, the Company recorded $36 million and $103 million of restructuring charges related to this plan, respectively. Cumulatively, the Company has incurred $287 million of restructuring charges related to this plan. As of December 31, 2022, the plan was substantially complete.

2019 Legacy Delphi Technologies Plan In 2019, legacy Delphi Technologies announced a restructuring plan to reshape and realign its global technical center footprint and reduce salaried and contract staff. The Company continued actions under this program post-acquisition and has recorded cumulative charges of $67 million since October 1, 2020, including approximately $5 million and $60 million in

restructuring charges during the years ended December 31, 2022 and 2021, respectively. The actions under this plan are substantially complete.

Additionally, the Company recorded approximately $54 million in restructuring charges during the three months ended December 31, 2020, for acquisition-related restructuring charges. In conjunction with the acquisition, there were contractually required severance and post-combination stock-based compensation cash payments to legacy Delphi Technologies executive officers and other employee termination benefits.

The following provides details of restructuring expense incurred by the Company's reporting segments during the years ended December 31, 2022, 2021 and 2020, related to the plans discussed above:

Air Management

2020 Structural Costs Plan

- During the year ended December 31, 2022, the segment recorded $26 million of restructuring costs under this plan. This primarily related to $18 million for two voluntary termination programs pursuant to which approximately 74 employees accepted termination packages in 2022.
- During the year ended December 31, 2021, the segment recorded $52 million of restructuring costs, of which $23 million related to a voluntary termination program where approximately 140 employees accepted termination packages in 2021, and $25 million related to severance costs and professional fees for specific actions to reduce structural costs.
- During the year ended December 31, 2020, the segment recorded $79 million of restructuring costs, of which $27 million related to a voluntary termination program where approximately 200 employees accepted termination packages in 2020, $33 million related to severance costs and professional fees for specific actions to reduce structural costs, and $19 million related to employee termination benefits related to the announced closure of a facility in Europe affecting approximately 200 employees.

2019 Legacy Delphi Technologies Plan

- During the year ended December 31, 2021, the segment recorded $4 million of restructuring costs, primarily related to severance costs.

e-Propulsion & Drivetrain

- During the year ended December 31, 2022, the segment recorded $12 million of restructuring costs, primarily related to severance costs associated with the announced closure of a technical center in Europe affecting approximately 80 employees.

2020 Structural Costs Plan

- During the year ended December 31, 2022, the segment recorded $10 million of restructuring costs primarily related to contractual settlements and professional fees.
- During the year ended December 31, 2021, the segment recorded $55 million of restructuring costs, of which $19 million primarily related to severance costs, equipment relocation and professional fees to reduce existing structural costs, and $35 million related to contractual settlements, professional fees and other costs associated with the announced closure of a facility in Europe.
- During the year ended December 31, 2020, the segment recorded $70 million of restructuring costs, of which $55 million related to the announced closure of a facility in Europe affecting approximately 350 employees, primarily for the statutory minimum benefits and incremental one-time termination benefits negotiated with local labor

authorities, and $15 million primarily related to severance costs, equipment relocation and professional fees to reduce existing structural costs.

Fuel Systems

- During the year ended December 31, 2022, the segment recorded $6 million of restructuring costs, primarily related to equipment relocation and professional fees.

  2019 Legacy Delphi Technologies Plan

  - During the year ended December 31, 2022, the segment recorded $5 million of restructuring costs related to this plan, primarily related to employee severance and equipment moves.
  - During the year ended December 31, 2021, the segment recorded $54 million of restructuring costs related to this plan. These costs were primarily for the statutory minimum benefits and incremental one-time termination benefits negotiated with local labor authorities.

- During the year ended December 31, 2020, the segment recorded $8 million of restructuring costs primarily related to contractually required severance and stock-based compensation cash payments associated with Delphi Technologies executive officers and other employee termination benefits.

Corporate

- During the year ended December 31, 2021, $2 million of net restructuring costs were recorded for various corporate restructuring actions.
- During the year ended December 31, 2020, $45 million of restructuring costs were recorded primarily related to contractually required severance and stock-based compensation cash payments associated with Delphi Technologies executive officers and other employee termination benefits.

Estimates of restructuring expense are based on information available at the time such charges are recorded. Due to the inherent uncertainty involved in estimating restructuring expenses, actual amounts paid for such activities may differ from amounts initially recorded. Accordingly, the Company may record revisions of previous estimates by adjusting previously established accruals.

The Company continues to evaluate different options across its operations to reduce existing structural costs over the next few years. The Company will recognize restructuring expense associated with any future actions at the time they are approved and become probable or are incurred. Any future actions could result in significant restructuring expense.

NOTE 5 RESEARCH AND DEVELOPMENT COSTS

The Company's net Research & Development ("R&D") expenditures are primarily included in Selling, general and administrative expenses of the Consolidated Statements of Operations. Customer reimbursements are netted against gross R&D expenditures as they are considered a recovery of cost. Customer reimbursements for prototypes are recorded net of prototype costs based on customer contracts, typically either when the prototype is shipped or when it is accepted by the customer. Customer reimbursements for engineering services are recorded when performance obligations are satisfied in accordance with the contract. Financial risks and rewards transfer upon shipment, acceptance of a prototype component by the customer or upon completion of the performance obligation as stated in the respective customer agreement. The Company has various customer arrangements relating to R&D activities that it performs at its various R&D locations.

The following table presents the Company's gross and net expenditures on R&D activities:

	Year Ended December 31,		
(in millions)	2022	2021	2020
Gross R&D expenditures	$ 968	$ 930	$ 533
Customer reimbursements	(182)	(223)	(57)
Net R&D expenditures	$ 786	$ 707	$ 476

Net R&D expenditures as a percentage of net sales were 5.0%, 4.8% and 4.7% for the years ended December 31, 2022, 2021 and 2020, respectively.

NOTE 6 OTHER OPERATING EXPENSE, NET

Items included in Other operating expense, net consist of:

	Year Ended December 31,		
(in millions)	2022	2021	2020
Merger, acquisition and divestiture expense, net	$ 40	$ 50	$ 96
Asset impairments	30	14	17
(Gain) loss on sales of businesses	(13)	29	—
Intangible asset accelerated amortization (Note 12)	—	—	38
Other income, net	1	(12)	(13)
Other operating expense, net	$ 58	$ 81	$ 138

Merger, acquisition and divestiture expense, net: During the year ended December 31, 2022, the Company recorded merger, acquisition and divestiture expense of $54 million primarily related to professional fees associated with the intended separation of its Fuel Systems and Aftermarket segments. This merger, acquisition and divestiture expense was partially offset by a $14 million gain related to a change in estimate of the expected earn-out estimate associated with the Santroll acquisition. During the year ended December 31, 2021, the Company recorded merger, acquisition and divestiture expense of $50 million primarily related to professional fees associated with the acquisition of AKASOL, professional fees for integration and other support associated with the Company's acquisition of Delphi Technologies and other specific acquisition and disposition initiatives. During the year ended December 31, 2020, the Company recorded merger, acquisition and divestiture expense of $96 million primarily for professional fees associated with the Company's acquisition of Delphi Technologies.

(Gain) loss on sales of businesses: During the year ended December 31, 2022, the Company recorded a net gain on sales of businesses of $13 million, which included a $22 million gain related to the sale of its interest in BorgWarner Romeo Power LLC and a $9 million loss related to a change in estimate of the expected earn-out related to the divestiture of the Company's Water Valley facility.

During the year ended December 31, 2021, the Company recorded a pre-tax loss of $29 million, which included a $22 million loss in connection with the divestiture of the Company's Water Valley facility and a $7 million loss on the sale of an e-Propulsion & Drivetrain technical center in Europe. Refer to Note 2 "Acquisitions and Dispositions," to the Consolidated Financial Statements for more information.

Asset impairments: During the year ended December 31, 2022, the Company recorded an impairment charge of $30 million to remove an indefinite-lived trade name as the Company no longer plans to utilize this trade name in the business. During the year ended December 31, 2021, the Company recorded a $14 million impairment charge on an indefinite-lived trade name in the Aftermarket segment. Refer to Note 12 “Goodwill and Other Intangibles,” to the Consolidated Financial Statement for more information. During the year ended December 31, 2020, the Company recorded asset impairment charges of $17 million. The impairment charges consist of $9 million in the Air Management segment and $8 million in the e-Propulsion & Drivetrain segment, related to the write down of property, plant and equipment associated with the announced closures of two European facilities.

NOTE 7 INCOME TAXES

Earnings before income taxes and the provision for income taxes are presented in the following table.

	Year Ended December 31,		
(in millions)	2022	2021	2020
Earnings (loss) before income taxes:			
U.S.[1]	$ 51	$ (423)	$ 437
Non-U.S.[1]	1,267	1,212	527
Total	$ 1,318	$ 789	$ 964
Provision for income taxes:			
Current:			
Federal	$ 75	$ 43	$ 19
State	7	7	2
Foreign	276	276	252
Total current expense	358	326	273
Deferred:			
Federal	(58)	(98)	70
State	(9)	(13)	11
Foreign	1	(65)	43
Total deferred (benefit) expense	(66)	(176)	124
Total provision for income taxes	$ 292	$ 150	$ 397

[1] In 2021, the U.S. loss before income taxes was primarily related to the $362 million unrealized loss related to the Company’s investment in Romeo Power, Inc. In 2020, the Company recognized a $382 million unrealized gain related to its investment in Romeo Power, Inc.

The provision for income taxes resulted in an effective tax rate of approximately 22%, 19% and 41% for the years ended December 31, 2022, 2021 and 2020, respectively.

The following table provides a reconciliation of tax expense based on the U.S. statutory tax rate to final tax expense.

	Year Ended December 31,		
(in millions)	2022	2021	2020
Income taxes at U.S. statutory rate of 21%	$ 277	$ 166	$ 203
Increases (decreases) resulting from:			
Valuation allowance adjustments, net	67	39	53
Net tax on remittance of foreign earnings	36	43	93
Foreign rate differentials	25	36	21
Reserve adjustments, settlements and claims	16	(17)	45
Impact of tax law and rate change	2	(20)	—
State taxes, net of federal benefit	(4)	(9)	10
Affiliates' earnings	(6)	(10)	(4)
U.S. tax on non-U.S. earnings	(11)	4	10
Changes in accounting methods and filing positions	(14)	(18)	(18)
Tax credits	(16)	(5)	(12)
Enhanced research and development deductions	(42)	(27)	(9)
Tax holidays	(43)	(76)	(36)
Other, net	5	44	41
Provision for income taxes, as reported	$ 292	$ 150	$ 397

The Company’s tax rate is affected by the tax laws and rates of the U.S. and other jurisdictions in which the Company operates, the relative amount of income earned by jurisdiction and the relative amount of losses or income for which no tax benefit or expense was recognized due to a valuation allowance.

The Company’s effective tax rate was impacted beneficially by tax incentives obtained in various non-U.S. countries, primarily those arising in China related to the High and New Technology Enterprise (“HNTE”) status of various subsidiaries ($43 million, $76 million and $36 million for the years ended December 31, 2022, 2021 and 2020, respectively). HNTE status is granted for three-year periods, and the Company seeks to renew such status on a regular basis. In addition, beneficial impacts were recognized related to tax deductions for qualifying research and development expenditures ($42 million, $27 million and $9 million for the years ended December 31, 2022, 2021 and 2020, respectively).

The Company’s effective tax rate is also impacted by net changes to valuation allowances, where the Company has determined that it is more-likely-than-not that certain deferred tax assets would not be realized. For the years ended December 31, 2022, 2021 and 2020,the Company recorded net expense related to valuation allowances of $67 million, $39 million and $53 million, respectively.

During 2022, the Company recognized discrete tax benefits of $33 million, primarily related to a reduction in certain unrecognized tax benefits and accrued interest related to a matter for which the statute of limitations had lapsed and favorable provision-to-return adjustments.

In 2021, the Company recognized a $55 million tax benefit related to a reduction in certain unrecognized tax benefits and accrued interest related to a matter for which the statute of limitations had lapsed. In addition, the Company recognized a discrete tax benefit of $20 million related to an increase in its deferred tax assets as a result of an increase in the United Kingdom (“UK”) tax rate from 19% to 25%. This rate change was enacted in June 2021 and becomes effective April 2023. Further, a net discrete tax benefit of $36 million was recognized, primarily related to changes to certain withholding rates applied to unremitted earnings. In the fourth quarter of 2021, the Company received approval for tax holiday status reducing the statutory tax rate for two of its legal entities, resulting in a reduction in tax expense of $28 million in 2021.

In 2020, the Company recognized $49 million of income tax expense, which primarily related to final U.S. Department of Treasury regulations issued in the third quarter of 2020, which impacted the net tax on remittance of foreign earnings, and certain tax law changes in India effective in the first quarter of 2020.

A roll forward of the Company's total gross unrecognized tax benefits is presented below:

(in millions)	2022	2021	2020
Balance, January 1	$ 221	$ 231	$ 146
Additions based on tax positions related to current year	20	23	14
Acquisitions	—	8	54
(Reductions) additions for tax positions of prior years	(8)	—	9
Reductions for lapse in statute of limitations	(14)	(36)	(5)
Reductions for closure of tax audits and settlements	(21)	—	—
Translation adjustment	(14)	(5)	13
Balance, December 31	$ 184	$ 221	$ 231

The Company recognizes interest and penalties related to unrecognized tax benefits in income tax expense and accrued approximately $57 million and $51 million for the payment of interest and penalties at December 31, 2022 and 2021, respectively. For the years ended December 31, 2022, 2021 and 2020, the Company recognized expense related to interest and penalties of $5 million, $16 million and $21 million, respectively.

During the year ended December 31, 2021, the Company also recorded a reduction in tax expense of $34 million for previously recorded interest related to matters for which the statute of limitations lapsed.

As of December 31, 2022, approximately $218 million represents the amount that, if recognized, would affect the Company's effective income tax rate in future periods. This amount includes a decrease in U.S. federal income taxes that would occur upon recognition of the state tax benefits and U.S. foreign tax credits included therein.

The Company estimates that it is reasonably possible there could be a decrease of approximately $26 million in unrecognized tax benefits and interest in the next 12 months related to the closure of an audit and the lapse in statute of limitations subsequent to the reporting period from certain taxing jurisdictions.

The Company and/or one of its subsidiaries files income tax returns in the U.S. federal, various state jurisdictions and various foreign jurisdictions. In certain tax jurisdictions, the Company may have more than one taxpayer. The Company is no longer subject to income tax examinations by tax authorities in its major tax jurisdictions as follows:

Tax jurisdiction	Years no longer subject to audit
U.S. Federal	2015 and prior
Barbados	2016 and prior
China	2015 and prior
France	2015 and prior
Germany	2011 and prior
Hungary	2015 and prior

Tax jurisdiction	Years no longer subject to audit
Japan	2018 and prior
Luxembourg	2016 and prior
Mexico	2015 and prior
Poland	2016 and prior
South Korea	2015 and prior
United Kingdom	2015 and prior

In the U.S., certain tax attributes created in years prior to 2017 were subsequently utilized. Even though the U.S. federal statute of limitations may have expired for years prior to 2017, the years in which these tax attributes were created could still be subject to examination, limited to only the examination of the creation of the tax attribute.

The components of deferred tax assets and liabilities consist of the following:

(in millions)	December 31, 2022	December 31, 2021
Deferred tax assets:		
Net operating loss and capital loss carryforwards	$ 607	$ 634
Interest limitation carryforwards	156	123
Research and development capitalization	146	91
Pension and other postretirement benefits	45	41
Employee compensation	46	44
Warranty	31	31
State tax credits	29	28
Unrecognized tax benefits	24	32
Unrealized loss on equity securities	8	—
Foreign tax credits	7	8
Other comprehensive loss	—	39
Other	167	167
Total deferred tax assets	$ 1,266	$ 1,238
Valuation allowance	(591)	(551)
Net deferred tax asset	$ 675	$ 687
Deferred tax liabilities:		
Goodwill and intangible assets	(267)	(274)
Unremitted foreign earnings	(141)	(146)
Fixed assets	(121)	(126)
Other comprehensive income	(14)	—
Unrealized gain on equity securities	—	(5)
Other	(87)	(88)
Total deferred tax liabilities	$ (630)	$ (639)
Net deferred taxes	$ 45	$ 48

As of December 31, 2022, the Company had gross deferred tax assets for certain non-U.S. net operating loss (“NOL”) carryforwards of $584 million, $374 million of which expire at various dates from 2023 through 2042 and $210 million of which have an indefinite life. The Company has a valuation allowance recorded of $449 million with regards to these deferred tax assets.

As of December 31, 2022, certain U.S. subsidiaries had gross deferred tax assets of approximately $23 million for federal and state NOL carryforwards, $21 million of which expire at various dates from 2023 through 2041 and $2 million of which have an indefinite life. The Company has recorded a valuation allowance of $17 million with regards to these deferred tax assets. In addition, certain U.S. subsidiaries also have state tax credit carryforwards of $29 million, which are offset by a valuation allowance of $29 million.

The Company reviews the likelihood that the benefit of its deferred tax assets will be realized and, therefore, the need for valuation allowances on a quarterly basis. The Company assesses existing deferred tax assets, net operating loss carryforwards and tax credit carryforwards by jurisdiction and expectations of its ability to utilize these tax attributes through a review of past, current, and estimated future taxable income and tax planning strategies. If, based upon the weight of available evidence, it is more-likely-than-not the deferred tax assets will not be realized, a valuation allowance is recorded. Due to recent restructurings, the Company concluded that the weight of the negative evidence outweighs the

positive evidence in certain foreign jurisdictions. As a result, the Company believes it is more-likely-than-not that the net deferred tax assets in certain foreign jurisdictions that include entities in Luxembourg, Hungary, France, Spain, Ireland and the U.K. will not be realized in the future.

As of December 31, 2022, the Company recorded deferred tax liabilities of $141 million with respect to foreign unremitted earnings. The Company did not provide deferred tax liabilities with respect to certain book versus tax basis differences not represented by undistributed earnings of approximately $1.1 billion as of December 31, 2022, because the Company continues to assert indefinite reinvestment of these basis differences. These basis differences would become taxable upon the sale or liquidation of the foreign subsidiaries. The Company's best estimate of the unrecognized deferred tax liability on these basis differences is approximately $70 million as of December 31, 2022.

NOTE 8 RECEIVABLES, NET

The table below provides details of receivables as of December 31, 2022 and 2021:

	December 31,	
(in millions)	2022	2021
Receivables, net:		
Customers	$ 2,823	$ 2,522
Indirect taxes	319	240
Other	199	149
Gross receivables	3,341	2,911
Allowance for credit losses	(18)	(13)
Total receivables, net	$ 3,323	$ 2,898

The table below summarizes the activity in the allowance for credit losses for the years ended December 31, 2022, 2021 and 2020:

	Year Ended December 31,		
(in millions)	2022	2021	2020
Beginning balance, January 1	$ (13)	$ (11)	$ (6)
Provision	(6)	(3)	(11)
Write-offs	—	—	7
Translation adjustment and other	1	1	(1)
Ending balance, December 31	$ (18)	$ (13)	$ (11)

Factoring

The Company assumed arrangements entered into by Delphi Technologies with various financial institutions to sell eligible trade receivables from certain Aftermarket customers in North America and Europe. These arrangements can be terminated at any time subject to prior written notice. The receivables under these arrangements are sold to financial institutions without recourse to the Company and are therefore accounted for as true sales. During the years ended December 31, 2022, December 31, 2021 and fourth quarter ended December 31, 2020, the Company sold $142 million, $156 million and $41 million of receivables, respectively, under these arrangements. Additionally, during the same periods, expenses of $5 million, $3 million and $1 million, respectively, were recognized within interest expense.

NOTE 9 INVENTORIES, NET

A summary of Inventories, net is presented below:

(in millions)	December 31, 2022	December 31, 2021
Raw material and supplies	$ 1,203	$ 1,057
Work-in-progress	176	175
Finished goods	333	327
FIFO inventories	1,712	1,559
LIFO reserve	(25)	(25)
Inventories, net	$ 1,687	$ 1,534

NOTE 10 OTHER CURRENT AND NON-CURRENT ASSETS

Additional detail related to assets is presented below:

(in millions)	December 31, 2022	December 31, 2021
Prepayments and other current assets:		
Prepaid tooling	$ 82	$ 81
Prepaid taxes	40	64
Customer incentive payments (Note 3)	34	36
Derivative instruments	18	13
Contract assets (Note 3)	16	17
Prepaid insurance	11	9
Prepaid engineering	9	27
Other	59	74
Total prepayments and other current assets	$ 269	$ 321
Investments and long-term receivables:		
Investment in debt securities	$ 455	$ —
Investment in equity affiliates	279	298
Long-term receivables	87	102
Investment in equity securities	75	130
Total investments and long-term receivables	$ 896	$ 530
Other non-current assets:		
Deferred income taxes (Note 7)	$ 239	$ 254
Operating leases (Note 22)	199	185
Customer incentive payments (Note 3)	99	137
Derivative instruments	68	8
Other	63	99
Total other non-current assets	$ 668	$ 683

NOTE 11 PROPERTY, PLANT AND EQUIPMENT, NET

Property, plant and equipment, net is stated at cost less accumulated depreciation and amortization, and consisted of:

(in millions)	December 31, 2022	December 31, 2021
Land, land use rights and buildings	$ 1,440	$ 1,504
Machinery and equipment	5,917	5,807
Finance lease assets	15	13
Construction in progress	610	471
Total property, plant and equipment, gross	7,982	7,795
Less: accumulated depreciation	3,904	3,713
Property, plant and equipment, net, excluding tooling	4,078	4,082
Tooling, net of amortization	287	313
Property, plant and equipment, net	$ 4,365	$ 4,395

Interest costs capitalized for the years ended December 31, 2022, 2021 and 2020 were $18 million, $12 million and $8 million, respectively.

In 2022, the Company revised its prior year presentation of fully depreciated assets still in use to include these assets on their respective line items at their gross values with a corresponding increase in accumulated depreciation.

NOTE 12 GOODWILL AND OTHER INTANGIBLES

During the fourth quarter of 2022, the Company performed a quantitative analysis on each reporting unit to refresh its respective fair value. Prior to 2022, the estimated fair value was determined based on the income approach. The income approach is based on discounted future cash flows and requires significant assumptions, including estimates regarding future revenue, profitability, capital requirements and discount rates. The basis of the income approach is the Company's annual budget and long-range plan ("LRP"). The annual budget and LRP includes a five-year projection of future cash flows based on actual new products and customer commitments. Because the projections are estimated over a significant future period of time, those estimates and assumptions are subject to uncertainty. For 2022, the estimated fair value was determined using a combined income and market approach. The market approach is based on market multiples (revenue and "EBITDA", defined as earnings before interest, taxes, depreciation and amortization) and requires an estimate of appropriate multiples based on market data for comparable companies. The market valuation models and other financial ratios used by the Company require certain assumptions and estimates regarding the applicability of those models to the Company's facts and circumstances.

The Company believes the assumptions and estimates used to determine the estimated fair value are reasonable. Different assumptions could materially affect the estimated fair value. The primary assumptions affecting the Company's 2022 goodwill quantitative impairment review are as follows:

- **Discount rates:** the Company used a range of 11.0% to 14.5% weighted average cost of capital ("WACC") as the discount rates for future cash flows. The WACC is intended to represent a rate of return that would be expected by a market participant.

- **Operating income margin:** the Company used historical and expected operating income margins, which may vary based on the projections of the reporting unit being evaluated.

- **Revenue growth rates:** the Company used a global automotive market industry growth rate forecast adjusted to estimate its own market participation for product lines.

In addition to the above primary assumptions, the Company notes the following risks to volume and operating income assumptions that could have an impact on the discounted cash flow models:

- The automotive industry is cyclical, and the Company's results of operations could be adversely affected by industry downturns.
- The automotive industry is evolving, and if the Company does not respond appropriately, its results of operations could be adversely affected.
- The Company is dependent on market segments that use its key products and could be affected by decreasing demand in those segments.
- The Company is subject to risks related to international operations.

Based on the assumptions outlined above, the impairment testing conducted in the fourth quarter of 2022 indicated the Company's goodwill assigned to the respective reporting units was not impaired. Future changes in the judgments, assumptions and estimates from those used in acquisition-related valuations and goodwill impairment testing, including discount rates or future operating results and related cash flow projections, could result in significantly different estimates of the fair values in the future. Due to the Company's recent acquisitions, there is less headroom (the difference between the carrying value and the fair value) associated with certain of the Company's reporting units. Based on the impairment testing conducted in 2022, the amounts by which the estimated fair values of the Company's goodwill reporting units exceeded their carrying values ranged from 25% to 153%. An increase in discount rates, a reduction in projected cash flows or a combination of the two could lead to a reduction in the estimated fair values, which may result in impairment charges that could materially affect the Company's financial statements in any given year.

A summary of the changes in the carrying amount of goodwill is presented in the following tables. The prior period balances have been recast for inter-segment transitions of certain businesses that were completed during 2022. Refer to Note 24, "Reporting Segments and Related Information" for more information.

	2022				
(in millions)	Air Management	e-Propulsion & Drivetrain	Aftermarket	Fuel Systems	Total
Gross goodwill balance, January 1	$ 1,466	$ 1,890	$ 380	$ 45	$ 3,781
Accumulated impairment losses, January 1	(502)	—	—	—	(502)
Net goodwill balance, January 1	$ 964	$ 1,890	$ 380	$ 45	$ 3,279
Goodwill during the year:					
Acquisitions[1] (Note 2)	126	132	—	—	258
Measurement period adjustments (Note 2)	—	(20)	—	—	(20)
Other, primarily translation adjustment	(26)	(88)	(6)	—	(120)
Net goodwill balance, December 31	$ 1,064	$ 1,914	$ 374	$ 45	$ 3,397

	2021				
(in millions)	Air Management	e-Propulsion & Drivetrain	Aftermarket	Fuel Systems	Total
Gross goodwill balance, January 1	$ 1,472	$ 1,244	$ 368	$ 45	$ 3,129
Accumulated impairment losses, January 1	(502)	—	—	—	(502)
Net goodwill balance, January 1	$ 970	$ 1,244	$ 368	$ 45	$ 2,627
Goodwill during the year:					
Acquisitions[1] (Note 2)	—	707	—	—	707
Measurement period adjustments[2]	(1)	26	16	—	41
Disposition[3] (Note 2)	—	(12)	—	—	(12)
Other, primarily translation adjustment	(5)	(75)	(4)	—	(84)
Net goodwill balance, December 31	$ 964	$ 1,890	$ 380	$ 45	$ 3,279

[1] Acquisitions relate to the Company's 2022 purchases of Drivetek, Rhombus and Santroll, and the 2021 purchase of AKASOL.
[2] Measurement period adjustments primarily relate to the 2020 acquisition of Delphi Technologies.
[3] Disposition relates to the Company's 2021 sale of Water Valley.

The Company's other intangible assets, primarily from acquisitions, consist of the following:

		December 31, 2022			December 31, 2021		
(in millions)	Estimated useful lives (years)	Gross carrying amount	Accumulated amortization	Net carrying amount	Gross carrying amount	Accumulated amortization	Net carrying amount
Amortized intangible assets:							
Patented and unpatented technology	5 - 15	$ 492	$ 141	$ 351	$ 443	$ 105	$ 338
Customer relationships	7 - 15	901	351	550	877	310	567
Miscellaneous	2 - 5	10	6	4	14	7	7
Total amortized intangible assets		1,403	498	905	1,334	422	912
Unamortized trade names		146	—	146	179	—	179
Total other intangible assets		$ 1,549	$ 498	$ 1,051	$ 1,513	$ 422	$ 1,091

Amortization of other intangible assets was $97 million, $88 million and $89 million for the years ended December 31, 2022, 2021 and 2020, respectively. The Company utilizes the straight-line method of amortization recognized over the estimated useful lives of the assets. The estimated future annual amortization expense, primarily for acquired intangible assets, is as follows: $95 million in 2023, $95 million in 2024, $94 million in 2025, $86 million in 2026, $80 million in 2027 and $455 million thereafter.

During the fourth quarter of 2020, as a result of an evaluation of the underlying technologies and management of the business subsequent to the acquisition of Delphi Technologies, the Company reduced the useful life of certain intangible assets as they no longer provided future economic benefit. This resulted in accelerated amortization expense of $38 million and the removal of the related gross carrying amount and accumulated amortization of these assets.

A roll forward of the gross carrying amounts and related accumulated amortization of the Company's other intangible assets is presented below:

	Gross carrying amounts		Accumulated amortization	
(in millions)	2022	2021	2022	2021
Beginning balance, January 1	$ 1,513	$ 1,452	$ 422	$ 356
Acquisitions[1] (Note 2)	132	130	—	—
Impairment[2]	(41)	(14)	(3)	—
Amortization	—	—	97	88
Translation adjustment	(55)	(55)	(18)	(22)
Ending balance, December 31	$ 1,549	$ 1,513	$ 498	$ 422

[1] Acquisitions relate to the Company's 2022 purchases of Drivetek, Rhombus and Santroll, and the 2021 purchase of AKASOL.

[2] During the fourth quarter of 2022, the Company recorded an impairment charge of $30 million to remove an indefinite-lived trade name as the Company no longer plans to utilize this trade name in the business. In 2021, the Company performed a quantitative impairment test over its indefinite-lived trade names, which indicated that for one trade name the fair value was less than the carrying value. Therefore, the Company recorded an impairment charge to reduce the carrying value to the fair value.

NOTE 13 PRODUCT WARRANTY

The following table summarizes the activity in the product warranty accrual accounts:

(in millions)	2022	2021
Beginning balance, January 1	$ 236	$ 253
Acquisitions/dispositions	—	4
Provisions for current period sales	103	83
Adjustments of prior estimates[1]	14	142
Payments[1]	(96)	(240)
Other, primarily translation adjustment	(12)	(6)
Ending balance, December 31	$ 245	$ 236

[1] In December 2021, the Company settled and paid a warranty claim for $130 million. The Company had been working with an OEM customer through the warranty process during 2021, and in December 2021, as a result of discussions that occurred in the fourth quarter, the Company (without admission of liability) and the customer reached an agreement to fully resolve the claim for $130 million. This resulted in an adjustment to prior estimates of $124 million during the year ended December 31, 2021. The Company is pursuing a partial recovery of this claim through its insurance coverage. No amounts have been recorded to date and there can be no assurance that there will be any recovery.

The product warranty liability is classified in the Consolidated Balance Sheets as follows:

	December 31,	
(in millions)	2022	2021
Other current liabilities	$ 142	$ 128
Other non-current liabilities	103	108
Total product warranty liability	$ 245	$ 236

NOTE 14 NOTES PAYABLE AND DEBT

The Company had short-term and long-term debt outstanding as follows:

(in millions)	December 31, 2022	December 31, 2021
Short-term debt		
Short-term borrowings	$ 58	$ 62
Long-term debt		
3.375% Senior notes due 03/15/25 ($500 million par value)	499	498
5.000% Senior notes due 10/01/25 ($800 million par value)[1]	866	889
2.650% Senior notes due 07/01/27 ($1,100 million par value)	1,092	1,092
7.125% Senior notes due 02/15/29 ($121 million par value)	120	119
1.000% Senior notes due 05/19/31 (€1,000 million par value)	1,051	1,117
4.375% Senior notes due 03/15/45 ($500 million par value)	495	494
Term loan facilities, finance leases and other	47	56
Total long-term debt	4,170	4,265
Less: current portion	4	4
Long-term debt, net of current portion	$ 4,166	$ 4,261

[1] These notes include the fair value step-up from the Delphi Technologies acquisition. The fair value step-up was calculated based on observable market data and is amortized as a reduction to interest expense over the remaining life of the instrument using the effective interest method.

The Company may utilize uncommitted lines of credit for short-term working capital requirements. As of December 31, 2022 and 2021, the Company had $58 million and $62 million, respectively, in borrowings under these facilities, which are reported in Notes payable and short-term debt on the Consolidated Balance Sheets.

The weighted average interest rate on short-term borrowings outstanding as of December 31, 2022 and 2021 was 0.9% and 1.0%, respectively. The weighted average interest rate on all borrowings outstanding, including the effects of outstanding swaps, as of December 31, 2022 and 2021 was 2.5%. The following table provides details on Interest expense, net included in the Consolidated Statements of Operations:

(in millions)	Year Ended December 31, 2022	2021	2020
Interest expense	$ 78	$ 105	$ 73
Interest income	(26)	(12)	(12)
Interest expense, net	$ 52	$ 93	$ 61

On May 19, 2021, in anticipation of the acquisition of AKASOL and to refinance the Company's €500 million 1.80% senior notes due in November 2022, the Company issued €1.0 billion in 1.00% senior notes due May 2031. Interest is payable annually in arrears on May 19 of each year. These senior notes are not guaranteed by any of the Company's subsidiaries. On June 18, 2021, the Company repaid its €500 million 1.80% senior notes due November 2022 and incurred a loss on debt extinguishment of $20 million, which is reflected in Interest expense, net in the Consolidated Statement of Operations.

Annual principal payments required as of December 31, 2022 are as follows:

(in millions)		
2023	$	62
2024		7
2025		1,307
2026		7
2027		1,106
After 2027		1,707
Total payments	$	4,196
Add: unamortized premiums, net of discount		32
Total	$	4,228

The Company's long-term debt includes various covenants, none of which are expected to restrict future operations.

The Company has a $2 billion multi-currency revolving credit facility that allows the Company the ability to increase the facility by $1 billion with bank group approval. This facility matures in March 2025. The credit agreement contains customary events of default and one key financial covenant, which is a debt-to-EBITDA (Earnings Before Interest, Taxes, Depreciation and Amortization) ratio. The Company was in compliance with the financial covenant at December 31, 2022. At December 31, 2022 and 2021, the Company had no outstanding borrowings under this facility.

The Company's commercial paper program allows the Company to issue $2 billion of short-term, unsecured commercial paper notes under the limits of its multi-currency revolving credit facility. Under this program, the Company may issue notes from time to time and use the proceeds for general corporate purposes. The Company had no outstanding borrowings under this program as of December 31, 2022 and 2021.

The total current combined borrowing capacity under the multi-currency revolving credit facility and commercial paper program cannot exceed $2 billion.

As of December 31, 2022 and 2021, the estimated fair values of the Company's senior unsecured notes totaled $3,553 million and $4,421 million, respectively. The estimated fair values were $570 million lower than carrying value at December 31, 2022 and $212 million higher than their carrying value at December 31, 2021. Fair market values of the senior unsecured notes are developed using observable values for similar debt instruments, which are considered Level 2 inputs as defined by ASC Topic 820. The carrying values of the Company's multi-currency revolving credit facility, commercial paper program and other debt facilities approximate fair value. The fair value estimates do not necessarily reflect the values the Company could realize in the current markets.

The Company had outstanding letters of credit of $38 million and $35 million at December 31, 2022 and 2021, respectively. The letters of credit typically act as guarantees of payment to certain third parties in accordance with specified terms and conditions.

NOTE 15 OTHER CURRENT AND NON-CURRENT LIABILITIES

Additional detail related to liabilities is presented in the table below:

	December 31,	
(in millions)	2022	2021
Other current liabilities:		
Payroll and employee related	$ 398	$ 330
Customer related	202	220
Product warranties (Note 13)	142	128
Income taxes payable	142	105
Indirect taxes	125	106
Accrued freight	44	46
Operating leases (Note 22)	42	43
Deferred engineering	39	44
Employee termination benefits (Note 4)	37	85
Supplier related	23	18
Interest	22	23
Dividends payable	21	18
Other non-income taxes	19	22
Insurance	19	19
Earn-out liability	16	—
Contract liabilities (Note 3)	16	21
Legal and professional fees	15	8
Retirement related (Note 18)	13	16
Mandatorily redeemable noncontrolling interest liability (Note 2)	—	58
Other	155	146
Total other current liabilities	$ 1,490	$ 1,456
Other non-current liabilities:		
Other income tax liabilities	$ 242	$ 274
Deferred income taxes (Note 7)	194	206
Operating leases (Note 22)	166	152
Product warranties (Note 13)	103	108
Deferred income	66	68
Employee termination benefits (Note 4)	22	41
Other	68	115
Total other non-current liabilities	$ 861	$ 964

NOTE 16 FAIR VALUE MEASUREMENTS

ASC Topic 820 emphasizes that fair value is a market-based measurement, not an entity-specific measurement. Therefore, a fair value measurement should be determined based on assumptions that market participants would use in pricing an asset or liability. As a basis for considering market participant assumptions in fair value measurements, ASC Topic 820 establishes a fair value hierarchy, which prioritizes the inputs used in measuring fair values as follows:

Level 1: Observable inputs such as quoted prices for identical assets or liabilities in active markets;

Level 2: Inputs, other than quoted prices in active markets, that are observable either directly or indirectly; and

Level 3: Unobservable inputs in which there is little or no market data, which require the reporting entity to develop its own assumptions.

Assets and liabilities measured at fair value are based on one or more of the following three valuation techniques noted in ASC Topic 820:

A. **Market approach:** Prices and other relevant information generated by market transactions involving identical or comparable assets, liabilities or a group of assets or liabilities, such as a business.
B. **Cost approach:** Amount that would be required to replace the service capacity of an asset (replacement cost).
C. **Income approach:** Techniques to convert future amounts to a single present amount based upon market expectations (including present value techniques, option-pricing and excess earnings models).

The following tables classify assets and liabilities measured at fair value on a recurring basis as of December 31, 2022 and 2021:

		Basis of fair value measurements				
(in millions)	Balance at December 31, 2022	Quoted prices in active markets for identical items (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)	Valuation technique	Assets measured at NAV[1]
Assets:						
Receivables	$ 11	$ —	$ 2	$ 9	C	$ —
Long-term receivables	$ 13	$ —	$ 13	$ —	C	$ —
Investment in debt securities	$ 455	$ —	$ 455	$ —	A	$ —
Investment in equity securities	$ 29	$ —	$ —	$ —	—	$ 29
Foreign currency contracts	$ 18	$ —	$ 18	$ —	A	$ —
Net investment hedge contracts	$ 68	$ —	$ 68	$ —	A	$ —
Liabilities:						
Current earn-out liability	$ 21	$ —	$ —	$ 21	C	$ —
Non-current earn-out liability	$ 10	$ —	$ —	$ 10	C	$ —
Foreign currency contracts	$ 11	$ —	$ 11	$ —	A	$ —
Net investment hedge contracts	$ 1	$ —	$ 1	$ —	A	$ —

		Basis of fair value measurements				
(in millions)	Balance at December 31, 2021	Quoted prices in active markets for identical items (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)	Valuation technique	Assets measured at NAV[1]
Assets:						
Investment in equity securities	$ 87	$ 70	$ —	$ —	A	$ 17
Long-term receivables	$ 35	$ —	$ 17	$ 18	C	$ —
Foreign currency contracts	$ 13	$ —	$ 13	$ —	A	$ —
Net investment hedge contracts	$ 8	$ —	$ 8	$ —	A	$ —
Liabilities:						
Foreign currency contracts	$ 8	$ —	$ 8	$ —	A	$ —
Net investment hedge contracts	$ 54	$ —	$ 54	$ —	A	$ —

[1] Certain assets that are measured at fair value using the NAV per share (or its equivalent) practical expedient have not been classified in the fair value hierarchy. These amounts represent investments in commingled and managed funds that have underlying assets in fixed income securities, equity securities, and other assets and the fair values have been estimated using the net asset value of the Company's ownership interest in partners' capital. The Company's redemption of its investments with

the funds is governed by the partnership agreements and subject to approval from the general partners. With the exception of annual distributions in connection with the Company's deemed tax liability, distributions from each fund will be received as the underlying investments of the funds are liquidated, the timing of which is unknown.

The following tables classify the Company's defined benefit plan assets measured at fair value on a recurring basis:

(in millions)	Balance at December 31, 2022	Basis of fair value measurements				
		Quoted prices in active markets for identical items (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)	Valuation technique	Assets measured at NAV[3]
U.S. Plans:						
Fixed income securities	$ 89	$ —	$ —	$ —	—	$ 89
Equity securities	17	—	—	—	—	17
Alternative credit fund	20	—	—	—	—	20
Cash	3	3	—	—	A	—
	$ 129	$ 3	$ —	$ —		$ 126
Non-U.S. Plans:						
Fixed income securities	$ 525	$ 54	$ —	$ —	A	$ 471
Equity securities	142	113	—	—	A	29
Cash	147	147	—	—	A	—
Insurance contract[2]	69	—	—	69	C	—
Real estate and other	273	—	20	46	A,C	207
	$ 1,156	$ 314	$ 20	$ 115		$ 707

(in millions)	Balance at December 31, 2021	Basis of fair value measurements				
		Quoted prices in active markets for identical items (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)	Valuation technique	Assets measured at NAV[3]
U.S. Plans:						
Fixed income securities	$ 129	$ —	$ —	$ —	—	$ 129
Equity securities	28	—	—	—	—	28
Alternative credit fund	19	—	—	—	—	19
Cash	1	1	—	—	A	—
	$ 177	$ 1	$ —	$ —		$ 176
Non-U.S. Plans:						
Fixed income securities	$ 710	$ 116	$ —	$ —	A	$ 594
Equity securities	412	363	—	—	A	49
Cash[1]	338	338	—	—	A	—
Insurance contract[2]	108	—	—	108	C	—
Real estate and other	481	124	18	127	A,C	212
	$ 2,049	$ 941	$ 18	$ 235		$ 855

[1] As of December 31, 2021, £122 million in the Company's non-U.S. plans was deemed cash in-transit and classified as a Level 1 investment.

[2] A BorgWarner defined benefit plan in the United Kingdom owns an insurance contract that guarantees payment of specified pension liabilities. The Company measures the fair value of the insurance asset by projecting expected future cash flows from the contract and discounting them to present value based on current market rates, including an assessment for non-performance risk of the insurance company. The assumptions used to project expected future cash flows are based on actuarial estimates and are unobservable; therefore, the contract is categorized within Level 3 of the hierarchy.

[3] Certain assets that are measured at fair value using the NAV per share (or its equivalent) practical expedient have not been classified in the fair value hierarchy. These amounts represent investments in commingled and managed funds that have underlying assets in fixed income securities, equity securities, and other assets.

The reconciliation of Level 3 defined benefit plans assets was as follows:

	Fair Value Measurements Using Significant Unobservable Inputs (Level 3)	
(in millions)	Insurance contract	Real estate trust fund
Balance at January 1, 2021	$ 113	$ 86
Purchases, sales and settlements	—	36
Benefits paid	(4)	—
Unrealized gains on assets still held at the reporting date	1	7
Translation adjustment	(2)	(2)
Balance at December 31, 2021	$ 108	$ 127
Purchases, sales and settlements	—	(93)
Realized gains	—	3
Benefits paid	(5)	—
Unrealized (losses) gains on assets still held at the reporting date	(20)	25
Translation adjustment	(14)	(16)
Balance at December 31, 2022	$ 69	$ 46

Refer to Note 18, “Retirement Benefit Plans,” to the Consolidated Financial Statements for more detail surrounding the defined benefit plan’s asset investment policies and strategies, target allocation percentages and expected return on plan asset assumptions.

NOTE 17 FINANCIAL INSTRUMENTS

The Company’s financial instruments include cash and cash equivalents, marketable securities and accounts receivable. Due to the short-term nature of these instruments, their book value approximates their fair value. The Company’s financial instruments may include long-term debt, investments in equity securities, interest rate and cross-currency swaps, commodity derivative contracts and foreign currency derivative contracts. All derivative contracts are placed with counterparties that have an S&P, or equivalent, investment grade credit rating at the time of the contracts’ placement. An adjustment for non-performance risk is considered in the estimate of fair value in derivative assets based on the counterparty credit default swap (“CDS”) rate. When the Company is in a net derivative liability position, the non-performance risk adjustment is based on its CDS rate. At December 31, 2022 and 2021, the Company had no derivative contracts that contained credit-risk-related contingent features.

The Company, at times, uses certain commodity derivative contracts to protect against commodity price changes related to forecasted raw material and component purchases. The Company had no outstanding commodity contracts at December 31, 2022 and 2021.

The Company manages its interest rate risk by balancing its exposure to fixed and variable rates while attempting to optimize its interest costs. The Company, at times, selectively uses interest rate swaps to reduce market value risk associated with changes in interest rates (fair value hedges and cash flow hedges). At December 31, 2022 and 2021, the Company had no outstanding interest rate swaps or options.

The Company uses foreign currency forward and option contracts to protect against exchange rate movements for forecasted cash flows, including capital expenditures, purchases, operating expenses or sales transactions designated in currencies other than the functional currency of the operating unit. In addition, the Company uses foreign currency forward contracts to hedge exposure associated with its net investment in certain foreign operations (net investment hedges). Foreign currency derivative contracts require the Company, at a future date, to either buy or sell foreign currency in exchange for the operating units' local currency. The following foreign currency derivative contracts were outstanding and mature through the ending duration noted below:

Foreign currency derivatives (in millions)[1]

Functional currency	Traded currency	Notional in traded currency December 31, 2022	Notional in traded currency December 31, 2021	Ending duration
Brazilian Real	U.S. Dollar	14	23	Dec-23
British Pound	Euro	10	42	Feb-23
Chinese Renminbi	British Pound	23	26	Dec-23
Chinese Renminbi	Euro	42	26	Dec-23
Chinese Renminbi	U.S. Dollar	276	185	Dec-24
Euro	British Pound	63	6	Dec-24
Euro	Polish Zloty	489	394	Dec-24
Euro	U.S. Dollar	139	86	Dec-24
U.S. Dollar	British Pound	17	13	Dec-23
U.S. Dollar	Chinese Renminbi	1,402	—	Jun-23
U.S. Dollar	Euro	45	28	Mar-23
U.S. Dollar	Korean Won	51,786	49,919	Nov-23
U.S. Dollar	Mexico Peso	3,465	2,619	Dec-24
U.S. Dollar	Singapore Dollar	—	27	N/A
U.S. Dollar	Thailand Baht	1,790	1,720	May-23

[1] Table above excludes non-significant traded currency pairings with total notional amounts less than $10 million U.S. Dollar equivalent as of December 31, 2022 or 2021.

The Company selectively uses cross-currency swaps to hedge the foreign currency exposure associated with its net investment in certain foreign operations (net investment hedges). In May 2022, the Company terminated its $100 million cross-currency swap contract originally maturing in February 2023 and executed a $100 million cross-currency swap contract to mature in February 2029, resulting in cash proceeds of $16 million that are expected to remain in accumulated other comprehensive loss until the net investment is sold, completely liquidated or substantially liquidated. At December 31, 2022 and 2021, the following cross-currency swap contracts were outstanding:

(in millions)	Cross-currency swaps				
	December 31, 2022		December 31, 2021		Ending duration
U.S. Dollar to Euro:					
Fixed receiving notional	$	1,100	$	1,100	Jul-27
Fixed paying notional	€	976	€	976	Jul-27
U.S. Dollar to Euro:					
Fixed receiving notional	$	500	$	500	Mar-25
Fixed paying notional	€	450	€	450	Mar-25
U.S. Dollar to Japanese Yen:					
Fixed receiving notional	$	—	$	100	Feb-23
Fixed paying notional	¥	—	¥	10,978	Feb-23
Fixed receiving notional	$	100	$	—	Feb-29
Fixed paying notional	¥	12,724	¥	—	Feb-29

At December 31, 2022 and 2021, the following amounts were recorded in the Consolidated Balance Sheets as being payable to or receivable from counterparties under ASC Topic 815, “Derivatives and Hedging”:

(in millions)	Assets					Liabilities				
Derivatives designated as hedging instruments Under Topic 815:	Balance Sheet Location	December 31, 2022		December 31, 2021		Balance Sheet Location	December 31, 2022		December 31, 2021	
Foreign currency	Prepayments and other current assets	$	15	$	7	Other current liabilities	$	9	$	8
Foreign currency	Other non-current assets	$	—	$	—	Other non-current liabilities	$	1	$	—
Net investment hedges	Other non-current assets	$	68	$	8	Other non-current liabilities	$	1	$	54
Derivatives not designated as hedging instruments:										
Foreign currency	Prepayments and other current assets	$	3	$	6	Other current liabilities	$	1	$	—

Effectiveness for cash flow hedges is assessed at the inception of the hedging relationship and quarterly, thereafter. Gains and losses arising from these contracts that are included in the assessment of effectiveness are deferred into accumulated other comprehensive income (loss) (“AOCI”) and reclassified into income as the underlying operating transactions are recognized. These realized gains or losses offset the hedged transaction and are recorded on the same line in the statement of operations. The initial value of any component excluded from the assessment of effectiveness will be recognized in income using a systematic and rational method over the life of the hedging instrument. Any difference between the change in fair value of the excluded component and amounts recognized in income under that systematic and rational method will be recognized in AOCI.

Effectiveness for net investment hedges is assessed at the inception of the hedging relationship and quarterly, thereafter. Gains and losses arising from these contracts that are included in the assessment of effectiveness are deferred into foreign currency translation adjustments and only released when the subsidiary being hedged is sold or substantially liquidated. The initial value of any component excluded from the assessment of effectiveness will be recognized in income using a systematic and rational method over the life of the hedging instrument. Any difference between the change in fair value of the

excluded component and amounts recognized in income under that systematic and rational method will be recognized in AOCI.

During the year ended December 31, 2021, the Company repaid its €500 million 1.80% senior notes due November 2022, which were designated as a net investment hedge, resulting in a deferred loss of $50 million that will remain in accumulated other comprehensive loss until the net investment is sold, completely liquidated or substantially liquidated. The Company has designated the €1 billion in 1.00% senior notes due May 2031, issued in May 2021, as a net investment hedge of the Company's investment in its European subsidiaries.

The table below shows deferred gains (losses) reported in AOCI as well as the amount expected to be reclassified to income in one year or less for designated net investment hedges. The amount expected to be reclassified to income in one year or less assumes no change in the current relationship of the hedged item at December 31, 2022 market rates.

(in millions)	Deferred gain (loss) in AOCI at		Gain (loss) expected to be reclassified to income in one year or less
Contract Type	December 31, 2022	December 31, 2021	
Net investment hedges:			
Foreign currency	$ (4)	$ (10)	$ —
Cross-currency swaps	67	(46)	—
Foreign currency-denominated debt	133	66	—
Total	$ 196	$ 10	$ —

Derivative instruments designated as hedging instruments as defined by ASC Topic 815 held during the period resulted in the following gains and losses recorded in income:

	Year ended December 31, 2022			
(in millions)	Net sales	Cost of sales	Selling, general and administrative expenses	Other comprehensive income
Total amounts of earnings and other comprehensive income line items in which the effects of cash flow hedges are recorded	$ 15,801	$ 12,700	$ 1,610	$ (325)
Gain (loss) on cash flow hedging relationships:				
Foreign currency				
Gain recognized in other comprehensive income				$ 4

	Year ended December 31, 2021			
(in millions)	Net sales	Cost of sales	Selling, general and administrative expenses	Other comprehensive income
Total amounts of earnings and other comprehensive income line items in which the effects of cash flow hedges are recorded	$ 14,838	$ 11,983	$ 1,460	$ 100
Gain (loss) on cash flow hedging relationships:				
Foreign currency				
Loss recognized in other comprehensive income				$ (4)
Gain (loss) reclassified from AOCI to income	$ 1	$ (4)	$ (1)	$ —

(in millions)	Year ended December 31, 2020 Net sales	Cost of sales	Selling, general and administrative expenses	Other comprehensive income
Total amounts of earnings and other comprehensive income line items in which the effects of cash flow hedges are recorded	$ 10,165	$ 8,255	$ 951	$ 76
Gain (loss) on cash flow hedging relationships:				
Foreign currency				
Loss recognized in other comprehensive income				$ (1)
Gain (loss) reclassified from AOCI to income	$ —	$ 1	$ (2)	$ —

The gains or losses recorded in income related to components excluded from the assessment of effectiveness for derivative instruments designated as cash flow hedges were immaterial for the periods presented.

Gains and losses on derivative instruments designated as net investment hedges were recognized in other comprehensive income (loss) during the periods presented below.

(in millions) Net investment hedges	Year Ended December 31, 2022	2021	2020
Foreign currency	$ 6	$ (9)	$ (2)
Cross-currency swaps	$ 129	$ 115	$ (155)
Foreign currency-denominated debt	$ 67	$ 84	$ (51)

Derivatives designated as net investment hedge instruments as defined by ASC Topic 815 held during the period resulted in the following gains recorded in Interest expense on components excluded from the assessment of effectiveness:

(in millions) Net investment hedges	Year Ended December 31, 2022	2021	2020
Cross-currency swaps	$ 26	$ 22	$ 18

There were no gains or losses recorded in income related to components excluded from the assessment of effectiveness for foreign currency-denominated debt designated as net investment hedges. There were no gains and losses reclassified from AOCI for net investment hedges during the periods presented.

Derivatives not designated as hedging instruments are used to hedge remeasurement exposures of monetary assets and liabilities denominated in currencies other than the operating units' functional currency. These derivatives resulted in the following gains recorded in income:

(in millions) Contract Type	Location	Year Ended December 31, 2022	2021	2020
Foreign Currency	Selling, general and administrative expenses	$ 22	$ 13	$ 3

NOTE 18 RETIREMENT BENEFIT PLANS

The Company sponsors various defined contribution savings plans, primarily in the U.S., that allow employees to contribute a portion of their pre-tax and/or after-tax income in accordance with plan specified guidelines. Under specified conditions, the Company will make contributions to the plans and/or match a percentage of the employee contributions up to certain limits. Total expense related to the defined contribution plans was $59 million, $58 million and $38 million in the years ended December 31, 2022, 2021 and 2020, respectively.

The Company has a number of defined benefit pension plans and other postretirement employee benefit plans covering eligible salaried and hourly employees and their dependents. The defined pension benefits provided are primarily based on (i) years of service and (ii) average compensation or a monthly retirement benefit amount. The Company provides defined benefit pension plans in France, Germany, India, Ireland, Italy, Japan, Mexico, South Korea, Sweden, Switzerland, Turkey, U.K. and the U.S. The other postretirement employee benefit plans, which provide medical benefits, are unfunded plans. The Company's U.S. and U.K. defined benefit plans are frozen, and no additional service cost is being accrued. All pension and other postretirement employee benefit plans in the U.S. have been closed to new employees. The measurement date for all plans is December 31.

On October 1, 2020, as a result of the acquisition of Delphi Technologies, the Company assumed all of the retirement-related liabilities of Delphi Technologies, the most significant of which was the Delphi Technologies Pension Scheme (the "Scheme") in the United Kingdom. On December 12, 2020, the Company entered into a Heads of Terms Agreement (the "Agreement") with the Trustees of the Scheme related to the future funding of the Scheme. Under the Agreement, the Company eliminated the prior schedule of contributions between Delphi Technologies and the Scheme in exchange for a $137 million (£100 million) one-time contribution into the Scheme Plan by December 31, 2020, which was paid on December 15, 2020. The Agreement also contained other provisions regarding the implementation of a revised asset investment strategy as well as a funding progress test that will be performed every three years to determine if additional contributions need to be made into the Scheme by the Company.

The following table summarizes the expenses for the Company's defined contribution and defined benefit pension plans and the other postretirement defined employee benefit plans:

	Year Ended December 31,		
(in millions)	2022	2021	2020
Defined contribution expense	$ 59	$ 58	$ 38
Defined benefit pension (income) expense	(10)	(19)	15
Other postretirement employee benefit income	(1)	(1)	(1)
Total	$ 48	$ 38	$ 52

The following provides a roll forward of the plans' benefit obligations, plan assets, funded status and recognition in the Consolidated Balance Sheets:

	Pension benefits				Other postretirement employee benefits	
	Year Ended December 31,				Year Ended December 31,	
	2022		2021			
(in millions)	U.S.	Non-U.S.	U.S.	Non-U.S.	2022	2021
Change in projected benefit obligation:						
Projected benefit obligation, January 1	$ 183	$ 2,227	$ 202	$ 2,527	$ 54	$ 65
Service cost	—	20	—	25	—	—
Interest cost	4	37	3	30	1	1
Plan amendments	—	(11)	—	1	—	—
Settlement and curtailment	(6)	(3)	(4)	(13)	—	—
Actuarial gain	(33)	(685)	(7)	(208)	(13)	(6)
Currency translation	—	(200)	—	(59)	—	—
Acquisition	—	8	—	—	—	—
Benefits paid	(12)	(71)	(11)	(76)	(5)	(6)
Projected benefit obligation, December 31[1]	$ 136	$ 1,322	$ 183	$ 2,227	$ 37	$ 54
Change in plan assets:						
Fair value of plan assets, January 1	$ 177	$ 2,049	$ 187	$ 2,041		
Actual return on plan assets	(33)	(655)	5	110		
Employer contribution	2	20	—	24		
Settlements	(5)	(4)	(4)	(11)		
Currency translation	—	(189)	—	(39)		
Acquisition	—	6	—	—		
Benefits paid	(12)	(71)	(11)	(76)		
Fair value of plan assets, December 31	$ 129	$ 1,156	$ 177	$ 2,049		
Funded status	$ (7)	$ (166)	$ (6)	$ (178)	$ (37)	$ (54)
Amounts in the Consolidated Balance Sheets consist of:						
Non-current assets	$ —	$ 26	$ —	$ 68	$ —	$ —
Current liabilities	(1)	(6)	(2)	(7)	(6)	(7)
Non-current liabilities	(6)	(186)	(4)	(239)	(31)	(47)
Net amount	$ (7)	$ (166)	$ (6)	$ (178)	$ (37)	$ (54)
Amounts in accumulated other comprehensive loss consist of:						
Net actuarial loss	$ 80	$ 104	$ 84	$ 74	$ (3)	$ 10
Net prior service (credit) cost	(3)	(9)	(3)	2	(11)	(13)
Net amount	$ 77	$ 95	$ 81	$ 76	$ (14)	$ (3)
Total accumulated benefit obligation for all plans	$ 136	$ 1,279	$ 183	$ 2,183		

[1] The decrease in the projected benefit obligation was primarily due to actuarial gains during the period. The main driver of these gains was the increase of 2.97% in the weighted average discount rate for Non-U.S. plans.

The funded status of pension plans with accumulated benefit obligations in excess of plan assets is as follows:

(in millions)	December 31, 2022	December 31, 2021
Accumulated benefit obligation	$ (1,185)	$ (658)
Plan assets	1,022	442
Deficiency	$ (163)	$ (216)
Pension deficiency by country:		
United States	$ (6)	$ (6)
United Kingdom	(38)	(11)
Germany	(34)	(89)
Other	(85)	(110)
Total pension deficiency	$ (163)	$ (216)

The funded status of pension plans with projected benefit obligations in excess of plan assets is as follows:

(in millions)	December 31, 2022	December 31, 2021
Projected benefit obligation	$ (1,223)	$ (731)
Plan assets	1,026	478
Deficiency	$ (197)	$ (253)
Pension deficiency by country:		
United States	$ (6)	$ (6)
United Kingdom	(38)	(11)
Germany	(35)	(95)
Other	(118)	(141)
Total pension deficiency	$ (197)	$ (253)

The weighted average asset allocations of the Company's funded pension plans and target allocations by asset category are as follows:

	December 31, 2022	December 31, 2021	Target Allocation
U.S. Plans:			
Alternative credit, real estate, cash and other	18 %	12 %	7% - 17%
Fixed income securities	69 %	72 %	70% - 80%
Equity securities	13 %	16 %	9% - 19%
	100 %	100 %	
Non-U.S. Plans:			
Insurance contract, real estate, cash and other[1]	42 %	45 %	22% - 32%
Fixed income securities[1]	46 %	35 %	54% - 64%
Equity securities	12 %	20 %	9% - 19%
	100 %	100 %	

[1] As of December 31, 2021, £122 million in the Company's non-U.S. plans was deemed cash in-transit, driving the variances between actual allocation and target allocation.

The Company's investment strategy is to maintain actual asset weightings within a preset range of target allocations. The Company believes these ranges represent an appropriate risk profile for the planned benefit payments of the plans based on the timing of the estimated benefit payments. In each asset

category, separate portfolios are maintained for additional diversification. Investment managers are retained in each asset category to manage each portfolio against its benchmark. Each investment manager has appropriate investment guidelines. In addition, the entire portfolio is evaluated against a relevant peer group. The defined benefit pension plans did not hold any Company securities as investments as of December 31, 2022 and 2021. A portion of pension assets is invested in common and commingled trusts.

The Company expects to contribute a total of $20 million to $30 million into its defined benefit pension plans during 2023. Of the $20 million to $30 million in projected 2023 contributions, $7 million are contractually obligated, while any remaining payments would be discretionary.

Refer to Note 16, “Fair Value Measurements,” to the Consolidated Financial Statements for more detail surrounding the fair value of each major category of plan assets, as well as the inputs and valuation techniques used to develop the fair value measurements of the plans’ assets at December 31, 2022 and 2021.

See the table below for a breakout of net periodic benefit cost between U.S. and non-U.S. pension plans:

	Pension benefits						Other postretirement employee benefits		
	Year Ended December 31,						Year Ended December 31,		
	2022		2021		2020				
(in millions)	U.S.	Non-U.S.	U.S.	Non-U.S.	U.S.	Non-U.S.	2022	2021	2020
Service cost	$ —	$ 20	$ —	$ 25	$ —	$ 21	$ —	$ —	$ —
Interest cost	4	37	3	30	5	16	1	1	2
Expected return on plan assets	(8)	(75)	(10)	(83)	(10)	(36)	—	—	—
Settlements, curtailments and other	3	—	2	(2)	—	5	—	—	—
Amortization of unrecognized prior service (credit) cost	(1)	—	(1)	—	—	—	(2)	(3)	(4)
Amortization of unrecognized loss	3	7	4	13	3	11	—	1	1
Net periodic cost (income)	$ 1	$ (11)	$ (2)	$ (17)	$ (2)	$ 17	$ (1)	$ (1)	$ (1)

The components of net periodic benefit cost other than the service cost component are included in Other postretirement income in the Consolidated Statements of Operations.

The Company’s weighted average assumptions used to determine the benefit obligations for its defined benefit pension and other postretirement employee benefit plans were as follows:

	December 31,	
(percent)	2022	2021
U.S. pension plans:		
Discount rate	5.46	2.73
Rate of compensation increase	N/A	N/A
U.S. other postretirement employee benefit plans:		
Discount rate	5.41	2.46
Rate of compensation increase	N/A	N/A
Non-U.S. pension plans:		
Discount rate[1]	4.94	1.97
Rate of compensation increase	3.76	3.21

[1] Includes 4.94% and 1.91% for the U.K. pension plans for December 31, 2022 and 2021, respectively.

The Company's weighted average assumptions used to determine the net periodic benefit cost/(income) for its defined benefit pension and other postretirement employee benefit plans were as follows:

(percent)	Year Ended December 31, 2022	2021	2020
U.S. pension plans:			
Discount rate	2.73	2.31	3.17
Effective interest rate on benefit obligation	2.18	1.62	2.73
Expected long-term rate of return on assets	4.75	5.75	6.00
Average rate of increase in compensation	N/A	N/A	N/A
U.S. other postretirement plans:			
Discount rate	2.46	1.93	2.95
Effective interest rate on benefit obligation	1.84	1.21	2.50
Expected long-term rate of return on assets	N/A	N/A	N/A
Average rate of increase in compensation	N/A	N/A	N/A
Non-U.S. pension plans:			
Discount rate[1]	1.97	1.44	1.69
Effective interest rate on benefit obligation	1.83	1.24	2.19
Expected long-term rate of return on assets[2]	4.10	4.10	4.75
Average rate of increase in compensation	3.21	3.23	3.10

[1] Includes 1.91%, 1.39% and 1.82% for the U.K. pension plans for December 31, 2022, 2021 and 2020, respectively.
[2] Includes 4.12%, 4.00% and 3.97% for the U.K. pension plans for December 31, 2022, 2021 and 2020, respectively.

The Company's approach to establishing the discount rate is based upon the market yields of high-quality corporate bonds, with appropriate consideration of each plan's defined benefit payment terms and duration of the liabilities. In determining the discount rate, the Company utilizes a full-yield approach in the estimation of service and interest components by applying the specific spot rates along the yield curve used in the determination of the benefit obligation to the relevant projected cash flows.

The Company determines its expected return on plan asset assumptions by evaluating estimates of future market returns and the plans' asset allocation. The Company also considers the impact of active management of the plans' invested assets.

The estimated future benefit payments for the pension and other postretirement employee benefits are as follows:

(in millions) Year	Pension benefits U.S.	Pension benefits Non-U.S.	Other postretirement employee benefits
2023	$ 14	$ 73	$ 6
2024	14	71	5
2025	13	71	5
2026	13	74	4
2027	13	78	4
2028-2032	52	441	13

The weighted average rate of increase in the per capita cost of covered health care benefits is projected to range from 6.50% in 2023 down to an ultimate trend rate of 4.75%.

NOTE 19 STOCK-BASED COMPENSATION

The Company has granted restricted common stock and restricted stock units (collectively, “restricted stock”) and performance share units as long-term incentive awards to employees and non-employee directors under the BorgWarner Inc. 2018 Stock Incentive Plan (“2018 Plan”). The Company’s Board of Directors adopted the 2018 Plan in February 2018, and the Company’s stockholders approved the 2018 Plan at the annual meeting of stockholders on April 25, 2018. The 2018 Plan authorizes the issuance of a total of 7.0 million shares. As part of the Delphi Technologies acquisition, 2.2 million shares were registered for future issuance for former Delphi Technologies employees. In aggregate, approximately 2.2 million shares were available for future issuance as of December 31, 2022.

Restricted Stock: The value of restricted stock is determined by the market value of the Company’s common stock at the date of grant. In 2022, restricted stock in the amount of 1.0 million shares and less than 0.1 million shares were granted to employees and non-employee directors, respectively. The value of the awards is recognized as compensation expense ratably over the restriction periods, generally two or three years. As of December 31, 2022, there was $46 million of unrecognized compensation expense related to restricted stock that will be recognized over a weighted average period of approximately 1.2 years.

Restricted stock compensation expense recorded in the Consolidated Statements of Operations is as follows:

	Year Ended December 31,		
(in millions, except per share data)	2022	2021	2020
Restricted stock compensation expense	$ 37	$ 37	$ 31
Restricted stock compensation expense, net of tax	$ 28	$ 28	$ 23

A summary of the status of the Company’s nonvested restricted stock for employees and non-employee directors is as follows:

	Shares subject to restriction (thousands)	Weighted average grant date fair value
Nonvested at January 1, 2020	1,664	$ 44.26
Granted	810	$ 33.94
Vested	(600)	$ 44.85
Forfeited	(80)	$ 40.20
Converted[1]	346	$ 39.54
Nonvested at December 31, 2020	2,140	$ 39.58
Granted	1,175	$ 43.66
Vested	(845)	$ 43.34
Forfeited	(107)	$ 39.86
Nonvested at December 31, 2021	2,363	$ 40.24
Granted	1,060	$ 44.32
Vested	(862)	$ 38.68
Forfeited	(188)	$ 42.09
Nonvested at December 31, 2022	2,373	$ 42.47

[1] Represents outstanding Delphi Technologies restricted stock converted to BorgWarner restricted stock. The Delphi Technologies awards were converted using an exchange ratio of 0.4307 at the close of the acquisition.

Performance share units: The Company grants performance share units to members of senior management that vest at the end of three-year periods based the following metrics:

- ***Total Stockholder Return Units:*** This performance metric is based on the Company's market performance in terms of total shareholder return relative to a peer group of automotive companies. Based on the Company's relative ranking within the performance peer group, it is possible for none of the awards to vest or for a range of up to 200% of the target shares to vest.

  The Company recognizes compensation expense relating to this performance share plan ratably over the performance period regardless of whether the market conditions are expected to be achieved. Compensation expense associated with the performance share plans is calculated using a lattice model (Monte Carlo simulation).

  As of December 31, 2022, there was $10 million of unrecognized compensation expense related to total stockholder return units that will be recognized over a weighted average period of approximately 1.7 years.

- ***Relative Revenue Growth Units:*** This performance metric is based on the Company's performance in terms of revenue growth relative to the vehicle market over three-year performance periods. Based on the Company's relative revenue growth in excess of the industry vehicle production, it is possible for none of the awards to vest or for a range of up to 200% of the target shares to vest.

  The value of this performance share award is determined by the market value of the Company's common stock at the date of grant. The Company recognizes compensation expense relating to this performance share plan over the performance period based on the number of shares expected to vest at the end of each reporting period. The actual performance of the Company is evaluated quarterly and the expense is adjusted according to the new projections.

  As of December 31, 2022, these awards were fully expensed.

- ***Adjusted Earnings Per Share Units:*** Introduced in the first quarter of 2020, this performance metric is based on the Company's earnings per share adjusted for certain one-time items and non-operating gains and losses against a pre-defined target measured in the third year of the performance period.

  The value of this performance share award is determined by the adjusted earnings per share performance. The Company recognizes compensation expense relating to this performance share plan over the performance period based on the number of shares expected to vest at the end of each reporting period. The actual performance of the Company is evaluated quarterly and the expense is adjusted according to the new projections.

  As of December 31, 2022, these awards were fully expensed.

- ***eProducts Revenue Mix***: Introduced in the first quarter of 2021, this performance metric is based on the Company's total revenue derived from eProducts in relation to its total proforma revenue in the third year of the performance period. Based on the Company's eProducts revenue mix, it is possible for none of the awards to vest or for a range of up to 200% of the target shares to vest.

  The value of this performance share award is determined by the market value of the Company's common stock at the date of grant. The Company recognizes compensation expense relating to this performance share plan over the performance period based on the number of shares expected to vest at the end of each reporting period. The actual performance of the Company is evaluated quarterly and the expense is adjusted according to the new projections.

  As of December 31, 2022, there was $17 million of unrecognized compensation expense related to the eProducts revenue mix units that will be recognized over a weighted average period of approximately 1.5 years. The unrecognized amount of compensation expense is based on projected performance as of December 31, 2022.

- ***Cumulative Free Cash Flow***: Introduced in the first quarter of 2021, this performance metric is based on the Company's performance in terms of its operating cash flow, less capital expenditures, over the three-year performance periods. Based on the Company's cumulative free cash flow, it is possible for none of the awards to vest or for a range of up to 200% of the target shares to vest.

  The value of this performance share award is determined by the market value of the Company's common stock at the date of grant. The Company recognizes compensation expense relating to this performance share plan over the performance period based on the number of shares expected to vest at the end of each reporting period. The actual performance of the Company is evaluated quarterly and the expense is adjusted according to the new projections.

  As of December 31, 2022, there was $13 million of unrecognized compensation expense related to the cumulative free cash flow units that will be recognized over a weighted average period of approximately 1.7 years. The unrecognized amount of compensation expense is based on projected performance as of December 31, 2022.

- ***eProducts Revenue***: Introduced in the first quarter of 2022, this performance metric is based on the amount of the Company's total revenue derived from eProducts in the third year of the performance period. Based on the Company's eProducts revenue, it is possible for none of the awards to vest or for a range of up to 200% of the target shares to vest.

  The value of this performance share award is determined by the market value of the Company's common stock at the date of grant. The Company recognizes compensation expense relating to this performance share plan over the performance period based on the number of shares expected to vest at the end of each reporting period. The actual performance of the Company is evaluated quarterly and the expense is adjusted according to the new projections.

  As of December 31, 2022, there was $8 million of unrecognized compensation expense related to the eProducts revenue units that will be recognized over a weighted average period of approximately 2.0 years. The unrecognized amount of compensation expense is based on projected performance as of December 31, 2022.

The amounts expensed and common stock issued for performance share units for the years ended December 31, 2022, 2021 and 2020 were as follows:

	Year Ended December 31,					
	2022		2021		2020	
	Expense (in millions)	Number of shares issued (in thousands)	Expense (in millions)	Number of shares issued (in thousands)	Expense (in millions)	Number of shares issued (in thousands)
Total Stockholder Return	$ 7	—	$ 6	—	$ 5	165
Other Performance-Based	31	305	18	148	5	340
Total	$ 38	305	$ 24	148	$ 10	505

A summary of the status of the Company's nonvested performance share units for the years ended December 31, 2022, 2021 and 2020 were as follows:

	Total Stockholder Return		Other Performance-Based	
	Number of shares (in thousands)	Weighted average grant date fair value	Number of shares (in thousands)	Weighted average grant date fair value
Nonvested at January 1, 2020	240	$ 64.61	240	$ 48.52
Granted	137	$ 28.55	253	$ 34.15
Vested	(89)	$ 69.75	(89)	$ 51.29
Forfeited	(17)	$ 57.36	(19)	$ 44.19
Nonvested at December 31, 2020	271	$ 45.20	385	$ 38.66
Granted	135	$ 70.39	404	$ 45.30
Vested	(143)	$ 47.93	(143)	$ 41.92
Forfeited	(4)	$ 37.28	(6)	$ 36.79
Nonvested at December 31, 2021	259	$ 56.90	640	$ 42.14
Granted	138	$ 66.96	415	$ 44.33
Vested	(127)	$ 28.55	(234)	$ 34.73
Forfeited	(20)	$ 59.87	(56)	$ 43.35
Nonvested at December 31, 2022	250	$ 76.68	765	$ 45.51

NOTE 20 ACCUMULATED OTHER COMPREHENSIVE LOSS

The following table summarizes the activity within accumulated other comprehensive loss:

(in millions)	Foreign currency translation adjustments	Hedge instruments	Defined benefit postretirement plans	Total
Beginning Balance, January 1, 2020	$ (497)	$ —	$ (230)	$ (727)
Comprehensive (loss) income before reclassifications	133	(1)	(131)	1
Income taxes associated with comprehensive (loss) income before reclassifications	43	—	18	61
Reclassification from accumulated other comprehensive (loss) income	—	1	16	17
Income taxes reclassified into net earnings	—	—	(3)	(3)
Ending Balance December 31, 2020	$ (321)	$ —	$ (330)	$ (651)
Comprehensive (loss) income before reclassifications[1]	(59)	(4)	255	192
Income taxes associated with comprehensive (loss) income before reclassifications	(43)	—	(64)	(107)
Reclassification from accumulated other comprehensive (loss) income	—	4	14	18
Income taxes reclassified into net earnings	—	—	(3)	(3)
Ending Balance December 31, 2021	$ (423)	$ —	$ (128)	$ (551)
Comprehensive (loss) income before reclassifications	(287)	4	(14)	(297)
Income taxes associated with comprehensive (loss) income before reclassifications	(40)	—	7	(33)
Reclassification from accumulated other comprehensive (loss) income	—	—	7	7
Income taxes reclassified into net earnings	—	—	(2)	(2)
Ending Balance December 31, 2022	$ (750)	$ 4	$ (130)	$ (876)

[1] The increase in the defined benefit postretirement plans comprehensive income before reclassifications is primarily due to actuarial gains during the period. Refer to Note 18 “Retirement Benefit Plans,” for more information.

The change in other comprehensive income for the Company’s noncontrolling interest entities is related to foreign currency translation.

NOTE 21 CONTINGENCIES

In the normal course of business, the Company is party to various commercial and legal claims, actions and complaints, including matters involving warranty claims, intellectual property claims, general liability and various other risks. It is not possible to predict with certainty whether or not the Company will ultimately be successful in any of these commercial and legal matters or, if not, what the impact might be. The Company’s management does not expect that an adverse outcome in any of these commercial and legal claims, actions and complaints that are currently pending will have a material adverse effect on the Company’s results of operations, financial position or cash flows. An adverse outcome could, nonetheless, be material to the results of operations or cash flows.

Environmental

The Company and certain of its current and former direct and indirect corporate predecessors, subsidiaries and divisions have been identified by the United States Environmental Protection Agency and certain state environmental agencies and private parties as potentially responsible parties (“PRPs”) at various hazardous waste disposal sites under the Comprehensive Environmental Response, Compensation and Liability Act (“Superfund”) and equivalent state laws and, as such, may be presently

liable for the cost of clean-up and other remedial activities at 26 such sites as of December 31, 2022 and 2021. Responsibility for clean-up and other remedial activities at a Superfund site is typically shared among PRPs based on an allocation formula.

The Company believes that none of these matters, individually or in the aggregate, will have a material adverse effect on its results of operations, financial position or cash flows. Generally, this is because either the estimates of the maximum potential liability at a site are not material, or the liability will be shared with other PRPs, although no assurance can be given with respect to the ultimate outcome of any such matter.

The Company has an accrual for environmental liabilities of $7 million as of each of December 31, 2022 and 2021, included in Other current and Other non-current liabilities in the Consolidated Balance Sheets. This accrual, which relates to eight of the sites, is based on information available to the Company (which in most cases includes an estimate of allocation of liability among PRPs; the probability that other PRPs, many of which are large, solvent public companies, will fully pay the cost apportioned to them; currently available information from PRPs and/or federal or state environmental agencies concerning the scope of contamination and estimated remediation and consulting costs; and remediation alternatives). Clean-up and other remedial activities are complete or nearing completion at the other 18 sites, for which there was no accrual as of December 31, 2022 and 2021.

NOTE 22 LEASES AND COMMITMENTS

The Company’s lease agreements primarily consist of real estate property, such as manufacturing facilities, warehouses, and office buildings, in addition to personal property, such as vehicles, manufacturing and information technology equipment. The Company determines whether a contract is or contains a lease at contract inception. The majority of the Company’s lease arrangements are comprised of fixed payments, and a limited number of these arrangements include a variable payment component based on certain index fluctuations. As of December 31, 2022, a significant portion of the Company’s leases were classified as operating leases.

Generally, the Company’s operating leases have renewal options that extend the lease terms, and some include options to terminate the agreement or purchase the leased asset. The amortizable life of these assets is the lesser of its useful life or the lease term, including renewal periods reasonably assured of being exercised at lease inception.

All leases with an initial term of 12 months or less without an option to extend or purchase the underlying asset that the Company is reasonably certain to exercise (“short-term leases”) are not recorded on the Consolidated Balance Sheet, and lease expense is recognized on a straight-line basis over the lease term.

The following table presents the lease assets and lease liabilities as of December 31, 2022 and 2021:

(in millions)		December 31, 2022	December 31, 2021
Assets	Balance Sheet Location		
Operating leases	Other non-current assets	$ 199	$ 185
Finance leases	Property, plant and equipment, net	10	11
Total lease assets		$ 209	$ 196
Liabilities			
Current			
Operating leases	Other current liabilities	$ 42	$ 43
Finance leases	Notes payable and other short-term debt	3	2
Non-current			
Operating leases	Other non-current liabilities	166	152
Finance leases	Long-term debt	9	11
Total lease liabilities		$ 220	$ 208

The following table presents lease obligations arising from obtaining leased assets for the years ended December 31, 2022 and 2021:

(in millions)	December 31, 2022	December 31, 2021
Operating leases	$ 39	$ 27
Finance leases	2	1
Total lease obligations	$ 41	$ 28

The following table presents the maturity of lease liabilities as of December 31, 2022:

(in millions)	Operating leases	Finance leases
2023	$ 47	$ 2
2024	40	2
2025	37	2
2026	32	2
2027	26	2
After 2027	44	3
Total (undiscounted) lease payments	$ 226	$ 13
Less: Imputed interest	18	1
Present value of lease liabilities	$ 208	$ 12

In the years ended December 31, 2022, 2021 and 2020, the Company recorded operating lease expense of $50 million, $57 million and $29 million, respectively.

In the years ended December 31, 2022, 2021 and 2020, the operating cash flows for operating leases were $50 million, $54 million and $29 million, respectively.

In the years ended December 31, 2022, 2021 and 2020, the Company recorded short-term lease costs of $25 million, $21 million and $21 million, respectively.

Finance lease costs and related cash flows were immaterial for the periods presented.

ASC Topic 842, “Leases”, requires that the rate implicit in the lease be used if readily determinable. Generally, implicit rates are not readily determinable in the Company’s agreements, so the incremental borrowing rate is used instead for such lease arrangements. The incremental borrowing rates are determined using rates specific to the term of the lease, economic environments where lease activity is concentrated, value of lease portfolio, and assuming full collateralization of the loans. The following table presents the terms and discount rates:

	December 31,	
	2022	2021
Weighted average remaining lease term (years)		
Operating leases	6	7
Finance leases	6	7
Weighted average discount rate		
Operating leases	2.2 %	2.0 %
Finance leases	3.2 %	3.0 %

NOTE 23 EARNINGS PER SHARE

The Company presents both basic and diluted earnings per share of common stock (“EPS”) amounts. Basic EPS is calculated by dividing net earnings attributable to BorgWarner Inc. by the weighted average shares of common stock outstanding during the reporting period. Diluted EPS is calculated by dividing net earnings attributable to BorgWarner Inc. by the weighted average shares of common stock and common stock equivalents outstanding during the reporting period.

The dilutive impact of stock-based compensation is calculated using the treasury stock method. The treasury stock method assumes that the Company uses the assumed proceeds from the exercise of awards to repurchase common stock at the average market price during the period. The assumed proceeds under the treasury stock method include the purchase price that the grantee will pay in the future and compensation cost for future service that the Company has not yet recognized. The dilutive effects of performance-based stock awards described in Note 19, “Stock-Based Compensation,” to the Consolidated Financial Statements are included in the computation of diluted earnings per share at the level the related performance criteria are met through the respective balance sheet date. There were 0.8 million, 0.8 million and 0.2 million of performance share units excluded from the computation of the diluted earnings per share for the years ended December 31, 2022, 2021 and 2020, respectively, because the related performance criteria had not been met as of the balance sheet dates.

As a result of the acquisition of Delphi Technologies, approximately 37 million shares were issued on October 1, 2020, which resulted in dilution of approximately 9 million shares on a year-to-date basis.

The following table reconciles the numerators and denominators used to calculate basic and diluted earnings per share of common stock:

(in millions except share and per share amounts)	Year Ended December 31, 2022	2021	2020
Basic earnings per share:			
Net earnings attributable to BorgWarner Inc.	$ 944	$ 537	$ 500
Weighted average shares of common stock outstanding	235.5	238.1	213.0
Basic earnings per share of common stock	$ 4.01	$ 2.25	$ 2.35
Diluted earnings per share:			
Net earnings attributable to BorgWarner Inc.	$ 944	$ 537	$ 500
Weighted average shares of common stock outstanding	235.5	238.1	213.0
Effect of stock-based compensation	1.3	1.4	1.0
Weighted average shares of common stock outstanding including dilutive shares	236.8	239.5	214.0
Diluted earnings per share of common stock	$ 3.99	$ 2.24	$ 2.34
Antidilutive stock-based awards excluded from the calculation of diluted earnings per share	—	—	—

NOTE 24 REPORTING SEGMENTS AND RELATED INFORMATION

The Company’s business is aggregated into four reporting segments which are further described below. These segments are strategic business groups, which are managed separately as each represents a specific grouping of related automotive components and systems.

In the first quarter of 2022, the Company announced that the starter and alternator business, previously reported in its e-Propulsion & Drivetrain segment, would transition to the Aftermarket segment. The Company also announced in 2022 that the canisters and fuel delivery modules business, previously reported in its Air Management segment, would transition to the Fuel Systems segment. Both of these transitions were completed during the second quarter of 2022. Additionally, in the fourth quarter of 2022, the Company moved its battery systems business, previously reported in its Air Management segment, to the e-Propulsion & Drivetrain segment. Related to these transitions, the Company also revised the allocation of Corporate assets to various reporting segments in 2022. The reporting segment disclosures have been updated accordingly which included recasting prior period information for the new reporting structure.

- ***Air Management.*** This segment develops and manufactures products to improve fuel economy, reduce emissions and enhance performance. The Air Management segment’s technologies include turbochargers, eBoosters, eTurbos, timing systems, emissions systems, thermal systems, gasoline ignition technology, smart remote actuators, powertrain sensors, cabin heaters, battery heaters, battery charging and direct current charging stations.
- ***e-Propulsion & Drivetrain.*** This segment develops and manufactures products to improve fuel economy, reduce emissions and enhance performance in combustion, hybrid and electric vehicles. The e-Propulsion & Drivetrain segment’s technologies include rotating electrical components, power electronics, electric drive motors, battery systems, battery packs, control modules, software, friction and mechanical products for automatic transmissions and torque-management products.

- ***Fuel Systems (formerly known as Fuel Injection).*** This segment includes gasoline and diesel fuel injection components and systems. The fuel injection systems portfolio includes pumps, injectors, evaporative canisters, fuel delivery modules, fuel rails and fuel rail assemblies, engine control units, and complete systems including associated software and calibration services, that deliver greater efficiency and improve fuel economy for traditional and hybrid vehicles.
- ***Aftermarket.*** Through this segment, the Company sells products and services to independent aftermarket customers and original equipment service customers with both new and remanufactured products. The aftermarket product portfolio includes a wide range of solutions covering the fuel injection, electronics and engine management, starters and alternators, maintenance, test equipment and vehicle diagnostics categories.

During the first quarter of 2022, the Company updated the definition of its measure of segment income or loss to exclude the impact of intangible asset amortization expense. The Company believes this change improves comparability of ongoing operations given the increasing operating margin impact of intangible asset amortization arising from the Company's merger and acquisition activity. The prior period information disclosed below has been recast to reflect this change. Further, the Company renamed its measure of segment income or loss from Segment Adjusted EBIT to Segment Adjusted Operating Income.

Segment Adjusted Operating Income is the measure of segment income or loss used by the Company. Segment Adjusted Operating Income is comprised of operating income adjusted for restructuring, merger, acquisition and divestiture expense, intangible asset amortization expense, impairment charges and other items not reflective of ongoing operating income or loss. The Company believes Segment Adjusted Operating Income is most reflective of the operational profitability or loss of its reporting segments.

The following tables show segment information and Segment Adjusted Operating Income for the Company's reporting segments:

2022 Segment information

	Net sales					
(in millions)	Customers	Inter-segment	Net	Year-end assets	Depreciation/ amortization	Long-lived asset expenditures[1]
Air Management	$ 7,034	$ 95	$ 7,129	$ 5,376	$ 245	$ 192
e-Propulsion & Drivetrain	5,440	185	5,625	6,416	278	415
Fuel Systems	2,052	262	2,314	2,227	140	99
Aftermarket	1,275	10	1,285	1,281	23	16
Inter-segment eliminations	—	(552)	(552)	—	—	—
Total	15,801	—	15,801	15,300	686	722
Corporate[2]	—	—	—	1,694	35	1
Consolidated	$ 15,801	$ —	$ 15,801	$ 16,994	$ 721	$ 723

2021 Segment information

	Net sales					
(in millions)	Customers	Inter-segment	Net	Year-end assets	Depreciation/ amortization	Long-lived asset expenditures[1]
Air Management	$ 6,720	$ 100	$ 6,820	$ 5,274	$ 268	$ 239
e-Propulsion & Drivetrain	4,918	168	5,086	6,122	278	262
Fuel Systems	1,996	241	2,237	2,306	166	125
Aftermarket	1,204	8	1,212	1,204	24	6
Inter-segment eliminations	—	(517)	(517)	—	—	—
Total	14,838	—	14,838	14,906	736	632
Corporate[2]	—	—	—	1,669	36	34
Consolidated	$ 14,838	$ —	$ 14,838	$ 16,575	$ 772	$ 666

2020 Segment information

(in millions)	Net sales			Year-end assets	Depreciation/ amortization[3]	Long-lived asset expenditures[1]
	Customers	Inter-segment	Net			
Air Management	$ 5,496	$ 68	$ 5,564	$ 5,385	$ 235	$ 202
e-Propulsion & Drivetrain	3,648	47	3,695	5,017	242	185
Fuel Systems	537	56	593	2,375	38	29
Aftermarket	484	4	488	1,177	21	9
Inter-segment eliminations	—	(175)	(175)	—	—	—
Total	10,165	—	10,165	13,954	536	425
Corporate[2]	—	—	—	2,075	32	16
Consolidated	$ 10,165	$ —	$ 10,165	$ 16,029	$ 568	$ 441

[1] Long-lived asset expenditures include capital expenditures and tooling outlays.

[2] Corporate assets include cash and cash equivalents, investments and long-term receivables, and deferred income taxes.

[3] In 2020, e-Propulsion & Drivetrain includes $38 million related to accelerated amortization for certain intangibles, refer to Note 12, "Goodwill and Other Intangibles," for more information.

Segment Adjusted Operating Income

(in millions)	Year Ended December 31, 2022	2021	2020
Air Management	$ 1,068	$ 1,064	$ 762
e-Propulsion & Drivetrain	379	458	368
Fuel Systems	249	235	49
Aftermarket	196	164	54
Segment Adjusted Operating Income	1,892	1,921	1,233
Corporate, including stock-based compensation	289	302	192
Intangible asset amortization expense	97	88	89
Restructuring expense	59	163	203
Merger, acquisition and divestiture expense, net	40	50	96
Asset impairments and lease modifications	30	17	17
(Gain) loss on sales of businesses	(13)	29	—
Other non-comparable items	16	(3)	(9)
Customer warranty settlement (Note 21)	—	124	—
Amortization of inventory fair value adjustment	—	—	27
Equity in affiliates' earnings, net of tax	(38)	(48)	(18)
Unrealized loss (gain) on debt and equity securities	73	362	(382)
Interest expense, net	52	93	61
Other postretirement income	(31)	(45)	(7)
Earnings before income taxes and noncontrolling interest	1,318	789	964
Provision for income taxes	292	150	397
Net earnings	1,026	639	567
Net earnings attributable to the noncontrolling interest, net of tax	82	102	67
Net earnings attributable to BorgWarner Inc.	$ 944	$ 537	$ 500

Geographic Information

During the year ended December 31, 2022, approximately 81% of the Company's consolidated net sales were outside the U.S., attributing sales to the location of production rather than the location of the customer. Outside the U.S., China, Mexico, Germany, Poland, South Korea and the United Kingdom exceeded 5% of consolidated net sales during the year ended December 31, 2022. The Company's investments in equity securities are excluded from the definition of long-lived assets, as are goodwill and certain other non-current assets.

	Net sales			Long-lived assets		
(in millions)	2022	2021	2020	2022	2021	2020
United States	$ 3,054	$ 2,490	$ 2,023	$ 635	$ 625	$ 937
Europe:						
Germany	1,439	1,342	1,175	355	405	338
Poland	1,086	1,121	696	328	324	352
United Kingdom	837	821	276	195	215	229
Other Europe	1,992	1,921	1,412	709	713	804
Total Europe	5,354	5,205	3,559	1,587	1,657	1,723
China	3,383	3,518	2,269	1,045	1,042	1,055
Mexico	1,987	1,736	1,035	653	623	367
South Korea	1,046	1,096	814	220	256	301
Other foreign	977	793	465	225	192	208
Total	$ 15,801	$ 14,838	$ 10,165	$ 4,365	$ 4,395	$ 4,591

Sales to Major Customers

Consolidated net sales to Ford (including its subsidiaries) were approximately 13%, 10% and 13% for the years ended December 31, 2022, 2021 and 2020, respectively. Consolidated net sales to Volkswagen (including its subsidiaries) were approximately 8%, 9% and 11% for the years ended December 31, 2022, 2021 and 2020. Such sales consisted of a variety of products to a variety of customer locations and regions. No other single customer accounted for more than 10% of consolidated net sales in any of the years presented.

Sales by Product Line

Sales of turbochargers for light vehicles represented approximately 20%, 19% and 24% of consolidated net sales for the years ended December 31, 2022, 2021 and 2020, respectively. No other single product line accounted for more than 10% of consolidated net sales in any of the years presented.

NOTE 25 OPERATING CASH FLOWS AND OTHER SUPPLEMENTAL FINANCIAL INFORMATION

	Year Ended December 31,		
(in millions)	2022	2021	2020
OPERATING			
Net earnings	$ 1,026	$ 639	$ 567
Adjustments to reconcile net earnings to net cash flows from operations:			
Depreciation and tooling amortization	624	684	479
Intangible asset amortization	97	88	89
Restructuring expense, net of cash paid	45	123	135
Stock-based compensation expense	75	62	41
(Gain) loss on sales of businesses	(15)	29	—
Loss on debt extinguishment	—	20	—
Asset impairments	30	14	17
Unrealized loss (gain) on debt and equity securities	73	362	(382)
Deferred income tax (benefit) provision	(65)	(180)	123
Gain on insurance recovery received for property damages	—	(5)	(9)
Other non-cash adjustments	(31)	(31)	(13)
Net earnings adjustments to reconcile to net cash flows from operations	1,859	1,805	1,047
Retirement plan contributions	(26)	(30)	(182)
Changes in assets and liabilities, excluding effects of acquisitions, divestitures and foreign currency translation adjustments:			
Receivables	(564)	(59)	27
Inventories	(215)	(268)	(28)
Prepayments and other current assets	28	11	23
Accounts payable and accrued expenses	438	(134)	186
Prepaid taxes and income taxes payable	63	8	35
Other assets and liabilities	(14)	(27)	76
Net cash provided by operating activities	$ 1,569	$ 1,306	$ 1,184
SUPPLEMENTAL CASH FLOW INFORMATION			
Cash paid during the year for:			
Interest	$ 138	$ 130	$ 97
Income taxes, net of refunds	$ 319	$ 342	$ 205
Non-cash investing transactions:			
Period end accounts payable related to property, plant and equipment purchases	$ 241	$ 142	$ 182

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

Not applicable.

Item 9A. Controls and Procedures

Disclosure Controls and Procedures

A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to costs. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within the Company have been detected. Because of the inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and not be detected. However, the Company's disclosure controls and procedures are designed to provide reasonable assurance of achieving their objectives.

The Company has adopted and maintains disclosure controls and procedures that are designed to provide reasonable assurance that information required to be disclosed in the reports filed or submitted under the Exchange Act, such as this Form 10-K, is recorded, processed, summarized and reported within the time periods specified in the rules and forms of the Securities and Exchange Commission. The Company's disclosure controls and procedures are also designed to provide reasonable assurance that such information is accumulated and communicated to management, as appropriate, to allow timely decisions regarding required disclosure. As required under Exchange Act Rule 13a-15, the Company's management, including the Chief Executive Officer and Chief Financial Officer, has conducted an evaluation of the effectiveness of disclosure controls and procedures as of December 31, 2022, the end of the period covered by this report. Based on that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that the disclosure controls and procedures are effective at the reasonable assurance level.

Management's Report on Internal Control Over Financial Reporting

The Company's management is responsible for establishing and maintaining adequate internal control over financial reporting, as defined in Exchange Act Rule 13a-15(f). Management conducted an assessment of the Company's internal control over financial reporting based on the framework and criteria established by the Committee of Sponsoring Organizations of the Treadway Commission in "Internal Control - Integrated Framework" (2013). Management excluded from its assessment of internal control over financial reporting Santroll Automotive Components, which was acquired on March 31, 2022, Rhombus Energy Solutions, which was acquired on July 29, 2022 and Drivetek AG, which was acquired on December 1, 2022. In aggregate, these acquisitions accounted for less than 1% of consolidated total assets and less than 1% of consolidated net sales, as of and for the year ended December 31, 2022, respectively. Based on the assessment, management concluded that, as of December 31, 2022, the Company's internal control over financial reporting is effective based on those criteria.

PricewaterhouseCoopers LLP, an independent registered public accounting firm, has audited the Company's consolidated financial statements and the effectiveness of internal control over financial reporting as of December 31, 2022 as stated in its report included herein.

Changes in Internal Control over Financial Reporting

There have been no changes in internal control over the financial reporting that occurred during the most recent fiscal quarter that have materially affected or are reasonably likely to materially affect the Company's internal control over financial reporting.

Item 9B. Other Information

Not applicable.

Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections

Not applicable.

PART III

Item 10. Directors, Executive Officers and Corporate Governance

Information with respect to directors, executive officers and corporate governance that appears in the Company’s proxy statement for its 2023 Annual Meeting of Stockholders under the captions “Election of Directors,” “Information on Nominees for Directors,” “Board Committees,” “Compensation Committee Report,” and “Code of Ethics” is incorporated herein by this reference and made a part of this report.

Code of Ethics

The Company has long maintained a Code of Ethical Conduct, updated from time to time, which is applicable to all directors, officers, and employees of the Company. In addition, the Company has adopted a Code of Ethics for CEO and Senior Financial Officers, which applies to the Company’s CEO, CFO, Treasurer, and Controller. Each of these codes is posted on the Company’s website at www.borgwarner.com/investors/corporate-governance. The Company intends to disclose any amendments to, or waivers from, a provision of its Code of Ethical Conduct or Code of Ethics for CEO and Senior Financial Officers on its website within four business days following the date of any amendment or waiver.

Item 11. Executive Compensation

Information with respect to director and executive compensation that will appear in the Company’s proxy statement for its 2023 Annual Meeting of Stockholders under the captions “Director Compensation,” “Compensation Committee Interlocks and Insider Participation,” “Compensation Discussion and Analysis,” “Restricted Stock,” “Long-Term Equity Incentives,” and “Change of Control Agreements and Transitional Income Plan” is incorporated herein by this reference and made a part of this report.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

Information with respect to security ownership and certain beneficial owners and management and related stockholders matters that will appear in the Company’s proxy statement for its 2023 Annual Meeting of Stockholders under the caption “Security Ownership of Certain Beneficial Owners and Management” is incorporated herein by this reference and made a part of this report.

For information regarding the Company's equity compensation plans, see Item 5 “Market for the Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities” in this Annual Report on Form 10-K.

Item 13. Certain Relationships and Related Transactions, and Director Independence

Information with respect to certain relationships and related transactions and director independence that will appear in the Company’s proxy statement for its 2023 Annual Meeting of Stockholders under the captions “Certain Relationships and Related Transactions” and “Independence of the Directors” is incorporated herein by this reference and made a part of this report.

Item 14. Principal Accountant Fees and Services

Information with respect to principal accountant fees and services that will appear in the Company's proxy statement for its 2023 Annual Meeting of Stockholders under the caption "Fees Paid to PwC" is incorporated herein by this reference and made a part of this report.

PART IV

Item 15. Exhibits and Financial Statement Schedules

The information required by Section (a)(3) of Item 15 is set forth on the Exhibit Index that precedes the Signatures page of this Form 10-K. The information required by Section (a)(1) of Item 15 is set forth above in Item 8, Financial Statements and Supplementary Data. All financial statement schedules have been omitted, since the required information is not applicable or is not present in amounts sufficient to require submission of the schedule or because the information required is included in the consolidated financial statements and notes thereto included in this Form 10-K.

Item 16. Form 10-K Summary

Not applicable.

EXHIBIT INDEX

Exhibit Number	Description
1.1	Underwriting Agreement, dated May 12, 2021, among the Company and Deutsche Bank AG, London Branch. Merrill Lynch International, and J.P. Morgan Securities, as lead managers (incorporated by reference to Exhibit 1.1 to the Company’s Current Report on Form 8-K filed on May 13, 2021).
3.1	Composite Restated Certificate of Incorporation of the Company, as amended through July 22, 2022 (incorporated by reference to Exhibit 3.1 to the Company’s Quarterly Report on Form 10-Q for the quarter ended June 30, 2022 filed August 3, 2022).
3.2	Amended and Restated By-Laws of the Company, as amended through April 25, 2018 (incorporated by reference to Exhibit 3.2 to the Company’s Quarterly Report on Form 10-Q for the quarter ended June 30, 2018 filed July 26, 2018).
4.1	Indenture, dated as of February 15, 1999, between Borg-Warner Automotive, Inc. and The Bank of New York Mellon Trust Company, N.A. (successor in interest to The First National Bank of Chicago), as trustee (incorporated by reference to Exhibit No. 4.5 to the Company's Registration Statement No. 333-172198 filed on February 11, 2011).
4.2	Indenture, dated as of September 23, 1999, between Borg-Warner Automotive, Inc. and The Bank of New York Mellon Trust Company, N.A. (successor in interest to Chase Manhattan Trust Company, National Association), as trustee (incorporated by reference to Exhibit No. 4.6 to the Company's Registration Statement 333-172198 filed on February 11, 2011).
4.3	Third Supplemental Indenture, dated as of September 16, 2010, between the Company and The Bank of New York Mellon Trust Company, N.A., as the indenture trustee (incorporated by reference to Exhibit 4.9 to the Company's Registration Statement 333-172198 filed on February 11, 2011).
4.4	Fourth Supplemental Indenture dated as of March 16, 2015, between the Company and The Bank of New York Mellon Trust Company, N.A., as the indenture trustee (incorporated by reference to Exhibit 4.2 to the Company's Current Report on Form 8-K filed March 16, 2015).
4.5	Fifth Supplemental Indenture dated as of November 6, 2015, between the Company and Deutsche Bank Trust Company Americas, as the indenture trustee (incorporated by reference to Exhibit 4.2 to the Company's Current Report on Form 8-K filed November 6, 2015).
4.6	Sixth Supplemental Indenture, dated as of June 19, 2020, between the Company and Deutsche Bank Trust Company Americas, as the indenture trustee (incorporated by reference to Exhibit 4.2 to the Company's Current Report on Form 8-K filed June 19, 2020).
4.7	Seventh Supplemental Indenture, dated as of October 5, 2020, between the Company and Deutsche Bank Trust Company Americas, as the indenture trustee (incorporated by reference to Exhibit 4.2 to the Company's Current Report on Form 8-K filed October 5, 2020).
4.8	Eighth Supplemental Indenture, dated as of May 19. 2021, between the Company and Deutsche Bank Trust Company Americas, as the indenture trustee (incorporated by reference to Exhibit 4.2 to the Company's Current Report on Form 8-K filed May 19, 2021)
4.9	Description of Securities (incorporated by reference to Exhibit 4.6 to the Company’s Annual Report on Form 10-K for the fiscal year ended December 31, 2019 filed February 13, 2020).
10.1	Financing Commitment Side Letter, dated November 16, 2022, by and among BorgWarner Inc., BorgWarner PDS (USA), Inc., and Wolfspeed, Inc.*
10.2	Amendment No. 1 to Credit Agreement, dated as of November 16, 2021, between BorgWarner In. and Bank of America, as administrative agent (incorporated by reference to Exhibit 99.1 on the Company’s Current Report on Form 8-K filed on November 18, 2021).
10.3	Amendment No. 2 to Credit Agreement, dated as of August 31, 2022, between BorgWarner Inc. and Bank of America, as administrative agent (incorporated by reference to Exhibit 10.1 on the Company’s Quarterly Report on Form 10-Q filed for the quarter ended September 30, 2022 on October 27, 2022).

Exhibit Number	Description
10.4	Fourth Amended and Restated Credit Agreement, dated as of March 13, 2020, among the Company, as borrower, the Administrative Agent named therein, and the Lenders that are parties thereto (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed March 16, 2020).
†10.5	Form of 2022 BorgWarner Inc. 2018 Stock Incentive Plan Restricted Stock Agreement for Employees (incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2022 filed on May 4, 2022).
†10.6	Form of 2022 BorgWarner Inc. 2018 Stock Incentive Plan Stock Units Award Agreement for Non-U.S. Employees (incorporated by reference to Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2022 filed on May 4, 2022).
†10.7	Form of 2022 BorgWarner Inc. 2018 Stock Incentive Plan Performance Share Award Agreement (incorporated by reference to Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q filed for the quarter ended March 31, 2022 on May 4, 2022).
†10.8	Form of 2022 BorgWarner Inc. 2018 Stock Incentive Plan Restricted Stock Agreement for Non-Employee Directors.*
†10.9	Form of 2021 BorgWarner Inc. 2018 Stock Incentive Plan Restricted Stock Agreement for Employees (incorporated by reference to Exhibit 10.8 to the Company's Annual Report on Form 10-K for the year ended December 31, 2021 filed on February 15, 2022).
†10.10	Form of 2021 BorgWarner Inc. 2018 Stock Incentive Plan Restricted Stock Units Agreement for Non-U.S. Employees (incorporated by reference to Exhibit 10.9 to the Company's Annual Report on Form 10-K for the year ended December 31, 2021filed on February 15, 2022).
†10.11	Form of 2021 BorgWarner Inc. 2018 Stock Incentive Plan Performance Share Award Agreement (incorporated by reference to Exhibit 10.10 to the Company's Annual Report on Form 10-K for the year ended December 31, 2021 filed on February 15, 2022).
†10.12	Form of 2021 BorgWarner Inc. 2018 Stock Incentive Plan Restricted Stock Agreement for Non-Employee Directors (incorporated by reference to Exhibit 10.11 to the Company's Annual Report on Form 10-K for the year ended December 31, 2021 filed on February 15, 2022).
†10.13	Form of 2020 BorgWarner Inc. 2018 Stock Incentive Plan Restricted Stock Agreement for Employees (incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2020 filed on May 6, 2020).
†10.14	Form of 2020 BorgWarner Inc. 2018 Stock Incentive Plan Restricted Stock Units Agreement for Non-U.S. Employees (incorporated by reference to Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2020 filed on May 6, 2020).
†10.15	Form of 2020 BorgWarner Inc. 2018 Stock Incentive Plan Performance Share Award Agreement (incorporated by reference to Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2020 filed on May 6, 2020).
†10.16	Form of 2020 BorgWarner Inc. 2018 Stock Incentive Plan Restricted Stock Agreement for Non-Employee Directors (incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2020 filed on August 5, 2020).
†10.17	Form of 2019 BorgWarner Inc. 2018 Stock Incentive Plan Restricted Stock Agreement for Employees (incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2019 filed on July 25, 2019).
†10.18	Form of 2019 BorgWarner Inc. 2018 Stock Incentive Plan Restricted Stock Units Agreement for Non-U.S. Employees (incorporated by reference to Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2019 filed on July 25, 2019).
†10.19	Form of 2019 BorgWarner Inc. 2018 Stock Incentive Plan Performance Share Award Agreement for Non-U.S. Employees (incorporated by reference to Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2019 filed on July 25, 2019).

Exhibit Number	Description
†10.20	Form of 2019 BorgWarner Inc. 2018 Stock Incentive Plan Restricted Stock Agreement for Non-Employee Directors (incorporated by reference to Exhibit 10.4 to the Company’s Quarterly Report on Form 10-Q for the quarter ended June 30, 2019 filed on July 25, 2019).
†10.21	Form of 2019 BorgWarner Inc. 2018 Stock Incentive Plan Restricted Stock Agreement for Non-U.S. Directors (incorporated by reference to Exhibit 10.5 to the Company’s Quarterly Report on Form 10-Q for the quarter ended June 30, 2019 filed on July 25, 2019).
†10.22	Amended and Restated BorgWarner Inc. Management Incentive Bonus Plan, effective as of December 31, 2008 (incorporated by reference to Exhibit 10.22 to the Company’s Annual Report on Form 10-K for the year ended December 31, 2018 filed on February 19, 2019).
†10.23	BorgWarner Inc. Retirement Savings Excess Benefit Plan, as amended and restated, effective January 1, 2009 (incorporated by reference to Exhibit 10.23 to the Company’s Annual Report on Form 10-K for the year ended December 31, 2018 filed on February 19, 2019).
†10.24	BorgWarner Inc. Board of Directors Deferred Compensation Plan, as amended and restated, effective January 1, 2009 (incorporated by reference to Exhibit 10.24 to the Company’s Annual Report on Form 10-K for the year ended December 31, 2018 filed on February 19, 2019).
†10.25	First Amendment, dated as of January 1, 2011, to BorgWarner Inc. Board of Directors Deferred Compensation Plan (incorporated by reference to Exhibit 10.25 to the Company’s Annual Report on Form 10-K for the year ended December 31, 2018 filed on February 19, 2019).
†10.26	Second Amendment, dated as of August 1, 2016, to BorgWarner Inc. Board of Directors Deferred Compensation Plan (incorporated by reference to Exhibit 10.31 to the Company's Annual Report on Form 10-K for the year ended December 31, 2016 filed February 9, 2017).
†10.27	Form of Change of Control Employment Agreement entered into by the Company and each of Tonit Calaway, Stefan Demmerle, Brady Ericson, Joe Fadool, Paul Farrell, Davide Girelli, Frederic Lissalde, Kevin Nowlan, Volker Weng, and Tania Wingfield (incorporated by reference to Exhibit 10.4 to the Company’s Quarterly Report on Form 10-K for the quarter ended June 30, 2022 filed on August 3,2022).
†10.28	BorgWarner Inc. 2004 Deferred Compensation Plan, as amended and restated, effective January 1, 2009 (incorporated by reference to Exhibit 10.29 to the Company’s Annual Report on Form 10-K for the year ended December 31, 2018 filed on February 19, 2019).
†10.29	Offer Letter, dated as of March 8, 2019, between BorgWarner Inc. and Kevin A. Nowlan (incorporated by reference to Exhibit 10.1 to the Company’s Quarterly Report on Form 10-Q for the quarter ended March 31, 2019 filed on April 25, 2019).
†10.30	Revised Offer Letter, dated as of June 7, 2020, between BorgWarner Inc. and Daniel R. Etue (incorporated by reference to Exhibit 10.2 to the Company’s Quarterly Report on Form 10-Q for the quarter ended June 30, 2020 filed on August 5, 2020).
†10.31	Employment Agreement, dated as of September 9, 2022, between BorgWarner Inc. and Frederic B. Lissalde (incorporated by reference to Exhibit 10.2 on the Company’s Quarterly Report on Form 10-Q filed for the quarter ended September 30, 2022 on October 27, 2022).
10.32	Distribution and Indemnity Agreement, dated as of January 27, 1993, between Borg-Warner Automotive, Inc. and Borg-Warner Security (incorporated by reference to Exhibit 10.25 to the Company’s Annual Report on Form 10-K/A for the year ended December 31, 2017 filed September 28, 2018).
10.33	Assignment of Trademarks and License Agreement, dated as of November 2, 1994, between Borg-Warner Security Corporation and Borg-Warner Automotive, Inc. (incorporated by reference to Exhibit 10.26 to the Company’s Annual Report on Form 10-K/A for the year ended December 31, 2017 filed September 28, 2018).
10.34	Amendment to Assignment of Trademarks and License Agreement, dated as of July 31, 1998, between Borg-Warner Security Corporation and Borg-Warner Automotive, Inc. (incorporated by reference to Exhibit 10.27 to the Company’s Annual Report on Form 10-K/A for the year ended December 31, 2017 filed September 28, 2018).
21.1	Subsidiaries of the Company.*
23.1	Independent Registered Public Accounting Firm's Consent.*

Exhibit Number	Description
31.1	Rule 13a-14(a)/15d-14(a) Certification by Principal Executive Officer.*
31.2	Rule 13a-14(a)/15d-14(a) Certification by Principal Financial Officer.*
32.1	Section 1350 Certifications.*
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.*
104.1	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101).*

*Filed herewith.

† Indicates a management contract or compensatory plan or arrangement.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) 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.

BORGWARNER INC.

By: /s/ Frederic B. Lissalde
Frederic B. Lissalde
President and Chief Executive Officer

Date: February 9, 2023

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following person on behalf of the registrant and in the capacities indicated on the 9th day of February, 2023.

Signature	Title
/s/ Frederic B. Lissalde Frederic B. Lissalde	President and Chief Executive Officer (Principal Executive Officer) and Director
/s/ Kevin A. Nowlan Kevin A. Nowlan	Executive Vice President and Chief Financial Officer (Principal Financial Officer)
/s/ Craig D. Aaron Craig D. Aaron	Vice President and Controller (Principal Accounting Officer)
/s/ Sara A. Greenstein Sara A. Greenstein	Director
/s/ David S. Haffner David S. Haffner	Director
/s/ Michael S. Hanley Michael S. Hanley	Director
/s/ Shaun E. McAlmont Shaun E. McAlmont	Director
/s/ Deborah D. McWhinney Deborah D. McWhinney	Director
/s/ Alexis P. Michas Alexis P. Michas	Director and Non-Executive Chairman
/s/ Sailaja K. Shankar Sailaja K. Shankar	Director
/s/ Hau N. Thai-Tang Hau N. Thai-Tang	Director

Directors and Officers

BOARD OF DIRECTORS

Alexis P. Michas (1, 4, 5)
Managing Partner, Juniper Investment Company, LLC

Frédéric B. Lissalde (5)
President and Chief Executive Officer, BorgWarner Inc.

Sara A. Greenstein (3, 4)
President and Chief Executive Officer, Axel Johnson Inc.

Michael S. Hanley (2, 5)
Retired Global Automotive Leader, Ernst & Young LLP

Dr. Shaun E. McAlmont (3, 4)
President and Chief Executive Officer, Ninjio, LLC

Deborah D. McWhinney (2, 3)
Retired Chief Executive Officer of Global Enterprise Payments, Citigroup Inc.

Sailaja K. Shankar (2, 3)
Senior Vice President, Engineering of the Security Business Group, Cisco Systems Inc.

Hau N. Thai-Tang (2)
Former Chief Industrial Platform Officer, Ford Motor Company

(1) Non-Executive Chair of the Board
(2) Member of the Audit Committee, of which Director Hanley is the Chair
(3) Member of the Compensation Committee, of which Director McWhinney is the Chair
(4) Member of the Corporate Governance Committee, of which Director Michas is the Chair
(5) Member of the Executive Committee, of which Director Michas is the Chair

OFFICERS

Frédéric B. Lissalde
President and Chief Executive Officer

Kevin A. Nowlan
Executive Vice President, Chief Financial Officer

Tonit M. Calaway
Executive Vice President, Chief Administrative Officer, General Counsel and Secretary

Tania Wingfield
Executive Vice President, Chief Human Resources Officer

Craig D. Aaron
Vice President and Controller

Stefan Demmerle
Vice President and President and General Manager, PowerDrive Systems

Brady D. Ericson
Vice President and President and General Manager, Fuel Injection Systems and Aftermarket

Daniel R. Etue
Vice President and Treasurer

Joseph F. Fadool
Vice President and President and General Manager, Emissions, Thermal and Turbo Systems

Paul A. Farrell
Executive Vice President and Chief Strategy Officer

Isabelle McKenzie
Vice President and President and General Manager, Morse Systems

Volker Weng
Vice President and President and General Manager, Drivetrain & Battery Systems

BorgWarner Inc.
World Headquarters
3850 Hamlin Road
Auburn Hills, MI 48326