2020 Annual Report

We make what matters work.*

EATON

Powering Business Worldwide

2020

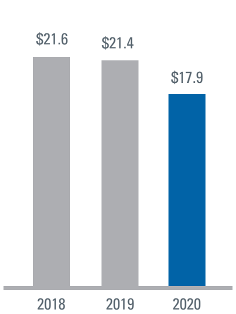
BUILDING ON OUR PROGRESS, delivering on our promises

*Our future has never been brighter. We're focusing on some of the most important secular trends that we've experienced in our lifetime to accelerate our growth and deliver higher, more consistent earnings:

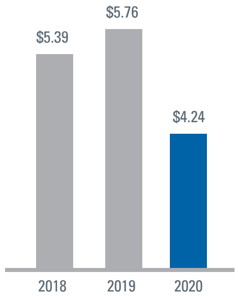
- Explosive growth in connectivity
- Energy transition driven by climate change
- Rapid growth in electrification

THERE IS NO BETTER TIME THAN NOW TO BE AN INTELLIGENT POWER MANAGEMENT COMPANY.

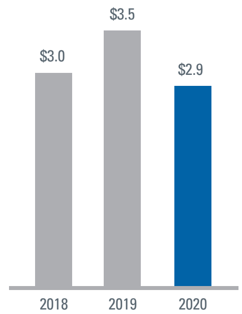
2020 financial highlights



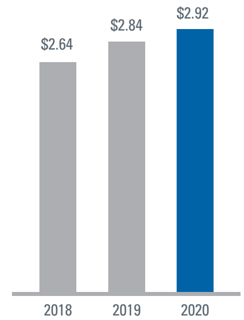
NET SALES
(Billions of dollars)



EARNINGS PER ORDINARY SHARE EXCLUDING ADJUSTMENTS
(Dollars per share)[1]



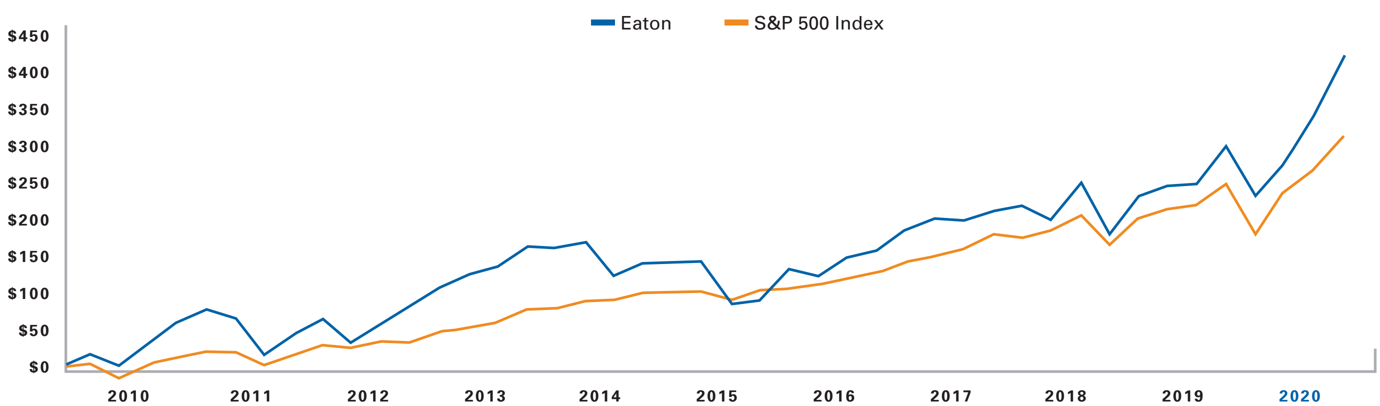
CASH FLOW FROM OPERATIONS
(Billions of dollars)[2]



DIVIDENDS PER ORDINARY SHARE
(Dollars per share)

(In millions except for per share data)	2020	2019	2018
Net sales	$17,858	$21,390	$21,609
Net income attributable to Eaton ordinary shareholders	1,410	2,211	2,145
Adjustments[1]			
Acquisition and divestiture charges	133	174	–
Restructuring program charges	170	–	–
Expected Vehicle segment warranty costs	–	39	–
Arbitration decision expense	–	–	206
Earnings excluding adjustments[1]	$1,713	$2,424	$2,351
Net income per share attributable to Eaton ordinary shareholders–diluted	$3.49	$5.25	$4.91
Adjustments[1]			
Acquisition and divestiture charges	0.33	0.42	–
Restructuring program charges	0.42	–	–
Expected Vehicle segment warranty costs	–	0.09	–
Arbitration decision expense	–	–	0.48
Earnings per ordinary share excluding adjustments[1]	**$4.24**	**$5.76**	**$5.39**
Weighted-average number of ordinary shares outstanding-diluted	404.0	420.8	436.9
Cash dividends declared per ordinary share	$2.92	$2.84	$2.64
Cash flow from operations[2]	$2,944	$3,451	$2,955
Total assets	31,824	32,805	31,092
Eaton shareholders' equity	14,930	16,082	16,107

COMPANY STOCK PERFORMANCE



This graph compares the cumulative total return to shareholders for Eaton and the S&P 500 Index over the time period 2010 through 2020. The shareholder returns reflected on the graph assume dividends were reinvested as of the ex-dividend date.

1. Net income attributable to Eaton ordinary shareholders of $1,410 for 2020 was $1,713 excluding $133 from the after-tax expense of acquisition and divestiture charges and $170 from the after-tax expense of a multi-year restructuring program Eaton decided to undertake in 2020. Net income per share attributable to Eaton ordinary shareholders-diluted of $3.49 for 2020 was $4.24 excluding $0.33 per share expense from acquisition and divestiture charges and $0.42 per share expense from a multi-year restructuring program. Net income attributable to Eaton ordinary shareholders of $2,211 for 2019 was $2,424 excluding $174 from the after-tax expense of acquisition and divestiture charges and $39 from the after-tax expense for expected warranty costs in the Vehicle segment to correct the performance of a product which incorporated a defective part from a supplier. Net income per share attributable to Eaton ordinary shareholders-diluted of $5.25 for 2019 was $5.76 excluding $0.42 per share expense from acquisition and divestiture charges and $0.09 per share expense from expected warranty costs in the Vehicle segment. Net income attributable to Eaton ordinary shareholders of $2,145 for 2018 was $2,351 excluding $206 from the after-tax expense for an arbitration decision related to the legacy Cooper Industries business acquired in 2012. Net income per share attributable to Eaton ordinary shareholders-diluted of $4.91 for 2018 was $5.39 excluding $0.48 per share expense from the arbitration decision.
2. Operating cash flow in 2018 was $2,955 excluding the $297 payment made for the arbitration decision related to the legacy Cooper Industries business acquired in 2012.

2020: Building on our progress, delivering on our promises

To our shareholders: In a year defined by crises – the COVID-19 pandemic, widespread civil unrest, an urgent need to address climate change, and a global economic downturn – we united as a company to keep our promises to our customers, our employees, and to society.

From the outset of the pandemic, Eaton products and services were deemed critical to our global infrastructure. By implementing our comprehensive disaster preparedness plan and employing rigorous protocols to keep our employees safe, we were able to remain open and meet our customers' needs throughout the crisis.

The past year was also a time of reckoning for society as the fight for racial equality took on renewed urgency. Our employees responded with empathy and compassion, speaking out against injustice and inequality around the world and supporting local initiatives where we could make a measurable impact. One local example included an effort to close the digital divide in Cleveland, Ohio.

The need for climate action also intensified in the year. At Eaton, we believe that what's good for the planet is also good for our business. So, in support of our leadership on environmental, social, and corporate governance (ESG) matters, we announced our commitment to become carbon neutral by 2030. And we're already making solid progress toward this goal.

Finally, although the economic crisis had a profound impact on our end markets, we delivered better-than-expected financial results and had one of our best years ever in total shareholder returns. This is clear evidence of how we're becoming a stronger company.

These results would not have been possible without the extraordinary efforts of our employees. Throughout the year, they continued to lead with our values, focusing on meeting the needs of all our stakeholders – our colleagues, our customers and suppliers, our communities, and our shareholders.

A year of progress

Despite the historic impacts of the pandemic, the year was also defined by a number of notable achievements across the company.

- **We announced and made strong progress toward achieving our science-based emissions targets.** In alignment with our comprehensive ESG strategy, we announced plans to cut emissions from our operations by 50 percent by 2030. In 2020, we achieved a 19 percent reduction in greenhouse gas emissions at our manufacturing sites, bringing us closer to our 2030 goal. In addition, as of year's end, 60 percent of our manufacturing sites were certified zero waste-to-landfill, marking a 5 percent increase over 2019. Our goal is for 100 percent of our sites to achieve this certification by 2030.

- **We advanced our goal to become a model of inclusion and diversity.** In further support of our ESG efforts, we celebrated a milestone in the evolution of our board, with 50 percent of our directors now either women or U.S. minorities. This builds on the strength of our global leadership team, 54 percent of whom are U.S. minorities. And in 2020, we strengthened our supplier diversity program, purchasing approximately $1.9 billion in goods and services from small and diverse suppliers, and growing our business with women-owned businesses by approximately 7 percent and with veteran-owned businesses by nearly 5 percent over 2019.

- **We made significant portfolio moves.** In the first quarter, we completed the sale of our Lighting business and announced the sale of our Hydraulics business. In addition, we completed the acquisition of Power Distribution, Inc., a supplier of power distribution, static switching, and power monitoring equipment and services for data centers and industrial and commercial customers, and announced plans to acquire a 50 percent stake in low-voltage circuit breaker manufacturer HuanYu High Tech. More recently, we signed agreements to acquire Tripp Lite, a supplier of power quality products and connectivity solutions for data centers, industrial, medical, and communications markets, and Cobham Mission Systems, a manufacturer of air-to-air refueling systems, environmental systems, and actuation primarily for defense markets. These moves will enable us to invest heavily in high-growth and high-margin strategic areas of our business.

- **We built momentum around our digital transformation – a critical step in our transformation into an intelligent power management company.** We created the Eaton Digital Office and introduced Brightlayer™, our market-facing platform that allows us to monetize our data through new insights and software. The impact of these efforts will significantly accelerate our growth, generating an anticipated $500 million in additional revenue for our company by 2025.

- **We strengthened our communities.** In addition to meeting the needs of our customers during the pandemic, we produced protective face shields, surgical masks, and created a number of innovative tools designed to protect health care professionals from COVID-19. Outside of Eaton, our employees were also busy making a difference. They donated thousands of volunteer hours, collected and distributed medical supplies, donated personal protective equipment, and provided food and essential items to those in need. And our colleagues in more than two dozen countries contributed to our global COVID-19 relief matching gift program, providing vital funding to support the pandemic response.

// We returned **$2.8B** to our shareholders... //

- **We delivered the best safety performance in our company's history.** In addition to implementing and adhering to rigorous pandemic protocols, we saw outstanding results in our traditional safety measures. In 2020, we delivered the largest-ever annual decreases in severe and overall injuries and exceeded world-class benchmarks in both our total recordable case rate and days away case rate metrics.

// Dividends totaled **$1.2B** //

- **We flexed our business and delivered better-than-expected financial results.** Despite the challenges of 2020, our team continued to perform during the economic downturn, maintaining our focus on organic growth, delivering strong margins, and generating very strong free cash flow. Earnings per share for 2020 were $3.49. Excluding charges of $0.33 per share related to acquisitions and divestitures and $0.42 per share related to a multi-year restructuring program, adjusted earnings per share were $4.24. And our segment margins were strong, coming in at 16.4 percent, with a decremental margin of 23 percent. Our operating cash flow remained resilient at $2.9 billion and free cash flow was $2.6 billion. Free cash flow as a percentage of revenues was 14.3 percent, 90 basis points over 2019 and an all-time record.[1]

- **We delivered for our shareholders.** We returned $2.8 billion to our shareholders in the form of dividends and share repurchases. Dividends totaled $1.2 billion, and share repurchases totaled $1.6 billion, representing 4 percent of our shares outstanding at the beginning of 2020. In addition, we saw a 27 percent increase in our stock price during the year. When combined with our dividend payout, we generated a total shareholder return of 31 percent – the third highest among our 18 peers for the year.

2020 **milestones**

Half of our Board of Directors are women or U.S. minorities.

We committed to becoming carbon neutral in our operations by 2030.

We created the Eaton Digital Office and launched our new market-facing Brightlayer platform.

We recorded the best safety performance in company history.

A look ahead

While some of the challenges of 2020 remain with us, we believe our future has never been brighter. The advances we made this past year have positioned us for continued success in 2021 and beyond. And societal trends are on our side. We are at the beginning stages of what we think are some of the most important secular growth trends that we will experience in our lifetime – rapid growth in electrification, an energy transition driven by climate change, and explosive growth in connectivity. These three trends are perfectly aligned with our direction and they will allow us to accelerate our rate of growth and deliver higher and more consistent earnings for years to come. There is no better time than now to be an intelligent power management company, and there is no better time than now to be an investor in Eaton.

A trusted partner

Finally, I want to acknowledge Rick Fearon, our longtime vice chairman and chief financial and planning officer, for his extraordinary service to our company. Over the years, Rick has been instrumental in shaping Eaton into the company it is today and has served as a trusted partner to our senior leadership team, our board, and certainly to me. We wish him and his family all the best as he enters retirement.

In closing

It's often through crises that the true character of an individual, an organization or a society is revealed. Over the course of the year, Eaton demonstrated that we are a company that leads by its values and will continue to do so, no matter what challenges lie ahead.

On behalf of our 92,000 employees and our partners around the world, thank you for your continued confidence in our company. Throughout our history, our investors have helped us deliver on our promise to improve the quality of life of people and our planet. With your sustained support, we'll continue to pursue our mission and make meaningful contributions to society. And we'll do all we can to serve as a beacon of hope in a world that needs more empathy, compassion and unity.

Stay healthy, stay safe.

Craig Arnold
Chairman and Chief Executive Officer

[1] In 2020, free cash flow of $2.6 billion was operating cash flow of $2.9 billion less capital expenditures of $0.4 billion. In 2019, free cash flow of $2.9 billion was operating cash flow of $3.5 billion less capital expenditures of $0.6 billion.

2020 **financial highlights**

3rd

Ranked 3rd among our 18 peer companies in total shareholder return

$2.9B

Operating cash flow

$4.24

Adjusted earnings per share*

*See page 3

Creating a sustainable enterprise

The climate emergency we face is no longer an abstract issue for scientists to resolve. It's happening now, and it's a crisis for every continent, every nation and every individual. Climate action simply can't wait. Current and emerging global challenges have made the focus on sustainability more urgent than ever.

At Eaton, sustainability is at the core of our mission to improve the quality of life and the environment. Our sustainability efforts are also aligned with the Business Roundtable's commitment to address climate change through a collection of actions that will lead to the reduction of greenhouse gas (GHG) emissions on a global basis. We believe that meaningful efforts to support the environment are fundamental to creating value, so we've significantly expanded our sustainability commitments.

We are doing our part to limit climate change and mitigate its catastrophic effects by setting science-based targets. We've also established new standards for stronger governance, for increased transparency, and for higher levels of support that we will provide to our communities.

We recently set ambitious sustainability targets, which include achieving the following by 2030:

Growth and customer solutions

- **Invest $3 billion** in research and development to create sustainable product solutions
- **Reduce emissions** from our installed base of products and upstream sources by 15 percent
- **Leverage our leadership** in providing efficient solutions to accelerate the global energy transition

Operational excellence

- **Reduce our GHG emissions** in our operations by 50 percent from 2018 levels
- **Certify 100 percent** of our manufacturing sites as zero waste-to-landfill
- **Achieve carbon neutrality** in our operations by 2030

Employee development and engagement

- **Achieve and maintain** employee engagement scores of 80 percent or higher
- **Record 250,000 hours** of employee volunteer time annually
- **Provide 12 hours** of training and development per employee per year

Shareholder information (This content was not included in our 10-K SEC filing.)

Annual general meeting of shareholders

The company's 2021 Annual General Meeting of Shareholders will be held virtually at http://www.virtualshareholdermeeting.com/ETN2021 at 9:00 a.m. Eastern time (2:00 p.m. Irish time) on Wednesday, April 28, 2021. Formal notice of the meeting will be made available on or about March 19, 2021, to each shareholder of record as of March 1, 2021.

Most Eaton shareholders will not receive a mailed copy of the Proxy Statement and Annual Report to Shareholders, but rather a notice that these materials are available online. Eaton shareholders who currently receive paper copies, due to a prior election or due to participation in an employee benefit plan, can register for electronic delivery of these materials as well as online proxy voting, at http://enroll.icsdelivery.com/etn.

Annual report to shareholders

This 2020 Annual Report to Shareholders is available online at Eaton.com/annualreport. Any shareholder may obtain at no charge a printed copy of this Annual Report upon written request to the address shown below. Other public financial reports are also available on Eaton's website at Eaton.com.

Annual certifications

The most recent certifications required by Sections 302 and 906 of the Sarbanes-Oxley Act of 2002 were filed as Exhibits 31.1, 31.2, 32.1 and 32.2 to Eaton's Annual Report on Form 10-K for 2020. Additionally, Eaton submitted to the New York Stock Exchange its 2020 Chief Executive Officer Certification regarding Eaton's compliance with the corporate governance listing standards of the Exchange.

Dividend reinvestment plan

A dividend reinvestment plan is available at no charge to shareholders of record of Eaton Ordinary Shares. Through the plan, shareholders of record may buy additional shares by reinvesting their cash dividends or investing additional cash up to $60,000 per year.

Direct deposit of dividends

Shareholders of record may have their dividends directly deposited into their bank accounts. Interested shareholders of record should contact Broadridge, as shown below.

Forward-looking statements

This Annual Report to Shareholders, including the Chairman's letter, contains forward-looking statements concerning expectations for the future and our corporate strategy, in addition to the forward-looking statements made in the Form 10-K included in this Annual Report. These statements should be used with caution and are subject to various risks and uncertainties, many of which are outside of Eaton's control. Please see the factors described in the paragraph under the heading "Forward-Looking Statements" on page 93 of the Form 10-K included in this Annual Report to Shareholders for a discussion of the factors that could cause actual results to differ materially from these forward-looking statements.

Broadridge corporate issuer solutions

Regular Mail: P.O. Box 1342, Brentwood, NY 11717
Registered/Overnight Packages: ATTN: IWS, 1155 Long Island Ave., Edgewood, NY 11717
Phone: +1 888.597.8625 (U.S. & Canada) +1 303.562.9631 (Toll)
TDD: +1 855.627.5080 (hearing impaired inside the U.S.) | TDD: +1 720.399.2074 (hearing impaired outside the U.S.)
Email: shareholder@broadridge.com | Website: https://shareholder.broadridge.com/eaton-corp/

Eaton shareholder contact information

Investor Relations, Eaton, 1000 Eaton Boulevard, Cleveland, OH 44122 USA +1 440.523.3634. Eaton.com

Quarterly financial releases

Eaton's financial results are available approximately four weeks after the end of each quarter.
Releases are available on Eaton's website at Eaton.com. Copies may also be obtained by calling +1 440.523.3634.

Common shares

Listed for trading: New York Stock Exchange (Ticker Symbol: ETN)

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

FORM 10-K

Annual report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

For the year ended December 31, 2020

Commission file number 000-54863

EATON CORPORATION plc

(Exact name of registrant as specified in its charter)

Ireland	98-1059235
(State or other jurisdiction of incorporation or organization)	(IRS Employer Identification Number)
Eaton House, 30 Pembroke Road, Dublin 4, Ireland	D04 Y0C2
(Address of principal executive offices)	(Zip Code)

+353 1637 2900

(Registrant's telephone number, including area code)

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

Title of each class	Trading Symbol	Name of each exchange on which registered
Ordinary shares ($0.01 par value)	ETN	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. (Check one):

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 Act). Yes ☐ No ☑

The aggregate market value of Ordinary Shares held by non-affiliates of the registrant as of June 30, 2020 was $35.0 billion.

As of January 31, 2021, there were 398.1 million Ordinary Shares outstanding.

Documents Incorporated By Reference

Portions of the Proxy Statement for the 2021 annual shareholders meeting are incorporated by reference into Part III.

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Part I

Item 1. Business.

Eaton Corporation plc (Eaton or the Company) is a power management company with 2020 net sales of $17.9 billion. Eaton’s mission is to improve the quality of life and the environment through the use of power management technologies and services. We provide sustainable solutions that help our customers effectively manage electrical, hydraulic and mechanical power – more safely, more efficiently and more reliably. Eaton has approximately 92,000 employees in 60 countries and sells products to customers in more than 175 countries.

Eaton electronically files or furnishes reports pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (Exchange Act) to the United States Securities and Exchange Commission (SEC), including annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and proxy and information statements, as well as any amendments to those reports. As soon as reasonably practicable, these reports are available free of charge through the Company's website at www.eaton.com. These filings are also accessible on the SEC's website at www.sec.gov.

COVID-19

Information related to the impact of the COVID-19 pandemic on the Company is presented in “Management's Discussion and Analysis of Financial Condition and Results of Operations” of this Form 10-K.

Acquisitions and Divestitures of Businesses

Information regarding the Company's acquisitions and divestitures is presented in Note 2 of the Notes to the Consolidated Financial Statements.

Business Segment Information

Information by business segment regarding principal products, principal markets, methods of distribution and net sales is presented in Note 17 of the Notes to the Consolidated Financial Statements. Additional information regarding Eaton's segments and business is presented below.

Electrical Americas and Electrical Global

Principal methods of competition in these segments are performance of products and systems, technology, customer service and support, and price. Eaton has a strong competitive position in these segments and, with respect to many products, is considered among the market leaders. In normal economic cycles, sales of these segments are historically lower in the first quarter and higher in the third and fourth quarters of a year. In 2020, 20% of these segments' sales were made to six large distributors of electrical products and electrical systems and services.

Hydraulics

Principal methods of competition in this segment are product performance, geographic coverage, service, and price. Eaton has a strong competitive position in this segment and, with respect to many products, is considered among the market leaders. In 2020, 18% of this segment's sales were made to six large original equipment manufacturers or distributors of agricultural, construction, and industrial equipment and parts.

Aerospace

Principal methods of competition in this segment are total cost of ownership, product and system performance, quality, design engineering capabilities, and timely delivery. Eaton has a strong competitive position in this segment and, with respect to many products and platforms, is considered among the market leaders. In 2020, 22% of this segment's sales were made to four large original equipment manufacturers of aircraft.

Vehicle

Principal methods of competition in this segment are product performance, technology, global service, and price. Eaton has a strong competitive position in this segment and, with respect to many products, is considered among the market leaders. In 2020, 38% of this segment's sales were made to four large original equipment manufacturers of vehicles and related components.

eMobility

Principal methods of competition in this segment are product performance, technology, global service, and price. Eaton has a strong competitive position in this segment. In 2020, 25% of this segment's sales were made to five large original equipment manufacturers of vehicles, construction equipment and related components.

Information Concerning Eaton's Business in General

Raw Materials

Eaton's major requirements for raw materials include iron, steel, copper, nickel, aluminum, brass, tin, silver, lead, titanium, rubber, plastic, electronic components, chemicals, and fluids. Materials are purchased in various forms, such as extrusions, castings, powder metal, metal sheets and strips, forging billets, bar stock, and plastic pellets. Raw materials, as well as parts and other components, are purchased from many suppliers. Under normal circumstances, the Company has no difficulty obtaining its raw materials. In 2020, Eaton maintained appropriate levels of inventory to prevent shortages and stayed in close contact with its suppliers to manage the impact of the COVID-19 pandemic on the supply chain.

Patents and Trademarks

Eaton considers its intellectual property, including without limitation patents, trade names, domain names, trademarks, confidential information, and trade secrets to be of significant value to its business as a whole. The Company's products are manufactured, marketed and sold using a portfolio of patents, trademarks, licenses, and other forms of intellectual property, some of which expire in the future. Eaton develops and acquires new intellectual property on an ongoing basis and considers all of its intellectual property to be valuable. Based on the broad scope of the Company's product lines, management believes that the loss or expiration of any single intellectual property right would not have a material effect on Eaton's consolidated financial statements or its business segments. The Company's policy is to file applications and obtain patents for the majority of its novel and innovative new products including product modifications and improvements.

Environmental Contingencies

Operations of the Company involve the use and disposal of certain substances regulated under environmental protection laws. Eaton continues to modify processes on an ongoing, regular basis in order to reduce the impact on the environment, including the reduction or elimination of certain chemicals used in, and wastes generated from, operations. Compliance with laws that have been enacted or adopted regulating the discharge of materials into the environment, or otherwise relating to the protection of the environment, are not expected to have a material adverse effect upon earnings or the competitive position of the Company. Eaton's estimated capital expenditures for environmental control facilities are not expected to be material for 2021 and 2022. Information regarding the Company's liabilities related to environmental matters is presented in Note 10 of the Notes to the Consolidated Financial Statements.

Human Capital Management

Eaton has approximately 92,000 employees globally. The number of persons employed by our reportable segments and corporate in 2020 was as follows:

(In thousands)	2020
Electrical Americas	27
Electrical Global	25
Hydraulics	10
Aerospace	10
Vehicle	11
eMobility	1
Corporate	8
Total number of persons employed	92

Eaton uses and monitors a variety of metrics to ensure our objectives related to employee attraction, development, and retention are met. Most notably, Eaton tracks the following:

Diversity

Eaton is committed to having a workforce that is diverse and inclusive at all levels, reflecting the diversity of our customers and communities. Our success depends on our ability to attract and retain the best employees without regard to race, color, social or economic status, religion, national origin, marital status, age, veteran status, sexual orientation, gender identity, or any protected status. It is the policy of the Company to make all decisions regarding employment, including hiring, compensation, training, promotions, transfers, or lay-offs, based on the principle of equal employment opportunity and without discrimination. At December 31, 2020, Eaton's distribution by gender, and United States distribution by minority status, was as follows:

(As of December 31, 2020)	Total Global	Number of women	Percentage of women	U.S. total	Number of minorities (U.S. only)	Percentage of minorities (U.S. only)
Board of directors	12	4	33.3 %	9	2	22.2 %
Global leadership team	26	5	19.2 %	24	13	54.2 %
Executives	594	126	21.2 %	412	73	17.7 %
Managers	7,479	1,705	22.8 %	3,877	698	18.0 %
All other employees	83,888	27,722	33.0 %	21,522	7,276	33.8 %
All employees	91,987	29,558	32.1 %	25,835	8,060	31.2 %

At Eaton, one of our aspirational goals is to be a model of inclusion and diversity among our peers. Our plan to achieve this goal encompasses a number of actions, including a detailed examination into our programs, practices, processes, and policies to look for opportunities to strengthen our support of underrepresented individuals, groups and businesses across our operations.

Compensation

A key component of Eaton's attraction and retention strategy is competitive compensation. Eaton regularly benchmarks its compensation strategies with industry peers to maintain a top performing workforce. Eaton's 2020 total employee costs was $5.2 billion. The total compensation of our median employee on October 1, 2019, as reported in our 2020 Proxy Statement filed in March 2020, and as calculated in accordance with Item 402(u) of Regulation S-K, was $57,712.

Safety

Throughout our operations, our goal is to have no safety incidents. In 2019 we reduced our Total Recordable Case Rate (TRCR) by 16% (0.54) and our Days Away Case Rate (DACR) by 4% (0.23) compared to 2018. Our TRCR of 0.54 approaches our long-term goal of 0.50, which we believe is a world-class safety rate.

Further, in 2020, the Company took a number of measures to protect our workforce from the COVID-19 pandemic, including the following:

- Training our employees at sites around the world in cleaning and disinfecting protocols
- Enacting social distancing procedures, staggered shifts, a rotating office work schedule, and modified workspace and meeting space layouts
- Requiring employees to stay at home if they are feeling ill, and encouraging increased hand washing and hygiene practices across all sites
- Advising employees to take advantage of flexible work options
- Restricting visitors to all sites
- Consulting regularly with doctors and health care organizations
- Updating the Company's response plan as new information became available

In the event an employee suspects they have been exposed to COVID-19, or testing confirms it, sites will implement a response plan that includes:

- Communication with all who may have been exposed
- Disinfecting work stations and common areas
- Shutting down the facility if warranted

These actions are aligned with preventive health protocols of governmental authorities and health organizations including the Centers for Disease Control (U.S.) and the World Health Organization.

Achieving work-life balance

Achieving work-life balance is a common concern of today's employees. Flexible work solutions and inclusive programs will help us remain competitive in attracting and retaining the best talent and make it possible for employees in varied situations to be able to remain at Eaton. Flexible solutions include compressed work weeks, remote working, job sharing, part-time work, flextime, and telework.

Engagement

Fully engaged employees are more productive, innovative, and satisfied in their work. Examples of how we engage our employees include enterprise-wide town halls, hosting informal listening meetings and surveying groups of employees on specific subjects. In addition, we have programs focused on career development of employees at all levels. Our 2018 survey on employee engagement showed a favorable response from 81 percent of employees who completed it. This group reported that they were proud to work at Eaton, felt personal accomplishment from their work, and would recommend Eaton as a place to work. We are committed to a wide range of strategies designed to improve and sustain employee engagement over the long-term.

Item 1A. Risk Factors.

Among the risks that could materially adversely affect Eaton's businesses, financial condition or results of operations are the following:

Operational Risks

The coronavirus (COVID-19) outbreak has negatively impacted our results of operations.

As a result of the COVID-19 pandemic outbreak, authorities have implemented measures to try to contain the virus, such as travel bans and restrictions, shelter-in place-orders, and shut downs, and consumers have changed their demand patterns. As a result, our operations and financial results have been impacted. The degree to which COVID-19 impacts our future results will depend on future developments, which are highly uncertain and cannot be predicted, including, but not limited to, the duration and spread of the outbreak, its severity, the actions to contain the virus or treat its impact, and how quickly and to what extent normal economic and operating conditions resume.

If Eaton is unable to protect its information technology infrastructure against service interruptions, data corruption, cyber-based attacks or network security breaches, product or service offerings could be compromised or operations could be disrupted or data confidentiality impaired.

Eaton relies on information technology networks and systems, including the Internet, to process, transmit and store electronic information, and to manage or support a variety of business processes and activities, including procurement, manufacturing, distribution, invoicing and collection. These technology networks and systems may be susceptible to damage, disruptions or shutdowns due to failures during the process of upgrading or replacing software, databases or components; power outages; hardware failures; or computer viruses. In addition, security breaches could result in unauthorized disclosure of confidential information. If these information technology systems suffer severe damage, disruption, breach, or shutdown, and business continuity plans do not effectively resolve the issues in a timely manner, there could be a negative impact on operating results or the Company may suffer financial or reputational damage. Further, Cyber-based risks could also include attacks targeting the security, integrity and/or reliability of the hardware, software and information installed, stored or transmitted in our products, including after the purchase of those products and when they are incorporated into third party products, facilities or infrastructure. Such attacks could result in disruptions to third party systems, unauthorized release of confidential or otherwise protected information and corruption of data (our own or that of third parties). Further, to a significant extent, the security of our customers' systems depends on how those systems are protected, configured, updated and monitored, all of which are typically outside our control.

Eaton's operations depend on production facilities throughout the world, which subjects them to varying degrees of risk of disrupted production.

Eaton manages businesses with manufacturing facilities worldwide. The Company's manufacturing facilities and operations could be disrupted by a natural disaster, labor strike, war, political unrest, terrorist activity, economic upheaval, or public health concerns such as the spread of COVID-19. Any such disruption could cause delays in shipments of products and the loss of sales and customers, and insurance proceeds may not adequately compensate for losses.

Eaton uses a variety of raw materials and components in its businesses, and significant shortages, price increases, or supplier insolvencies could increase operating costs and adversely impact the competitive positions of Eaton's products.

Eaton's major requirements for raw materials are described above in Item 1 "Raw Materials". Significant shortages could affect the prices Eaton's businesses are charged and the competitive position of their products and services, all of which could adversely affect operating results.

Further, Eaton's suppliers of component parts may increase their prices in response to increases in costs of raw materials that they use to manufacture component parts. The Company may not be able to increase its prices commensurately with its increased costs, adversely affecting operating results.

Industry and Market Risks

Volatility of end markets that Eaton serves.

Eaton's segment revenues, operating results, and profitability have varied in the past and may vary from quarter to quarter in the future. Profitability can be negatively impacted by volatility in the end markets that Eaton serves. The Company has undertaken measures to reduce the impact of this volatility through diversification of the markets it serves and expansion of the geographic regions in which it operates. Future downturns in any of the markets could adversely affect revenues, operating results, and profitability.

Eaton's operating results depend in part on continued successful research, development, and marketing of new and/or improved products and services, and there can be no assurance that Eaton will continue to successfully introduce new products and services or maintain its present market positions.

The success of new and improved products and services depends on their initial and continued acceptance by Eaton's customers. The Company's businesses are affected, to varying degrees, by technological change and corresponding shifts in customer demand, which could result in unpredictable product transitions or shortened life cycles. Eaton may experience difficulties or delays in the research, development, production, or marketing of new products and services which may prevent Eaton from recouping or realizing a return on the investments required to bring new products and services to market. The Company's market positions may also be impacted by new entrants into Eaton's product or regional markets.

Legal and Regulatory Risks

Eaton's global operations subject it to economic risk as Eaton's results of operations may be adversely affected by changes in government legislation, regulations and policies, or currency fluctuations.

Operating globally subjects Eaton to changes in government regulations and policies in a large number of jurisdictions around the world, including those related to tariffs and trade barriers, investments, property ownership rights, taxation, data privacy, and exchange controls. Changes in the relative values of currencies occur from time to time and could affect Eaton's operating results. While the Company monitors exchange rate exposures and attempts to reduce these exposures through hedging activities, these risks could adversely affect operating results.

Further, existing free trade laws and regulations provide certain beneficial duties and tariffs for qualifying imports and exports, subject to compliance with applicable classification and other requirements. Changes in laws or policies governing the terms of foreign trade, and in particular increased trade restrictions, tariffs or taxes on imports from countries where we manufacture products, could have an impact on our business and financial results.

Eaton may be subject to risks relating to changes in its tax rates or exposure to additional income tax liabilities.

Eaton is subject to income taxes in many jurisdictions around the world. Income tax liabilities are subject to the allocation of income among various tax jurisdictions. The Company's effective tax rate could be affected by changes in the mix among earnings in countries with differing statutory tax rates, changes in the valuation allowance of deferred tax assets, or changes in tax legislation, regulations, and policies. The amount of income taxes paid is subject to ongoing audits by tax authorities in the countries in which Eaton operates. If these audits result in assessments different from amounts reserved, future financial results may include unfavorable adjustments to the Company's tax liabilities.

Eaton may be unable to adequately protect its intellectual property rights, which could affect the Company's ability to compete.

Protecting Eaton's intellectual property rights is critical to its ability to compete and succeed. The Company owns a large number of patents and patent applications worldwide, as well as trademark and copyright registrations that are necessary, and contribute significantly, to the preservation of Eaton's competitive position in various markets. Although management believes that the loss or expiration of any single intellectual property right would not have a material effect on the results of operations or financial position of Eaton or its business segments, there can be no assurance that any one, or more, of these patents and other intellectual property will not be challenged, invalidated, or circumvented by third parties. Eaton enters into confidentiality and invention assignment agreements with the Company's employees, and into non-disclosure agreements with suppliers and appropriate customers, so as to limit access to and disclosure of proprietary information. These measures may not suffice to deter misappropriation or independent third party development of similar technologies.

Eaton is subject to litigation and environmental regulations that could adversely impact Eaton's businesses.

At any given time, Eaton may be subject to litigation, the disposition of which may have a material adverse effect on the Company's businesses, financial condition or results of operations. Information regarding current legal proceedings is presented in Note 10 and Note 11 of the Notes to the Consolidated Financial Statements.

Item 1B. Unresolved Staff Comments.

None.

Item 2. Properties.

Eaton's principal executive offices are located at Eaton House, 30 Pembroke Road, Dublin 4, Ireland D04 Y0C2. The Company maintains manufacturing facilities at approximately 267 locations in 39 countries. The Company is a lessee under a number of operating leases for certain real properties and equipment, none of which is material to its operations. Management believes that the existing manufacturing facilities are adequate for its operations and that the facilities are maintained in good condition.

Item 3. Legal Proceedings.

Information regarding the Company's current legal proceedings is presented in Note 10 and Note 11 of the Notes to the Consolidated Financial Statements.

Item 4. Mine Safety Disclosures.

Not applicable.

Item 4A. Information about our Executive Officers

A listing of executive officers, their ages, positions and offices held over the past five years, as of February 1, 2021, follows:

Name	Age	Position (Date elected to position)
Craig Arnold	60	Chairman of Eaton Corporation plc (June 1, 2016 - present) Chief Executive Officer of Eaton Corporation (June 1, 2016 - present) Director of Eaton Corporation plc (September 1, 2015 - present) President and Chief Operating Officer of Eaton Corporation (September 1, 2015 - May 31, 2016)
Richard H. Fearon	64	Director of Eaton Corporation plc (September 1, 2015 - present) Vice Chairman and Chief Financial and Planning Officer of Eaton Corporation (April 24, 2002 - present)
Thomas B. Okray	58	Executive Vice President and Chief Financial Officer-Elect of Eaton Corporation (January 2021 - present) Senior Vice President and Chief Financial Officer of W.W. Grainger, Inc. (April 2018 - December 2020) Executive Vice President and Chief Financial Officer of Advance Auto Parts, Inc. (October 2016 - April 2018) Vice President, Finance, Global Customer Fulfillment of Amazon.com, Inc. (July 2015 - September 2016)
Uday Yadav	57	President and Chief Operating Officer - Electrical Sector of Eaton Corporation (July 1, 2019 - present) Chief Operating Officer - Industrial Sector of Eaton Corporation (September 1, 2015 - June 30, 2019)
Heath B. Monesmith	50	President and Chief Operating Officer - Industrial Sector of Eaton Corporation (July 1, 2019 - present) Executive Vice President and General Counsel of Eaton Corporation (March 1, 2017 - January 6, 2020) Senior Vice President and Deputy General Counsel of Eaton Corporation (May 15, 2015 - March 1, 2017)
April Miller Boise	52	Executive Vice President, General Counsel and Secretary of Eaton Corporation (January 6, 2020 - present) Senior Vice President, Chief Legal Officer and Corporate Secretary of Meritor, Inc. (August 15, 2016 - December 13, 2019) Senior Vice President, General Counsel, Head of Global Mergers and Acquisitions, and Corporate Secretary of Avintiv, Inc. (March 23, 2015 - December 31, 2015)
Ernest W. Marshall, Jr.	52	Executive Vice President and Chief Human Resources Officer of Eaton Corporation (July 1, 2018 - present) Vice President - Human Resources, Aviation Division of General Electric (August 1, 2013 - June 30, 2018)
Ken D. Semelsberger	59	Senior Vice President and Controller of Eaton Corporation (November 1, 2013 - present)

Joao V. Faria	56	President - Vehicle Group of Eaton Corporation (May 1, 2017 - present) Vice President and General Manager, Latin America, Electrical Sector and President, Latin America (August 1, 2013 - April 30, 2017)
Nandakumar Cheruvatath	59	President - Aerospace Group of Eaton Corporation (September 1, 2015 - present)
Paulo Ruiz Sternadt	46	President - Hydraulics Group of Eaton Corporation (April 1, 2019 - present) Chief Executive Officer - Dresser Rand, a Siemens business (October 19, 2017 - March 30, 2019) Executive Vice President - Global Solutions and New Technologies & Strategic Business Development of Dresser Rand, a Siemens business (April 1, 2016 - October 18, 2017) Global Segment Head - Business Segment Bushings, Instrument Transformers & Coils, Siemens AG (April 1, 2012 - March 30, 2016)
Brian S. Brickhouse	57	President - Americas Region, Electrical Sector of Eaton Corporation (July 1, 2019 - present) President - Electrical Systems and Services Group of Eaton Corporation (July 1, 2018 - June 30, 2019) President, Asia Pacific Region, Electrical (May 15, 2015 - June 30, 2018)

There are no family relationships among the officers listed, and there are no arrangements or understandings pursuant to which any of them were elected as officers. All officers hold office for one year and until their successors are elected and qualified, unless otherwise specified by the Board of Directors; provided, however, that any officer is subject to removal with or without cause, at any time, by a vote of a majority of the Board of Directors.

Part II

Item 5. Market for the Registrant's Ordinary Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities.

The Company's ordinary shares are listed for trading on the New York Stock Exchange under the symbol ETN. At December 31, 2020, there were 11,390 holders of record of the Company's ordinary shares. Additionally, 16,400 current and former employees were shareholders through participation in the Eaton Savings Plan (ESP), the Eaton Personal Investment Plan (EPIP), and the Eaton Puerto Rico Retirement Savings Plan.

Information regarding equity-based compensation plans required by Regulation S-K Item 201(d) is provided in Item 12 of this Form 10-K Report.

Irish Taxes Applicable to Dividends

Irish income tax may arise with respect to dividends paid on Eaton shares. Eaton may be required to deduct Irish dividend withholding tax ("IDWT", currently at a rate of 25%) from dividends paid to shareholders who are not tax residents of Ireland even though they are not subject to this tax. To claim exemption from IDWT, shareholders can complete certain Irish dividend withholding tax exemption forms or hold their shares in an account through the Depository Trust Company and have on file with their broker or qualifying agent a valid U.S. address on the record date of the dividend.

Eaton shareholders who receive their dividends subject to Irish dividend withholding tax will generally have no further liability for Irish income tax on the dividends unless they are otherwise subject to Irish income tax.

Issuer's Purchases of Equity Securities

During the fourth quarter of 2020, 1.2 million ordinary shares were repurchased in the open market at a total cost of $131 million. A summary of the shares repurchased in the fourth quarter of 2020 follows:

Month	Total number of shares purchased	Average price paid 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 the plans or programs (in millions)
October	—	$ —	—	$ 2,225
November	685,999	$ 110.17	685,999	$ 2,149
December	476,491	$ 115.74	476,491	$ 2,094
Total	1,162,490	$ 112.45	1,162,490	

Item 6. Selected Financial Data.

Information regarding selected financial data is presented in the “Five-Year Consolidated Financial Summary” of this Form 10-K.

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

Information required by this Item is presented in “Management's Discussion and Analysis of Financial Condition and Results of Operations” of this Form 10-K.

Item 7A. Quantitative and Qualitative Disclosures about Market Risk.

Information regarding market risk is presented in “Market Risk Disclosure” of this Form 10-K.

Item 8. Financial Statements and Supplementary Data.

The reports of the independent registered public accounting firm, consolidated financial statements, and notes to consolidated financial statements are presented in Item 15 of this Form 10-K.

Information regarding selected quarterly financial information for 2020 and 2019 is presented in “Quarterly Data” of this Form 10-K.

Item 9. Change in and Disagreements with Accountants on Accounting and Financial Disclosure.

None.

Item 9A. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures - Pursuant to SEC Rule 13a-15, an evaluation was performed under the supervision and with the participation of Eaton's management, including Craig Arnold - Principal Executive Officer; and Richard H. Fearon - Principal Financial Officer, of the effectiveness of the design and operation of the Company's disclosure controls and procedures. Based on that evaluation, Eaton's management concluded that the Company's disclosure controls and procedures were effective as of December 31, 2020.

Disclosure controls and procedures are designed to ensure that information required to be disclosed in Company reports filed or submitted under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the Securities and Exchange Commission's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed in Company reports filed under the Exchange Act is accumulated and communicated to management, including the Company's Principal Executive Officer and Principal Financial Officer, to allow timely decisions regarding required disclosure.

Pursuant to Section 404 of the Sarbanes Oxley Act of 2002 and the rules and regulations adopted pursuant thereto, Eaton has included a report of management's assessment of the effectiveness of internal control over financial reporting, which is included in Item 15 of this Form 10-K.

“Report of Independent Registered Public Accounting Firm” relating to internal control over financial reporting as of December 31, 2020 is included in Item 15 of this Form 10-K.

During the fourth quarter of 2020, there was no change in Eaton's internal control over financial reporting that materially affected, or is reasonably likely to materially affect, internal control over financial reporting. Management is currently evaluating the impact of the business acquired in 2020 on Eaton's internal control over financial reporting.

Item 9B. Other Information.

None.

Part III

Item 10. Directors, Executive Officers and Corporate Governance.

Information required with respect to the directors of the Company is set forth under the caption “Election of Directors” in the Company's definitive Proxy Statement to be filed on or about March 19, 2021, and is incorporated by reference.

The Company has adopted a Code of Ethics, which applies to the directors, officers and employees worldwide. This document is available on the Company's website at http://www.eaton.com.

There were no changes during the fourth quarter 2020 to the procedures by which security holders may recommend nominees to the Company's Board of Directors.

Information related to the Audit Committee, and members of the Committee who are financial experts, is set forth under the caption “Board Committees - Audit Committee” in the definitive Proxy Statement to be filed on or about March 19, 2021, and is incorporated by reference.

Item 11. Executive Compensation.

Information required with respect to executive compensation is set forth under the caption “Compensation Discussion and Analysis” in the Company's definitive Proxy Statement to be filed on or about March 19, 2021, and is incorporated by reference.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.

Information required with respect to securities authorized for issuance under equity-based compensation plans is set forth under the caption “Equity Compensation Plans” in the Company's definitive Proxy Statement to be filed on or about March 19, 2021, and is incorporated by reference.

Information required with respect to security ownership of certain beneficial owners, is set forth under the caption “Share Ownership Tables” in the Company's definitive Proxy Statement to be filed on or about March 19, 2021, and is incorporated by reference.

Item 13. Certain Relationships and Related Transactions, and Director Independence.

Information required with respect to certain relationships and related transactions is set forth under the caption “Review of Related Person Transactions” in the Company's definitive Proxy Statement to be filed on or about March 19, 2021, and is incorporated by reference.

Information required with respect to director independence is set forth under the caption “Director Independence” in the Company's definitive Proxy Statement to be filed on or about March 19, 2021, and is incorporated by reference.

Item 14. Principal Accounting Fees and Services.

Information required with respect to principal accountant fees and services is set forth under the caption "Audit Committee Report" in the Company's definitive Proxy Statement to be filed on or about March 19, 2021, and is incorporated by reference.

Part IV

Item 15. Exhibits, Financial Statement Schedules.

(a) (1) The reports of the independent registered public accounting firm, consolidated financial statements and notes to consolidated financial statements are included in Item 8 above:

Reports of Independent Registered Public Accounting Firm

Consolidated Statements of Income - Years ended December 31, 2020, 2019 and 2018

Consolidated Statements of Comprehensive Income - Years ended December 31, 2020, 2019 and 2018

Consolidated Balance Sheets - December 31, 2020 and 2019

Consolidated Statements of Cash Flows - Years ended December 31, 2020, 2019 and 2018

Consolidated Statements of Shareholders' Equity - Years ended December 31, 2020, 2019 and 2018

Notes to Consolidated Financial Statements

(2) All other schedules for which provision is made in Regulation S-X of the SEC are not required under the related instructions or are inapplicable and, therefore, have been omitted.

(3) Exhibits incorporated by reference to or filed in conjunction with this form 10-K are listed below.

3 (i)	Certificate of Incorporation - Incorporated by reference to the Form S-8 filed November 30, 2012
3 (ii)	Amended and restated Memorandum and Articles of Incorporation - Incorporated by reference to the Form 8-K Report filed on May 1, 2017
4.1	Description of Eaton Corporation plc's Securities registered pursuant to Section 12 of the Securities Exchange Act of 1934 (incorporated by reference to Exhibit 4.1 of the registrant's Form 10-K filed on February 26, 2020)
4.2	Indenture dated as of November 20, 2012, among Turlock Corporation, the guarantors named therein and The Bank of New York Mellon Trust Company, N.A., as trustee (incorporated by reference to Exhibit 4.1 of Eaton Corporation plc's Form 8-K Current Report filed on November 26, 2012 (Commission File No. 333-182303))
4.3	Supplemental Indenture No. 1, dated as of November 30, 2012, among Eaton Corporation, the guarantors named therein and The Bank of New York Mellon Trust Company, N.A., as trustee (incorporated by reference to Exhibit 4.2 of the registrant's Form S-4 filed on September 6, 2013)
4.4	Supplemental Indenture No. 2, dated as of January 8, 2013, among Eaton Corporation, the guarantors named therein and The Bank of New York Mellon Trust Company, N.A., as trustee (incorporated by reference to Exhibit 4.3 of the registrant's Form S-4 filed on September 6, 2013)
4.5	Supplemental Indenture No. 3, dated as of December 20, 2013, among Eaton Corporation, the guarantors named therein and The Bank of New York Mellon Trust Company, N.A., as trustee (incorporated by reference to Exhibit 4.4 of the registrant's Form 10-K filed on February 28, 2018)
4.6	Supplemental Indenture No. 4, dated as of December 20, 2017 and effective as of January 1, 2018, among Eaton Corporation, the guarantors named therein and The Bank of New York Mellon Trust Company, N.A., as trustee (incorporated by reference to Exhibit 4.5 of the registrant's Form 10-K filed on February 28, 2018)
4.7	Supplemental Indenture No. 5, dated as of February 16, 2018, among Eaton Corporation, the guarantors named therein and The Bank of New York Mellon Trust Company, N.A., as trustee (incorporated by reference to Exhibit 4.6 of the registrant's Form 10-K filed on February 28, 2018)
4.8	Pursuant to Regulation S-K Item 601(b)(4), Eaton agrees to furnish to the SEC, upon request, a copy of the instruments defining the rights of holders of its long-term debt other than those set forth in Exhibits (4.2 - 4.7) hereto
10	Material contracts

(a) Senior Executive Incentive Compensation Plan (effective February 27, 2013) - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2012

(b) Deferred Incentive Compensation Plan II - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2007

(c) First Amendment to Deferred Incentive Compensation Plan II - Incorporated by reference to the Form S-8 filed November 30, 2012

(d) Excess Benefits Plan II (2008 restatement) - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2007

(e) First Amendment to Excess Benefits Plan II (2008 restatement) - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2012

(f) Incentive Compensation Deferral Plan II - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2007

(g) First Amendment to Incentive Compensation Deferral Plan II - Incorporated by reference to the Form S-8 filed November 30, 2012

(h) Limited Eaton Service Supplemental Retirement Income Plan II - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2007

(i) First Amendment to Limited Eaton Service Supplemental Retirement Income Plan II - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2012

(j) Supplemental Benefits Plan II (2008 restatement) - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2007

(k) First Amendment to Supplemental Benefits Plan II (2008 restatement) - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2012

(l) Form of Restricted Share Unit Agreement - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2015

(m) Form of Restricted Share Award Agreement - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2015

(n) Form of Restricted Share Agreement (Non-Employee Directors) - Incorporated by reference to the Form 8-K Report filed February 1, 2010

(o) Form of Directors' Restricted Share Unit Agreement - Incorporated by reference to the Form 10-K report for the year ended December 31, 2012

(p) Form of Stock Option Agreement for Executives - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2015

(q) Form of Stock Option Agreement for Non-Employee Directors (2008) - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2007

(r) Amended and Restated 2002 Stock Plan - Incorporated by reference to the Form S-8 filed November 30, 2012

(s) Amended and Restated 2004 Stock Plan - Incorporated by reference to the Form S-8 filed November 30, 2012

(t) Amended and Restated 2008 Stock Plan - Incorporated by reference to the Form S-8 filed November 30, 2012

(u) Second Amended and Restated 2009 Stock Plan - Incorporated by reference to Form S-8 filed November 30, 2012

(v) Amended and Restated 2012 Stock Plan - Incorporated by reference to the Form S-8 filed November 30, 2012

(w) Amendment to Amended and Restated 2012 Stock Plan - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2012

(x) First Amendment to 2005 Non-Employee Director Fee Deferral Plan - Incorporated by reference to the Form S-8 filed November 30, 2012

(y) 2013 Non-Employee Director Fee Deferral Plan - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2012

(z) 2015 Stock Plan - Incorporated by reference to the Form S-8 filed on October 30, 2015

(aa) Form of Change of Control Agreement entered into with officers of Eaton Corporation - Incorporated by reference to the Form 8-K Report filed on December 17, 2015

(bb) Form of Indemnification Agreement entered into with directors - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2012

(cc) Form of Indemnification Agreement II entered into with directors - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2012

(dd) Amended and Restated Executive Strategic Incentive Plan (amended and restated February 27, 2013) - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2012

(ee) Executive Strategic Incentive Plan II (effective January 1, 2001) - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2002

(ff) Amended and Restated Supplemental Executive Strategic Incentive Plan (amended and restated February 27, 2013) - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2012

(gg) Deferred Incentive Compensation Plan (amended and restated effective November 1, 2007) - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2009

(hh) Excess Benefits Plan (amended and restated effective January 1, 1989) - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2002

(ii) Amendment to Excess Benefits Plan I - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2012

(jj) Supplemental Benefits Plan (amended and restated January 1, 1989) - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2002

(kk) Amendment to Supplemental Benefits Plan I - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2012

(ll) Eaton Corporation Board of Directors Policy on Incentive Compensation, Stock Options and Other Equity Grants upon the Restatement of Financial Results - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2015

(mm) Amended and Restated Grantor Trust Agreement for Non-Employee Directors' Deferred Fees Plans - effective January 1, 2010 - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2010

(nn) Amended and Restated Grantor Trust Agreement for Employees' Deferred Compensation Plans - effective January 1, 2010 - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2010

(oo) Eaton Savings Plan 2016 Restatement - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2015

(pp) First Amendment to Eaton Savings Plan - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2016

(qq) Second Amendment to Eaton Savings Plan - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2016

(rr) Seventh Amendment to Eaton Savings Plan 2016 Restatement – Filed in conjunction with this Form 10-K Report *

(ss) Eaton Personal Investment Plan 2015 Restatement - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2015

(tt) First Amendment to Eaton Personal Investment Plan - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2016

(uu) Second Amendment to Eaton Personal Investment Plan - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2016

	(vv)	Performance Share Award Agreement - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2015
	(ww)	Form of Indemnification Agreement entered into with officers of Eaton Corporation - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2015
	(xx)	Amendment to Limited Eaton Service Supplemental Retirement Income Plan I- Incorporated by reference to the Form 10-K Report for the year ended December 31, 2015
	(yy)	Amendment to Eaton Corporation Excess Benefits Plan - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2016
	(zz)	Amendment to Eaton Corporation Supplemental Benefits Plan - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2016
	(aaa)	Second Amendment to Eaton Corporation Excess Benefits Plan II - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2016
	(bbb)	Second Amendment to Limited Eaton Service Supplemental Retirement Income Plan II - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2016
	(ccc)	Second Amendment to Eaton Corporation Supplemental Benefits Plan II - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2016
	(ddd)	2016 RSU Grant Agreement - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2016
	(eee)	2016 Performance Share Grant Agreement - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2016
	(fff)	Special 2016 Performance Share Grant Agreement - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2016
	(ggg)	Stock and Asset Purchase Agreement, dated January 21, 2020 - Incorporated by reference to the Form 8-K filed on January 27, 2020
	(hhh)	2020 Stock Plan - Incorporated by reference to the Form S-8 filed on November 3, 2020
14		Code of Ethics - Incorporated by reference to the definitive Proxy Statement filed on March 14, 2008
21		Subsidiaries of Eaton Corporation plc - Filed in conjunction with this Form 10-K Report *
22		Table of Senior Notes, Issuer and Guarantors - Filed in conjunction with this Form 10-K Report *
23		Consent of Independent Registered Public Accounting Firm - Filed in conjunction with this Form 10-K Report *
24		Power of Attorney - Filed in conjunction with this Form 10-K Report *
31.1		Certification of Principal Executive Officer (Pursuant to the Sarbanes-Oxley Act of 2002, Section 302) - Filed in conjunction with this Form 10-K Report *
31.2		Certification of Principal Financial Officer (Pursuant to the Sarbanes-Oxley Act of 2002, Section 302) - Filed in conjunction with this Form 10-K Report *
32.1		Certification of Principal Executive Officer (Pursuant to the Sarbanes-Oxley Act of 2002, Section 906) - Filed in conjunction with this Form 10-K Report *
32.2		Certification of Principal Financial Officer (Pursuant to the Sarbanes-Oxley Act of 2002, Section 906) - Filed in conjunction with this Form 10-K Report *
101.INS		XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document. *
101.SCH		XBRL Taxonomy Extension Schema Document *
101.CAL		XBRL Taxonomy Extension Calculation Linkbase Document *
101.DEF		XBRL Taxonomy Extension Definition Linkbase Document *
101.LAB		XBRL Taxonomy Extension Label Linkbase Document *
101.PRE		XBRL Taxonomy Extension Presentation Linkbase Document *

104	Cover Page Interactive Data File (formatted as inline XBRL and contained in Exhibit 101)

* Submitted electronically herewith.

Attached as Exhibit 101 to this report are the following formatted in XBRL (Extensible Business Reporting Language): (i) Consolidated Statements of Income for the years ended December 31, 2020, 2019 and 2018, (ii) Consolidated Statements of Comprehensive Income for the years ended December 31, 2020, 2019 and 2018 (iii) Consolidated Balance Sheets at December 31, 2020 and 2019, (iv) Consolidated Statements of Cash Flows for the years ended December 31, 2020, 2019 and 2018, (v) Consolidated Statements of Shareholders' Equity for the years ended December 31, 2020, 2019 and 2018 and (vi) Notes to Consolidated Financial Statements for the year ended December 31, 2020.

Item 16. Form 10-K Summary.

Not applicable.

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.

EATON CORPORATION plc
Registrant

Date: February 24, 2021

By: /s/ Richard H. Fearon
Richard H. Fearon
(On behalf of the registrant and as Principal Financial Officer)

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the date indicated.

Date: February 24, 2021

Signature	Title	Signature	Title
/s/ Craig Arnold Craig Arnold	Chairman, Principal Executive Officer; Director	/s/ Richard H. Fearon Richard H. Fearon	Principal Financial Officer, Director
/s/ Ken D. Semelsberger Ken D. Semelsberger	Principal Accounting Officer	* Christopher M. Connor	Director
* Michael J. Critelli	Director	* Olivier Leonetti	Director
* Deborah L. McCoy	Director	* Silvio Napoli	Director
* Gregory R. Page	Director	* Sandra Pianalto	Director
* Lori J. Ryerkerk	Director	* Gerald B. Smith	Director
* Dorothy C. Thompson	Director		

*By /s/ Richard H. Fearon
Richard H. Fearon, Attorney-in-Fact for the officers and directors signing in the capacities indicated

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and the Board of Directors of Eaton Corporation plc

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Eaton Corporation plc ("the Company") as of December 31, 2020 and 2019, the related consolidated statements of income, comprehensive income, shareholders' equity and cash flows for each of the three years in the period ended December 31, 2020, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2020 and 2019, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2020, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2020, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated February 24, 2021 expressed an unqualified opinion thereon.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the 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 audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the 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 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 financial statements. We believe that our audits provide a reasonable basis for our opinion.

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: (1) relate to accounts or disclosures that are material to the consolidated financial statements and (2) 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.

Unrecognized Income Tax Benefits

Description of the Matter	As discussed in Note 11 to the consolidated financial statements, the Company had gross unrecognized income tax benefits of $1,036 million related to its uncertain tax positions at December 31, 2020. Unrecognized income tax benefits are recorded under the two-step recognition and measurement principles when a tax position does not meet the more likely than not standard, or if a tax position meets the more likely than not standard, but the financial statement tax benefit is reduced as part of the measurement step. The balance of unrecognized income tax benefits is comprised of uncertain tax positions which meet the more likely than not standard, but the financial statement tax benefit has been reduced as part of measuring the tax position. Auditing management's analysis of its uncertain tax positions and resulting unrecognized income tax benefits is complex as each tax position carries unique facts and circumstances that must be evaluated and ultimate resolution is dependent on uncontrollable factors such as the prospect of retroactive regulations, new case law, the willingness of the income tax authority to settle the issue, including the timing thereof, and other factors.
How We Addressed the Matter in Our Audit	We obtained an understanding, evaluated the design and tested the operating effectiveness of management's controls related to uncertain tax positions. For example, we tested controls over management's application of the two-step recognition and measurement principles and management's review of the inputs and resultant calculations of unrecognized income tax benefits, as well as the identification of uncertain tax positions. We also evaluated the Company's assessment of its uncertain tax positions. Our audit procedures included evaluating management's accounting policies and documentation to assess the appropriateness and consistency of the methods and assumptions used to develop its uncertain tax positions and related unrecognized income tax benefit amounts by jurisdiction. We also tested the completeness and accuracy of the underlying data used by the Company. For example, we compared the unrecognized income tax benefits recorded with similar positions in prior periods and assessed management's consideration of current tax controversy and litigation and trends in similar positions challenged by tax authorities. We also assessed the historical accuracy of management's estimates of its unrecognized income tax benefits with the resolution of those positions. In addition, we involved tax subject matter professionals to evaluate the application of relevant tax laws in the Company's recognition determination. Further, we tested the Company's release of previously recorded unrecognized income tax benefits, which along with the recording of additional unrecognized tax benefits, impacts the Company's tax provision. We have also evaluated the Company's income tax disclosures in relation to these matters.

Reallocation of Goodwill related to the Divestiture of the Hydraulics Business and the Re-segmentation of certain Operating Segments

Description of the Matter	As discussed in Notes 2 and 6 to the consolidated financial statements, in January 2020 the Company entered into an agreement to sell its Hydraulics business to Danfoss A/S for $3.3 billion in cash and classified the assets and liabilities of the Hydraulics business being sold ("Hydraulics") as held for sale. In conjunction with classification of Hydraulics as held for sale, management reassigned goodwill using a relative fair value allocation to both Hydraulics and the Filtration and Golf Grip businesses previously included in the Hydraulics operating segment and subsequently included within the Aerospace operating segment as part of the re-segmentation described below. Goodwill of $907 million was allocated to Hydraulics as part of the classifying Hydraulics assets as held for sale in the first quarter. Additionally, during the first quarter of 2020, as discussed in Note 6 to the consolidated financial statements, the Company re-segmented certain operating segments due to a reorganization of the Company's businesses. Specific to the Electrical business, the Company replaced the previous Electrical Products and Electrical Systems and Services segments with the Electrical Americas and the Electrical Global segments (collectively referred to as the "New Electrical Segments"). Management reassigned goodwill to the New Electrical Segments using a relative fair value allocation which resulted in goodwill of $6.4 billion and $4.0 billion being allocated to the Electrical Americas and Electrical Global operating segments, respectively. Auditing the Company's reallocation of goodwill to Hydraulics and the New Electrical Segments was complex due to the significant estimation required to determine each of the fair values of the impacted reporting units referred to above. These fair value estimates were sensitive to significant assumptions such as the weighted-average cost of capital, revenue growth rates, operating margins and the terminal values, which are affected by expectations about future market or economic conditions.
How We Addressed the Matter in Our Audit	We obtained an understanding, evaluated the design and tested the operating effectiveness of management's controls over the goodwill allocation processes. For example, we tested controls over management's review of the significant assumptions described above along with the completeness and accuracy of the data used in these fair value estimates. To test the estimated fair value of the impacted reporting units, our audit procedures included, among others, evaluating the Company's fair value methodology, testing the significant assumptions discussed above and testing the underlying data used by the Company in each of its analyses. For example, we compared the significant assumptions used by management to current industry and economic trends. We assessed the historical accuracy of management's estimates and performed sensitivity analyses of significant assumptions to evaluate the changes in the fair values of the impacted reporting units that would result from changes in assumptions. We also involved EY valuation specialists to assist in our evaluation of the weighted-average cost of capital utilized in each fair value estimate. We tested the allocations of goodwill by recalculating the amounts based on the estimated fair values of each of the impacted reporting units. Furthermore, we have evaluated the Company's disclosures in relation to the reallocation of goodwill.

Valuation of Intangible Assets in the Acquisition of Souriau-Sunbank Connection Technologies

Description of the Matter	As discussed in Note 2 to the consolidated financial statements, during December 2019 the Company completed the acquisition of the Souriau-Sunbank Connection Technologies business ("Souriau-Sunbank") for a total purchase price of approximately $907 million, net of cash received. The acquisition was accounted for using the acquisition method of accounting. The consideration paid in the acquisition must be allocated to the acquired assets and liabilities assumed generally based on their fair value with the excess of the purchase price over those fair values allocated to goodwill. The preliminary estimates of the fair value of intangible assets were revised during the measurement period in 2020 as third-party valuations were received and finalized resulting in the recognition of customer relationships and technology intangible assets of $250 million and $95 million, respectively. Auditing the Company's accounting for its acquisition of Souriau-Sunbank was complex because the customer relationships and technology intangible assets recognized were material to the consolidated financial statements and the estimates of fair value involved subjectivity. The subjectivity was primarily due to the sensitivity of the respective fair values to underlying assumptions about the future performance of the acquired business. The Company used discounted cash flow models to measure the intangible assets. The significant assumptions used to estimate the fair value of the intangible assets included discount rates and certain assumptions that form the basis of the forecasted results (e.g., revenue growth rates and future EBITDA margins). These significant assumptions are forward looking and could be affected by future economic and market conditions.
How We Addressed the Matter in Our Audit	We obtained an understanding, evaluated the design, and tested the operating effectiveness of controls over its accounting for the acquisition of Souriau-Sunbank, including recognition and measurement of the intangible assets acquired. For example, we tested controls over the recognition and measurement of customer relationships and technology intangible assets, including management's review of the methods and significant assumptions used to develop such fair value estimates. To test the estimated fair values of the customer relationships and technology intangible assets, we performed audit procedures that included, among others, evaluating the Company's selection of the valuation methodology, evaluating the methods and significant assumptions used by the Company's valuation specialist, and evaluating the completeness and accuracy of the underlying data supporting the significant assumptions and estimates. We also performed sensitivity analyses to evaluate the changes in the fair value of such intangible assets that would result from changes in the significant assumptions. We involved our EY valuation specialists to assist with our evaluation of the methodology used by the Company and certain significant assumptions included in the fair value estimates. For example, when evaluating the assumptions related to the revenue growth rates and future EBITDA margins, we compared the assumptions to the past performance of Souriau-Sunbank and expected industry trends and considered whether they were consistent with evidence obtained in other areas of the audit. Furthermore, we have evaluated the Company's disclosures in relation to the Souriau-Sunbank acquisition.

/s/ Ernst & Young LLP
We have served as the Company's auditor since 1923.

Cleveland, Ohio
February 24, 2021

MANAGEMENT'S REPORT ON FINANCIAL STATEMENTS

We have prepared the accompanying consolidated financial statements and related information of Eaton Corporation plc ("Eaton") included herein for the three years ended December 31, 2020. The primary responsibility for the integrity of the financial information included in this annual report rests with management. The financial information included in this annual report has been prepared in accordance with accounting principles generally accepted in the United States based on our best estimates and judgments and giving due consideration to materiality. The opinion of Ernst & Young LLP, Eaton's independent registered public accounting firm, on those consolidated financial statements is included herein.

Eaton has high standards of ethical business practices supported by the Eaton Code of Ethics and corporate policies. Careful attention is given to selecting, training and developing personnel, to ensure that management's objectives of establishing and maintaining adequate internal controls and unbiased, uniform reporting standards are attained. Our policies and procedures provide reasonable assurance that operations are conducted in conformity with applicable laws and with the Company's commitment to a high standard of business conduct.

The Board of Directors pursues its responsibility for the quality of Eaton's financial reporting primarily through its Audit Committee, which is composed of five independent directors. The Audit Committee meets regularly with management, the internal auditors and the independent registered public accounting firm to ensure that they are meeting their responsibilities and to discuss matters concerning accounting, internal control, audits and financial reporting. The internal auditors and independent registered public accounting firm have full and free access to senior management and the Audit Committee.

/s/ Craig Arnold	/s/ Richard H. Fearon	/s/ Ken D. Semelsberger
Principal Executive Officer	Principal Financial Officer	Principal Accounting Officer

February 24, 2021

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and the Board of Directors of Eaton Corporation plc

Opinion on Internal Control Over Financial Reporting

We have audited Eaton Corporation plc's ("the Company") internal control over financial reporting as of December 31, 2020, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2020, based on the COSO criteria.

As indicated in the accompanying Management's Report on Internal Control over Financial Reporting, management's assessment of and conclusion on the effectiveness of internal control over financial reporting did not include the internal controls of the entity that was acquired during 2020 (as defined in Note 2 to the consolidated financial statements), which is included in the 2020 consolidated financial statements of the Company and constituted less than 1% of total assets (inclusive of acquired intangible assets) as of December 31, 2020 and less than 1% of net sales for the year then ended. Our audit of internal control over financial reporting of the Company also did not include an evaluation of the internal control over financial reporting of the entity that was acquired during 2020.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2020 and 2019, the related consolidated statements of income, comprehensive income, shareholders' equity and cash flows for each of the three years in the period ended December 31, 2020, and the related notes and our report dated February 24, 2021 expressed an unqualified opinion thereon.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the 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 audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

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 (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) 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 (3) 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.

/s/ Ernst & Young LLP

Cleveland, Ohio
February 24, 2021

MANAGEMENT'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

The management of Eaton Corporation plc ("Eaton") is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Exchange Act rules 13a-15(f)).

Under the supervision and with the participation of Eaton's management, including our principal executive officer and principal financial officer, we conducted an evaluation of the effectiveness of the Company's internal control over financial reporting as of December 31, 2020. Our evaluation of internal control over financial reporting did not include the internal controls of the entity that was acquired during 2020 (as defined in Note 2), which is included in the 2020 consolidated financial statements and constituted less than 1% of total assets (inclusive of acquired intangible assets) as of December 31, 2020 and less than 1% of net sales for the year then ended. In conducting this evaluation, we used the framework set forth by the Committee of Sponsoring Organizations of the Treadway Commission in Internal Control - Integrated Framework (2013 Framework). Based on this evaluation under the framework referred to above, management concluded that the Company's internal control over financial reporting was effective as of December 31, 2020.

The independent registered public accounting firm Ernst & Young LLP has issued an audit report on the effectiveness of the Company's internal control over financial reporting as of December 31, 2020. This report is included herein.

/s/ Craig Arnold	/s/ Richard H. Fearon	/s/ Ken D. Semelsberger
Principal Executive Officer	Principal Financial Officer	Principal Accounting Officer

February 24, 2021

EATON CORPORATION plc
CONSOLIDATED STATEMENTS OF INCOME

(In millions except for per share data)	Year ended December 31 2020	2019	2018
Net sales	$ 17,858	$ 21,390	$ 21,609
Cost of products sold	12,408	14,338	14,511
Selling and administrative expense	3,075	3,583	3,548
Research and development expense	551	606	584
Interest expense - net	149	199	258
Gain on sale of business	221	—	—
Arbitration decision expense	—	—	275
Other expense - net	150	73	9
Income before income taxes	1,746	2,591	2,424
Income tax expense	331	378	278
Net income	1,415	2,213	2,146
Less net income for noncontrolling interests	(5)	(2)	(1)
Net income attributable to Eaton ordinary shareholders	$ 1,410	$ 2,211	$ 2,145
Net income per share attributable to Eaton ordinary shareholders			
Diluted	$ 3.49	$ 5.25	$ 4.91
Basic	3.51	5.28	4.93
Weighted-average number of ordinary shares outstanding			
Diluted	404.0	420.8	436.9
Basic	402.2	419.0	434.3
Cash dividends declared per ordinary share	$ 2.92	$ 2.84	$ 2.64

The accompanying notes are an integral part of the consolidated financial statements.

EATON CORPORATION plc
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

	Year ended December 31		
(In millions)	2020	2019	2018
Net income	$ 1,415	$ 2,213	$ 2,146
Less net income for noncontrolling interests	(5)	(2)	(1)
Net income attributable to Eaton ordinary shareholders	1,410	2,211	2,145
Other comprehensive income (loss), net of tax			
Currency translation and related hedging instruments	201	16	(609)
Pensions and other postretirement benefits	(73)	(130)	(139)
Cash flow hedges	(33)	(31)	7
Other comprehensive income (loss) attributable to Eaton ordinary shareholders	95	(145)	(741)
Total comprehensive income attributable to Eaton ordinary shareholders	$ 1,505	$ 2,066	$ 1,404

The accompanying notes are an integral part of the consolidated financial statements.

EATON CORPORATION plc
CONSOLIDATED BALANCE SHEETS

(In millions)	December 31 2020	2019
Assets		
Current assets		
Cash	$ 438	$ 370
Short-term investments	664	221
Accounts receivable - net	2,904	3,437
Inventory	2,109	2,805
Assets held for sale	2,487	1,377
Prepaid expenses and other current assets	576	518
Total current assets	9,178	8,728
Property, plant and equipment		
Land and buildings	2,184	2,440
Machinery and equipment	5,404	6,266
Gross property, plant and equipment	7,588	8,706
Accumulated depreciation	(4,624)	(5,210)
Net property, plant and equipment	2,964	3,496
Other noncurrent assets		
Goodwill	12,903	13,456
Other intangible assets	4,175	4,638
Operating lease assets	428	436
Deferred income taxes	426	372
Other assets	1,750	1,679
Total assets	$ 31,824	$ 32,805
Liabilities and shareholders' equity		
Current liabilities		
Short-term debt	$ 1	$ 255
Current portion of long-term debt	1,047	248
Accounts payable	1,987	2,114
Accrued compensation	351	449
Liabilities held for sale	468	325
Other current liabilities	2,027	1,741
Total current liabilities	5,881	5,132
Noncurrent liabilities		
Long-term debt	7,010	7,819
Pension liabilities	1,588	1,462
Other postretirement benefits liabilities	330	328
Operating lease liabilities	326	331
Deferred income taxes	277	396
Other noncurrent liabilities	1,439	1,204
Total noncurrent liabilities	10,970	11,540
Shareholders' equity		
Ordinary shares (398.1 million outstanding in 2020 and 413.3 million in 2019)	4	4
Capital in excess of par value	12,329	12,200
Retained earnings	6,794	8,170
Accumulated other comprehensive loss	(4,195)	(4,290)
Shares held in trust	(2)	(2)
Total Eaton shareholders' equity	14,930	16,082
Noncontrolling interests	43	51
Total equity	14,973	16,133
Total liabilities and equity	$ 31,824	$ 32,805

The accompanying notes are an integral part of the consolidated financial statements.

EATON CORPORATION plc
CONSOLIDATED STATEMENTS OF CASH FLOWS

	Year ended December 31		
(In millions)	2020	2019	2018
Operating activities			
Net income	$ 1,415	$ 2,213	$ 2,146
Adjustments to reconcile to net cash provided by operating activities			
Depreciation and amortization	811	884	903
Deferred income taxes	(86)	(71)	(115)
Pension and other postretirement benefits expense	210	157	159
Contributions to pension plans	(122)	(119)	(126)
Contributions to other postretirement benefits plans	(23)	(15)	(25)
Loss (gain) on sale of businesses	(91)	66	—
Changes in working capital			
Accounts receivable - net	219	172	(152)
Inventory	371	(60)	(242)
Accounts payable	76	147	23
Accrued compensation	(65)	(23)	23
Accrued income and other taxes	(95)	16	1
Other current assets	(67)	12	25
Other current liabilities	196	(21)	(19)
Other - net	195	93	57
Net cash provided by operating activities	2,944	3,451	2,658
Investing activities			
Capital expenditures for property, plant and equipment	(389)	(587)	(565)
Cash paid for acquisitions of businesses, net of cash acquired	(200)	(1,180)	—
Proceeds from (payments for) sales of businesses	1,408	(36)	—
Sales (purchases) of short-term investments - net	(441)	(70)	355
Proceeds from (payments for) settlement of currency exchange contracts not designated as hedges - net	94	54	(110)
Other - net	(75)	(47)	(78)
Net cash provided by (used in) investing activities	397	(1,866)	(398)
Financing activities			
Proceeds from borrowings	1	1,232	410
Payments on borrowings	(504)	(507)	(574)
Cash dividends paid	(1,175)	(1,201)	(1,149)
Exercise of employee stock options	71	66	29
Repurchase of shares	(1,608)	(1,029)	(1,271)
Employee taxes paid from shares withheld	(37)	(46)	(24)
Other - net	(6)	(9)	(2)
Net cash used in financing activities	(3,258)	(1,494)	(2,581)
Effect of currency on cash	(15)	(4)	43
Total increase (decrease) in cash	68	87	(278)
Cash at the beginning of the period	370	283	561
Cash at the end of the period	$ 438	$ 370	$ 283

The accompanying notes are an integral part of the consolidated financial statements.

EATON CORPORATION plc
CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY

	Ordinary shares		Capital in excess of par value	Retained earnings	Accumulated other comprehensive loss	Shares held in trust	Total Eaton shareholders' equity	Noncontrolling interests	Total equity
(In millions)	Shares	Dollars							
Balance at January 1, 2018	439.9	$ 4	$ 11,987	$ 8,669	$ (3,404)	$ (3)	$ 17,253	$ 37	$17,290
Cumulative-effect adjustment upon adoption of ASU 2014-09	—	—	—	(2)	—	—	(2)	—	(2)
Cumulative-effect adjustment upon adoption of ASU 2016-16	—	—	—	(199)	—	—	(199)	—	(199)
Net income	—	—	—	2,145	—	—	2,145	1	2,146
Other comprehensive loss, net of tax					(741)		(741)		(741)
Cash dividends paid	—	—	—	(1,149)	—	—	(1,149)	(1)	(1,150)
Issuance of shares under equity-based compensation plans	1.2	—	103	(3)	—	—	100	—	100
Changes in noncontrolling interest of consolidated subsidiaries - net	—	—	—	—	—	—	—	(2)	(2)
Repurchase of shares	(17.5)	—	—	(1,300)	—	—	(1,300)	—	(1,300)
Balance at December 31, 2018	423.6	4	12,090	8,161	(4,145)	(3)	16,107	35	16,142
Net income	—	—	—	2,211	—	—	2,211	2	2,213
Other comprehensive loss, net of tax					(145)		(145)		(145)
Cash dividends paid	—	—	—	(1,201)	—	—	(1,201)	(3)	(1,204)
Issuance of shares under equity-based compensation plans	2.2	—	110	(1)	—	1	110	—	110
Acquisitions of businesses	—	—	—	—	—	—	—	55	55
Acquisition of noncontrolling interest obtained through tender offer	—	—	—	—	—	—	—	(33)	(33)
Business divestiture	—	—	—	—	—	—	—	(4)	(4)
Changes in noncontrolling interest of consolidated subsidiaries - net	—	—	—	—	—	—	—	(1)	(1)
Repurchase of shares	(12.5)	—	—	(1,000)	—	—	(1,000)	—	(1,000)
Balance at December 31, 2019	413.3	4	12,200	8,170	(4,290)	(2)	16,082	51	16,133
Net income	—	—	—	1,410	—	—	1,410	5	1,415
Other comprehensive income, net of tax					95		95		95
Cash dividends paid	—	—	—	(1,175)	—	—	(1,175)	(9)	(1,184)
Issuance of shares under equity-based compensation plans	1.9	—	129	(3)	—	—	126	—	126
Changes in noncontrolling interest of consolidated subsidiaries - net	—	—	—	—	—	—	—	(4)	(4)
Repurchase of shares	(17.1)	—	—	(1,608)	—	—	(1,608)	—	(1,608)
Balance at December 31, 2020	398.1	$ 4	$ 12,329	$ 6,794	$ (4,195)	$ (2)	$ 14,930	$ 43	$14,973

The accompanying notes are an integral part of the consolidated financial statements.

Amounts are in millions unless indicated otherwise (per share data assume dilution).

Note 1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

General Information and Basis of Presentation

Eaton Corporation plc (Eaton or the Company) is a power management company with 2020 net sales of $17.9 billion. Eaton's mission is to improve the quality of life and the environment through the use of power management technologies and services. We provide sustainable solutions that help our customers effectively manage electrical, hydraulic and mechanical power – more safely, more efficiently and more reliably. Eaton has approximately 92,000 employees in 60 countries and sells products to customers in more than 175 countries.

The consolidated financial statements of the Company have been prepared in accordance with generally accepted accounting principles in the United States. Preparation of the consolidated financial statements requires management to make estimates and assumptions that affect amounts reported in the consolidated financial statements and notes. Actual results could differ from these estimates. Management has evaluated subsequent events through the date the consolidated financial statements were filed with the Securities Exchange Commission.

The consolidated financial statements include the accounts of Eaton and all subsidiaries and other entities it controls. Intercompany transactions and balances have been eliminated. The equity method of accounting is used for investments in associate companies where the Company has significant influence and generally a 20% to 50% ownership interest. Equity investments are evaluated for impairment whenever events or circumstances indicate the book value of the investment exceeds fair value. An impairment would exist if there is an other-than-temporary decline in value. Investments in associate companies included in Other assets were $680 and $714 as of December 31, 2020 and December 31, 2019, respectively, and income from these investments is reported in Other (income) expense - net. Eaton does not have off-balance sheet arrangements with unconsolidated entities.

Eaton's functional currency is United States Dollars (USD). The functional currency for most subsidiaries is their local currency. Financial statements for these subsidiaries are translated at year-end exchange rates as to assets and liabilities and weighted-average exchange rates as to revenues and expenses. The resulting translation adjustments are recognized in Accumulated other comprehensive loss.

During the first quarter of 2020, Eaton re-segmented certain reportable operating segments due to a reorganization of the Company's businesses. The new reportable segments are Electrical Americas and Electrical Global, which include the legacy Electrical Products and Electrical Systems and Services segments. Additionally, the Filtration and Golf Grip businesses previously included in the Hydraulics segment, and the electrical aerospace connectors business previously included in the Electrical Products segment, have been added to the Aerospace reportable segment as part of the reorganization. The Company also changed how it measures business segment performance in 2020 as it no longer allocates acquisition and divestiture charges to its operating segments. Historical segment information has been retrospectively adjusted to reflect these changes. See Note 17 for additional information related to the segments.

The Company recorded $37 and $13 of net gains for the years ended December 31, 2019 and 2018, respectively, related primarily to the remeasurement of intercompany loans denominated in a foreign currency and the currency exchange derivative contracts used to hedge these exposures. In the first quarter of 2020, Eaton changed the presentation of these gains from Other expense - net to Interest expense - net, and reclassified all prior periods.

In the first quarter of 2020, the Company also changed the presentation of the following items within the operating activities section of the Consolidated Statements of Cash Flows:

- The non-cash gains and losses associated with currency exchange derivative contracts have been moved from Other current assets and Other current liabilities to Other-net. This puts the non-cash impact of these derivatives on the same line as the non-cash impact from the balance sheet currency exposures they are used to hedge.
- The changes in both uncertain tax positions and prepaid taxes have been moved from Other-net and Other current assets, respectively, to Accrued income and other taxes. This places the cash flow impact from all taxes on the same line.
- The changes in non-trade receivables have been moved from Accounts receivable-net to Other current assets. This separates the cash flows associated with non-trade receivables from customer collections.

The net impact of these cash flow reclassifications made to prior periods was a $179 inflow for 2019 and a $206 outflow for 2018 to Changes in working capital with the corresponding impact to Other-net, resulting in no change to total operating cash flow.

Adoption of New Accounting Standards

Eaton adopted Accounting Standards Update 2016-13, Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments, in the first quarter of 2020. This standard introduces new guidance for accounting for credit losses on receivables. The Company did not recognize a cumulative-effect adjustment to retained earnings as of January 1, 2020, as the adoption of this standard did not have a material impact on the consolidated financial statements.

Revenue Recognition

Sales are recognized when control of promised goods or services are transferred to customers in an amount that reflects the consideration the Company expects to be entitled to in exchange for those goods or services. Control is transferred when the customer has the ability to direct the use of and obtain benefits from the goods or services. The majority of the Company's sales agreements contain performance obligations satisfied at a point in time when control is transferred to the customer. Sales recognized over time are generally accounted for using an input measure to determine progress completed at the end of the period. Sales for service contracts generally are recognized as the services are provided. For agreements with multiple performance obligations, judgment is required to determine whether performance obligations specified in these agreements are distinct and should be accounted for as separate revenue transactions for recognition purposes. In these types of agreements, we generally allocate sales price to each distinct obligation based on the price of each item sold in separate transactions.

Payment terms vary by the type and location of the customer and the products or services offered. Generally, the time between when revenue is recognized and payment is due is not significant. Eaton does not evaluate whether the selling price includes a financing interest component for contracts that are less than a year. Sales, value added, and other taxes collected concurrent with revenue are excluded from sales. Shipping and handling costs are treated as fulfillment costs and are included in Cost of products sold.

Eaton records reductions to sales for returns, and customer and distributor incentives, primarily comprised of rebates, at the time of the initial sale. Rebates are estimated based on sales terms, historical experience, trend analysis, and projected market conditions in the various markets served. The rebate programs offered vary across businesses due to the numerous markets Eaton serves, but the most common incentives relate to amounts paid or credited to customers for achieving defined volume levels. Returns are estimated at the time of the sale primarily based on historical experience and recorded gross on the Consolidated Balance Sheet. See Note 3 for additional information.

Goodwill and Indefinite Life Intangible Assets

Goodwill is evaluated annually for impairment as of July 1 using either a quantitative or qualitative analysis. Goodwill is tested for impairment at the reporting unit level, and is based on the net assets for each reporting unit, including goodwill and intangible assets. The Company's reporting units are equivalent to the reportable operating segments, except for the Aerospace segment which has two reporting units. Goodwill is assigned to each reporting unit, as this represents the lowest level that constitutes a business and is the level at which management regularly reviews the operating results. The Company performs a quantitative analysis using a discounted cash flow model and other valuation techniques, but may elect to perform a qualitative analysis. Additionally, goodwill is evaluated for impairment whenever an event occurs or circumstances change that would indicate that it is more likely than not that the fair value of a reporting unit is less than its carrying amount.

The annual goodwill impairment test was performed using a qualitative analysis in 2020 and 2019, except for the eMobility segment in 2020 and the Hydraulics segment in 2019 which used a quantitative analysis. A qualitative analysis is performed by assessing certain trends and factors, including projected market outlook and growth rates, forecasted and actual sales and operating profit margins, discount rates, industry data, and other relevant qualitative factors. These trends and factors are compared to, and based on, the assumptions used in the most recent quantitative analysis performed for each reporting unit. The results of the qualitative analyses did not indicate a need to perform quantitative analysis.

Goodwill impairment testing was also performed using quantitative analyses in 2020 for the Electrical Americas, Electrical Global, Hydraulics and Aerospace reporting units due to a reorganization of the Company's businesses discussed in Note 1 and Note 6, and in 2020 and 2019 as a result of the Hydraulics and Lighting businesses being classified as held for sale as discussed in Note 2. The Company used the relative fair value method to reallocate goodwill.

Quantitative analyses were performed by estimating the fair value for each reporting unit using a discounted cash flow model. The model includes estimates of future cash flows, future growth rates, terminal value amounts, and the applicable weighted-average cost of capital used to discount those estimated cash flows. The future cash flows were based on the Company's long-term operating plan and a terminal value was used to estimate the reporting unit's cash flows beyond the period covered by the operating plan. The weighted-average cost of capital is an estimate of the overall after-tax rate of return required by equity and debt market holders of a business enterprise. These analyses require the exercise of judgments, including judgments about appropriate discount rates, perpetual growth rates, revenue growth, and margin assumptions. Sensitivity analyses were performed around certain of these assumptions in order to assess the reasonableness of the assumptions and the resulting estimated fair values.

Based on these analyses performed in 2020 and 2019, the fair value of Eaton's reporting units continue to substantially exceed their respective carrying amounts and thus, no impairment exists.

Indefinite life intangible assets consist of certain trademarks. They are evaluated annually for impairment as of July 1 using either a quantitative or qualitative analysis to determine whether their fair values exceed their respective carrying amounts. Indefinite life intangible asset impairment testing for 2020 and 2019 was performed using a quantitative analysis. The Company determines the fair value of these assets using a royalty relief methodology similar to that employed when the associated assets were acquired, but using updated estimates of future sales, cash flows, and profitability. Additionally, indefinite life intangible assets are evaluated for impairment whenever an event occurs or circumstances change that would indicate that it is more likely than not that the asset is impaired. For 2020 and 2019, the fair value of indefinite lived intangible assets exceeded the respective carrying value.

For additional information about goodwill and other intangible assets, see Note 6.

Leases

The Company determines if an arrangement is a lease at inception. Operating lease assets and liabilities are recognized at the commencement date of the lease based on the present value of lease payments over the lease term. Lease assets represent the Company’s right to use an underlying asset for the lease term and lease liabilities represent the Company’s obligation to make lease payments arising from the lease. As most leases do not provide an implicit interest rate, Eaton uses its incremental borrowing rate based on the information available at the lease commencement date in determining the present value of lease payments. The length of a lease term includes options to extend or terminate the lease when it is reasonably certain that the Company will exercise those options. The Company made an accounting policy election to not recognize lease assets or liabilities for leases with a term of 12 months or less. Additionally, when accounting for leases, the Company combines payments for leased assets, related services and other components of a lease.

Other Long-Lived Assets

Depreciation and amortization for property, plant and equipment, and intangible assets subject to amortization, are generally computed by the straight-line method and included in Cost of products sold, Selling and administrative expense, and Research and development expense, as appropriate. Cost of buildings are depreciated generally over 40 years and machinery and equipment over 3 to 10 years. At December 31, 2020, the weighted-average amortization period for intangible assets subject to amortization was 18 years for patents and technology; 17 years for customer relationships; and 18 for certain trademarks. Software is amortized over 5 to 15 years.

Other long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate the carrying amount may not be recoverable. Upon indications of impairment, assets and liabilities are grouped at the lowest level for which identifiable cash flows are largely independent of the cash flows of other assets and liabilities. The asset group would be considered impaired when the estimated future net undiscounted cash flows generated by the asset group are less than its carrying value. Determining asset groups and underlying cash flows requires the use of significant judgment.

Retirement Benefits Plans

For the principal pension plans in the United States, Canada, Puerto Rico, and the United Kingdom, the Company uses a market-related value of plan assets to calculate the expected return on assets used to determine net periodic benefit costs. The market-related value of plan assets is a calculated value that recognizes changes in the fair value of plan assets over a five year period. All other plans use fair value of plan assets.

Net actuarial gains or losses are amortized to expense on a plan-by-plan basis when they exceed the accounting corridor. The Company’s corridors are set at either 8% or 10%, depending on the plan, of the greater of the plan assets or benefit obligations. Gains or losses outside of the corridor are subject to amortization over an average employee future service period that differs by plan. If most or all of the plan’s participants are no longer actively accruing benefits, the average life expectancy is used. The amortization periods on a weighted average basis for United States and Non-United States pension plans are approximately 23 years and 10 years, respectively. The amortization period for other postretirement benefits plans is 7 years.

Asset Retirement Obligations

A conditional asset retirement obligation is recognized at fair value when incurred if the fair value of the liability can be reasonably estimated. Uncertainty about the timing or method of settlement of a conditional asset retirement obligation would be considered in the measurement of the liability when sufficient information exists. Eaton believes that for substantially all of its asset retirement obligations, there is an indeterminate settlement date because the range of time over which the Company may settle the obligation is unknown or cannot be estimated. A liability for these obligations will be recognized when sufficient information is available to estimate fair value.

Income Taxes

Deferred income tax assets and liabilities are determined based on the difference between the financial statement and tax basis of the respective assets and liabilities, using enacted tax rates in effect for the year when the differences are expected to reverse. Deferred income tax assets are recognized for income tax loss carryforwards and income tax credit carryforwards. Judgment is required in determining and evaluating income tax provisions and valuation allowances for deferred income tax assets. Eaton recognizes an income tax benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by taxing authorities, based on the technical merits of the position. Eaton evaluates and adjusts these accruals based on changing facts and circumstances. Eaton recognizes interest and penalties related to unrecognized income tax benefits in the provision for income tax expense. Eaton's policy is to recognize income tax effects from accumulated other comprehensive income when individual units of account are sold, terminated, or extinguished. For additional information about income taxes, see Note 11.

Derivative Financial Instruments and Hedging Activities

Eaton uses derivative financial instruments to manage the exposure to the volatility in raw material costs, currency, and interest rates on certain debt. These instruments are marked to fair value in the accompanying Consolidated Balance Sheets. Changes in the fair value of derivative assets or liabilities (i.e., gains or losses) are recognized depending upon the type of hedging relationship and whether an instrument has been designated as a hedge. For those instruments that qualify for hedge accounting, Eaton designates the hedging instrument, based upon the exposure being hedged, as a cash flow hedge, a fair value hedge, or a hedge of a net investment in a foreign operation. Changes in fair value of these instruments that do not qualify for hedge accounting are recognized immediately in net income. See Note 15 for additional information about hedges and derivative financial instruments.

Note 2. ACQUISITIONS AND DIVESTITURES OF BUSINESSES

Acquisition of controlling interest of Ulusoy Elektrik Imalat Taahhut ve Ticaret A.S.

On April 15, 2019, Eaton completed the acquisition of an 82.275% controlling interest in Ulusoy Elektrik Imalat Taahhut ve Ticaret A.S. (Ulusoy Elektrik), a leading manufacturer of electrical switchgear based in Ankara, Turkey, with a primary focus on medium voltage solutions for industrial and utility customers. Its sales for the 12 months ended September 30, 2018 were $126. The purchase price for the shares was $214 on a cash and debt free basis. As required by the Turkish capital markets legislation, Eaton filed an application to execute a mandatory tender offer for the remaining shares shortly after the transaction closed. During the tender offer, Eaton purchased additional shares for $33 to increase its ownership interest to 93.7%. Ulusoy Elektrik is reported within the Electrical Global business segment.

Acquisition of Innovative Switchgear Solutions, Inc.

On July 19, 2019, Eaton acquired Innovative Switchgear Solutions, Inc. (ISG), a specialty manufacturer of medium-voltage electrical equipment serving the North American utility, commercial and industrial markets. Its 2018 sales were approximately $18. ISG is reported within the Electrical Americas business segment.

Acquisition of Souriau-Sunbank Connection Technologies

On December 20, 2019, Eaton acquired the Souriau-Sunbank Connection Technologies (Souriau-Sunbank) business of TransDigm Group Inc. for a cash purchase price of $907, net of cash received. Headquartered in Versailles, France, Souriau-Sunbank is a global leader in highly engineered electrical interconnect solutions for harsh environments in the aerospace, defense, industrial, energy, and transport markets. Souriau-Sunbank is reported within the Aerospace business segment.

The acquisition of Souriau-Sunbank has been accounted for using the acquisition method of accounting which requires the assets acquired and liabilities assumed be recognized at their respective fair values on the acquisition date. During the measurement period which ended in December 2020, opening balance sheet adjustments were made to finalize Eaton's fair value estimates based on the final valuations received related primarily to intangible assets, goodwill, and the related deferred tax impact, as follows:

	Preliminary Allocation	Measurement Period Adjustments	Final Allocations
Accounts Receivable - net	$ 60	$ —	$ 60
Inventory	121	4	125
Prepaid expenses and other current assets	5	(1)	4
Property, plant and equipment	101	2	103
Other intangible assets	385	(15)	370
Other assets	8	—	8
Accounts payable	(34)	1	(33)
Other current liabilities	(51)	(7)	(58)
Other noncurrent liabilities	(130)	4	(126)
Total identifiable net assets	465	(12)	453
Noncontrolling interests	(4)	1	(3)
Goodwill	442	15	457
Total consideration, net of cash received	$ 903	$ 4	$ 907

Goodwill is calculated as the excess of the consideration transferred over the fair value of net assets recognized and represents the anticipated synergies of acquiring Souriau-Sunbank. Goodwill recognized as a result of the acquisition is not deductible for tax purposes. The estimated fair values of the customer relationships and technology intangible assets were $250 and $95, respectively. The Company generally determines the fair value of intangible assets acquired using third-party valuations that are prepared using discounted cash flow models that rely on the Company's estimates. These estimates require judgment of future revenue growth rates, future margins, and the applicable weighted-average cost of capital used to discount those estimated cash flows. The estimated weighted-average useful lives was 20 years for customer relationships and 15 years for technology intangible assets. See Note 6 for additional information about goodwill and other intangible assets.

Eaton’s Consolidated Financial Statements include Souriau-Sunbank’s results of operations. Souriau-Sunbank's sales for the years ended December 31, 2020 and 2019 were $287 and $3, respectively.

Sale of Automotive Fluid Conveyance business

On December 31, 2019, Eaton sold its Automotive Fluid Conveyance Business. The transaction resulted in a pre-tax loss of $66 which was recorded in Other expense - net. This business was reported within the Vehicle business segment.

Acquisition of Power Distribution, Inc.

On February 25, 2020, Eaton acquired Power Distribution, Inc. a leading supplier of mission critical power distribution, static switching, and power monitoring equipment and services for data centers and industrial and commercial customers. The company is headquartered in Richmond, Virginia, and had 2019 sales of $125. Power Distribution, Inc. is reported within the Electrical Americas business segment.

Sale of Lighting business

On March 2, 2020, Eaton sold its Lighting business to Signify N.V. for a cash purchase price of $1.4 billion. The Company recognized a pre-tax gain of $221. The Lighting business, which had sales of $1.6 billion in 2019 as part of the Electrical Americas business segment, serves customers in commercial, industrial, residential, and municipal markets.

Pending Sale of Hydraulics business

On January 21, 2020, Eaton entered into an agreement to sell its Hydraulics business to Danfoss A/S, a Danish industrial company, for $3.3 billion in cash. Eaton’s Hydraulics business is a global leader in hydraulics components, systems, and services for industrial and mobile equipment. The business had sales of $1.8 billion and $2.2 billion for the years ended December 31, 2020 and 2019, respectively. The transaction is subject to customary closing conditions and regulatory approvals and is expected to close by the end of the first quarter or early second quarter of 2021.

Assets and liabilities held for sale

During the fourth quarter of 2019 and first quarter of 2020, the Company determined the Lighting business and Hydraulics business, respectively, met the criteria to be classified as held for sale. Therefore, assets and liabilities of these businesses have been presented as held for sale in the Consolidated Balance Sheets as of December 31, 2019 and December 31, 2020, respectively. Assets and liabilities classified as held for sale are measured at the lower of carrying value or fair value less costs to sell. There was no write-down as fair values of both the Lighting business and Hydraulics business assets less their costs to sell exceeded their respective carrying value. Depreciation and amortization expense is not recorded for the period in which Other long-lived assets are classified as held for sale.

The Company used the relative fair value method to allocate goodwill to both the Lighting and Hydraulics businesses. The fair values of the Lighting business and Hydraulics business were estimated based on a combination of the prices paid to Eaton by Signify N.V. and Danfoss A/S, respectively, and a discounted cash flow model. The model includes estimates of future cash flows, future growth rates, terminal value amounts, and the applicable weighted-average cost of capital used to discount those estimated cash flows. The weighted-average cost of capital is an estimate of the overall after-tax rate of return required by equity and debt market holders of a business enterprise. These analyses require the exercise of judgments, including judgments about appropriate discount rates, perpetual growth rates, revenue growth, and margin assumptions.

The assets and liabilities classified as held for sale for the Lighting business on the December 31, 2019 Consolidated Balance Sheet and the Hydraulics business on the December 31, 2020 Consolidated Balance Sheet are as follows:

	December 31, 2020 (Hydraulics business)	December 31, 2019 (Lighting business)
Accounts receivable	$ 345	$ 220
Inventory	369	161
Prepaid expenses and other current assets	18	10
Net property, plant and equipment	504	155
Goodwill	920	470
Other intangible assets	248	330
Operating lease assets	61	25
Deferred income taxes	6	—
Other noncurrent assets	16	6
Assets held for sale - current	$ 2,487	$ 1,377
Accounts payable	$ 241	$ 184
Accrued compensation	26	7
Other current liabilities	101	102
Pension liabilities	60	3
Operating lease liabilities	35	17
Deferred income taxes	3	(1)
Other noncurrent liabilities	2	13
Liabilities held for sale - current	$ 468	$ 325

The Lighting business and Hydraulics business did not meet the criteria to be classified as discontinued operations as neither of these sales represent a strategic shift that will have a major effect on the Company's operations.

Agreement to Acquire a 50% stake in HuanYu High Tech

On December 15, 2020, Eaton signed an agreement to acquire a 50 percent stake in HuanYu High Tech, a subsidiary of HuanYu Group that manufactures and markets low-voltage circuit breakers and contactors in China, and throughout the Asia-Pacific region. HuanYu High Tech had 2019 sales of $106 and has production operations in Wenzhou, China. The transaction is subject to customary closing conditions and regulatory approvals and is expected to close in the second quarter of 2021. Eaton expects to account for this investment on the equity method of accounting and will report it within the Electrical Global business segment.

Agreement to Acquire Tripp Lite

On January 28, 2021, Eaton signed an agreement to acquire Tripp Lite, a leading supplier of power quality products and connectivity solutions including single-phase uninterruptible power supply systems, rack power distribution units, surge protectors, and enclosures for data centers, industrial, medical, and communications markets in the Americas. Under the terms of the agreement, Eaton will pay $1.65 billion for Tripp Lite. The transaction is subject to customary closing conditions and is expected to close in the middle of 2021. Tripp Lite will be reported within the Electrical Americas business segment.

Agreement to Acquire Cobham Mission Systems

On January 31, 2021, Eaton signed an agreement to acquire Cobham Mission Systems (CMS), a leading manufacturer of air-to-air refueling systems, environmental systems, and actuation primarily for defense markets. Under the terms of the agreement, Eaton will pay $2.83 billion. The transaction is subject to customary closing conditions and is expected to close in the second half of 2021. CMS will be reported within the Aerospace business segment.

Note 3. REVENUE RECOGNITION

Sales are recognized when obligations under the terms of the contract are satisfied and control of promised goods or services have transferred to our customers. Sales are measured at the amount of consideration the Company expects to be paid in exchange for these products or services.

The majority of the Company's sales agreements contain performance obligations satisfied at a point in time when title and risk and rewards of ownership have transferred to the customer. Sales recognized over time are less than 5% of Eaton's Consolidated Net Sales. Sales recognized over time are generally accounted for using an input measure to determine progress completed at the end of the period. Sales for service contracts generally are recognized as the services are provided. For agreements with multiple performance obligations, judgment is required to determine whether performance obligations specified in these agreements are distinct and should be accounted for as separate revenue transactions for recognition purposes. In these types of agreements, we generally allocate sales price to each distinct obligation based on the price of each item sold in separate transactions.

Due to the nature of the work required to be performed for obligations recognized over time, Eaton estimates total costs by contract. The estimate of total costs are subject to judgment. Estimated amounts are included in the recognized sales price to the extent it is not probable that a significant reversal of cumulative sales will occur. Additionally, contracts can be modified to account for changes in contract specifications, requirements or sale price. The effect of a contract modification on the sales price or adjustments to the measure of completion under the input method are recognized as adjustments to revenue on a cumulative catch-up basis.

Payment terms vary by the type and location of the customer and the products or services offered. Generally, the time between when revenue is recognized and when payment is due is not significant. Eaton does not evaluate whether the selling price includes a financing interest component for contracts that are less than a year. Sales, value added, and other taxes collected concurrent with revenue are excluded from sales. Shipping and handling costs are treated as fulfillment costs and are included in Cost of products sold.

Eaton records reductions to sales for returns, and customer and distributor incentives, primarily comprised of rebates, at the time of the initial sale. Rebates are estimated based on sales terms, historical experience, trend analysis, and projected market conditions in the various markets served. The rebate programs offered vary across businesses due to the numerous markets Eaton serves, but the most common incentives relate to amounts paid or credited to customers for achieving defined volume levels. Returns are estimated at the time of the sale primarily based on historical experience and are recorded gross on the Consolidated Balance Sheet.

Sales commissions are expensed when the amortization period is less than a year and are generally not capitalized as they are typically earned at the completion of the contract when the customer is invoiced or when the customer pays Eaton.

Sales of products and services varies by segment and are discussed in Note 17.

In the Electrical Americas segment, sales contracts are primarily for electrical components, industrial components, power distribution and assemblies, residential products, single and three phase power quality, wiring devices, circuit protection, utility power distribution, power reliability equipment, and services that are primarily produced and sold in North and South America. The majority of the sales in this segment contain performance obligations satisfied at a point in time either when we ship the product from our facility, or when it arrives at the customer's facility. However, certain power distribution and power quality services are recognized over time.

In the Electrical Global segment, sales contracts are primarily for electrical components, industrial components, power distribution and assemblies, single phase and three phase power quality, and services that are primarily produced and sold outside of North and South America, as well as hazardous duty electrical equipment, emergency lighting, fire detection, intrinsically safe explosion-proof instrumentation, and structural support systems that are produced and sold globally. The majority of the sales contracts in this segment contain performance obligations satisfied at a point in time either when we ship the product from our facility, or when it arrives at the customer's facility. However, certain power distribution and power quality services are recognized over time.

Many of the products and services in power distribution and power quality services meet the definition of continuous transfer of control to customers and are recognized over time. These products are engineered to a customer's design specifications, have no alternative use to Eaton, and are controlled by the customer as evidenced by the customer's contractual ownership of the work in process or our right to payment for work performed to date plus a reasonable margin. As control is transferring over time, sales are recognized based on the extent of progress towards completion of the obligation. Eaton generally uses an input method to determine the progress completed and sales are recorded proportionally as costs are incurred. Incurred costs represent work performed, which corresponds with, and thereby best depicts, the transfer of control to the customer.

In the Hydraulics segment, sales contracts are primarily for hydraulic components and systems for industrial and mobile equipment. These sales contracts are primarily based on a customer's purchase order. In this segment, performance obligations are generally satisfied at a point in time when we ship the product from our facility.

In the Aerospace segment, sales contracts are primarily for aerospace fuel, hydraulics, and pneumatic systems for commercial and military use, as well as filtration systems for industrial applications. These sales contracts are primarily based on a customer's purchase order, and frequently covered by terms and conditions included in a long-term agreement. In this segment, performance obligations are generally satisfied at a point in time either when we ship the product from our facility, or when it arrives at the customer's facility. Our military contracts are primarily fixed-price contracts that are not subject to performance-based payments or progress payments from the customer.

In the Vehicle segment, sales contracts are primarily for drivetrains, powertrain systems and critical components that reduce emissions and improve fuel economy, stability, performance, and safety of cars, light trucks, and commercial vehicles. These sales contracts are primarily based on a customer's purchase order or a blanket purchase order subject to firm releases, frequently covered by terms and conditions included in a master supply agreement. In this segment, performance obligations are generally satisfied at a point in time either when we ship the product from our facility, or when it arrives at the customer's facility.

In the eMobility segment, sales contracts are primarily for electronic and mechanical components and systems that improves the power management and performance of both on-road and off-road vehicles. These sales contracts are primarily based on a customer's purchase order. In this segment, performance obligations are generally satisfied at a point in time either when we ship the product from our facility, or when it arrives at the customer's facility.

In limited circumstances, primarily in the Electrical and Vehicle segments, Eaton sells separately-priced warranties that extend the warranty coverage beyond the standard coverage offered on specific products. Sales for these separately-priced warranties are recorded based on their stand-alone selling price and are recognized as revenue over the length of the warranty period.

The Company's six operating segments and the following tables disaggregate sales by lines of businesses, geographic destination, market channel or end market.

	2020			
Net sales		Products	Systems	Total
Electrical Americas		$ 2,255	$ 4,425	$ 6,680
Electrical Global		2,608	2,095	4,703
		United States	Rest of World	
Hydraulics		$ 796	$ 1,046	1,842
	Original Equipment Manufacturers	Aftermarket	Industrial and Other	
Aerospace	$ 986	$ 685	$ 552	2,223
		Commercial	Passenger and Light Duty	
Vehicle		$ 1,060	$ 1,058	2,118
eMobility				292
Total				$ 17,858

	2019			
Net sales		Products	Systems	Total
Electrical Americas		$ 3,675	$ 4,500	$ 8,175
Electrical Global		2,782	2,390	5,172
		United States	Rest of World	
Hydraulics		$ 1,000	$ 1,204	2,204
	Original Equipment Manufacturers	Aftermarket	Industrial and Other	
Aerospace	$ 1,178	$ 859	$ 443	2,480
		Commercial	Passenger and Light Duty	
Vehicle		$ 1,538	$ 1,500	3,038
eMobility				321
Total				$ 21,390

	2018			
Net sales		Products	Systems	Total
Electrical Americas		$ 3,577	$ 4,337	$ 7,914
Electrical Global		2,832	2,327	5,159
		United States	Rest of World	
Hydraulics		$ 1,078	$ 1,314	2,392
	Original Equipment Manufacturers	Aftermarket	Industrial and Other	
Aerospace	$ 1,102	$ 766	$ 467	2,335
		Commercial	Passenger and Light Duty	
Vehicle		$ 1,759	$ 1,730	3,489
eMobility				320
Total				$ 21,609

The timing of revenue recognition, billings and cash collections results in billed accounts receivable, unbilled receivables (revenue recognized exceeds amount billed to the customer), and deferred revenue (advance payments and billings in excess of revenue recognized). Accounts receivables from customers were $2,539 and $3,090 at December 31, 2020 and December 31, 2019, respectively. Amounts are billed as work progresses in accordance with agreed-upon contractual terms, either at periodic intervals or upon achievement of contractual milestones. These assets and liabilities are reported on the Consolidated Balance Sheets on a contract-by-contract basis at the end of each reporting period. Unbilled receivables were $90 and $101 at December 31, 2020 and December 31, 2019, respectively, and are recorded in Prepaid expenses and other current assets. The decrease in unbilled receivables was primarily due to billings to customers during 2020, partially offset by revenue recognized and not yet billed.

Changes in the deferred revenue liabilities are as follows:

	Deferred Revenue
Balance at January 1, 2019	$ 248
Customer deposits and billings	982
Revenue recognized in the period	(993)
Translation	3
Deferred revenue reclassified to held for sale	(6)
Balance at December 31, 2019	$ 234
Customer deposits and billings	1,041
Revenue recognized in the period	(1,014)
Translation	7
Deferred revenue reclassified to held for sale	(11)
Balance at December 31, 2020	$ 257

A significant portion of open orders placed with Eaton are by original equipment manufacturers or distributors. These open orders are not considered firm as they have been historically subject to releases by customers. In measuring backlog of unsatisfied or partially satisfied obligations, only the amount of orders to which customers are firmly committed are included. Using this criterion, total backlog at December 31, 2020 was approximately $5.6 billion. At December 31, 2020, Eaton expects to recognize approximately 88% of this backlog in the next twelve months and the rest thereafter.

Note 4. CREDIT LOSSES FOR RECEIVABLES

Receivables are exposed to credit risk based on the customers' ability to pay which is influenced by, among other factors, their financial liquidity position. Eaton's receivables are generally short-term in nature with a majority outstanding less than 90 days.

Eaton performs ongoing credit evaluation of its customers and maintains sufficient allowances for potential credit losses. The Company evaluates the collectability of its receivables based on the length of time the receivable is past due, and any anticipated future write-off based on historic experience adjusted for market conditions. The Company's segments, supported by our global credit department, perform the credit evaluation and monitoring process to estimate and manage credit risk. The process includes an evaluation of credit losses for both the overall segment receivable and specific customer balances. The process also includes review of customer financial information and credit ratings, approval and monitoring of customer credit limits, and an assessment of market conditions. The Company may also require prepayment from customers to mitigate credit risk. Receivable balances are written off against an allowance for credit losses after a final determination of collectability has been made.

Accounts receivable are net of an allowance for credit losses of $48 and $49 at December 31, 2020 and 2019. The change in the allowance for credit losses includes expense and net write-offs, none of which is significant.

Note 5. INVENTORY

Inventory is carried at lower of cost or net realizable value using the first-in, first-out (FIFO) method. Cost components include raw materials, purchased components, direct labor, indirect labor, utilities, depreciation, inbound freight charges, purchasing and receiving costs, inspection costs, warehousing costs, and costs of the distribution network.

The components of inventory follow:

	December 31 2020	December 31 2019
Raw materials	$ 803	$ 986
Work-in-process	498	640
Finished goods	808	1,179
Total inventory	$ 2,109	$ 2,805

Note 6. GOODWILL AND OTHER INTANGIBLE ASSETS

Changes in the carrying amount of goodwill by segment follow:

	January 1, 2019	Additions	Goodwill reclassified to held for sale	Translation	December 31, 2019	Additions	Goodwill reclassified to held for sale	Translation	December 31, 2020
Electrical Americas	$ 6,819	$ 8	$ (470)	$ (5)	$ 6,352	$ 97	$ —	$ 7	$ 6,456
Electrical Global	3,942	155	—	9	4,106	7	—	182	4,295
Hydraulics	931	—	—	(10)	921	—	(907)	(14)	—
Aerospace	1,264	442	—	—	1,706	15	—	56	1,777
Vehicle	292	—	—	(1)	291	—	—	2	293
eMobility	80	—	—	—	80	—	—	2	82
Total	$ 13,328	$ 605	$ (470)	$ (7)	$ 13,456	$ 119	$ (907)	$ 235	$ 12,903

During the first quarter of 2020, Eaton re-segmented certain reportable operating segments due to a reorganization of the Company's businesses. The Company used the relative fair value method to reallocate goodwill to the associated reporting units impacted by the reorganization resulting in goodwill of $6.4 billion and $4.0 billion being allocated to the Electrical Americas and Electrical Global reportable segments, respectively. The Company's reporting units are equivalent to the reportable operating segments, except for the Aerospace segment which has two reporting units.

The fair values of the Electrical Americas and Electrical Global reportable segments were estimated based on a discounted cash flow model. The model includes estimates of future cash flows, future growth rates, terminal value amounts, and the applicable weighted-average cost of capital used to discount those estimated cash flows. The weighted-average cost of capital is an estimate of the overall after-tax rate of return required by equity and debt market holders of a business enterprise. These analyses require the exercise of judgments, including judgments about appropriate discount rates, perpetual growth rates, revenue growth, and margin assumptions.

The fair value of the Hydraulics reportable segment was estimated based on a combination of the price to be paid to Eaton by Danfoss A/S and a discounted cash flow model. See Note 2 for additional information about the allocation of goodwill to the Hydraulics reportable segment.

The Filtration and Golf Grip businesses previously included in the Hydraulics reportable segment, and the electrical aerospace connectors business previously included in the Electrical Products segment, have been added to the Aerospace segment as part of the reorganization.

The 2020 additions to goodwill primarily relate to the anticipated synergies of acquiring Power Distribution, Inc. The 2019 additions to goodwill relate to the anticipated synergies of acquiring Souriau-Sunbank, Ulusoy Elektrik and ISG.

A summary of other intangible assets follows:

	December 31			
	2020		2019	
	Historical cost	Accumulated amortization	Historical cost	Accumulated amortization
Intangible assets not subject to amortization				
Trademarks	$ 1,382		$ 1,516	
Intangible assets subject to amortization				
Customer relationships	$ 3,415	$ 1,795	$ 3,260	$ 1,634
Patents and technology	1,428	773	1,542	704
Trademarks	970	505	1,057	457
Other	91	38	92	34
Total intangible assets subject to amortization	$ 5,904	$ 3,111	$ 5,951	$ 2,829

Amortization expense related to intangible assets subject to amortization in 2020, and estimated amortization expense for each of the next five years, follows:

2020	$ 342
2021	339
2022	331
2023	287
2024	277
2025	273

Note 7. LEASES

Eaton leases certain manufacturing facilities, warehouses, distribution centers, office space, vehicles, and equipment. Most real estate leases contain renewal options. The exercise of lease renewal options is at the Company's sole discretion. The Company's lease agreements typically do not contain any significant guarantees of asset values at the end of a lease or restrictive covenants. Payments within certain lease agreements are adjusted periodically for changes in an index or rate.

The components of lease expense follows:

	2020	2019
Operating lease cost	$ 184	$ 166
Finance lease cost:		
Amortization of lease assets	6	5
Interest on lease liabilities	1	1
Short-term lease cost	18	46
Variable lease cost	3	22
Sublease income	(2)	(3)
Total lease cost	$ 210	$ 237

Rental expense was $232 for the year ended December 31, 2018. The net gains recorded on sale leaseback transactions were $9 and $16 for the years ended December 31, 2020 and 2019, respectively.

Supplemental cash flow information related to leases follows:

	2020	2019
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash outflows - payments on operating leases	$ (144)	$ (168)
Operating cash outflows - interest payments on finance leases	(1)	(1)
Financing cash outflows - payments on finance lease obligations	(8)	(6)
Lease assets obtained in exchange for new lease obligations, including leases acquired:		
Operating leases	$ 144	$ 114
Finance leases	16	24

Supplemental balance sheet information related to leases follows:

	December 31	
	2020	2019
Operating Leases		
Operating lease assets	$ 428	$ 436
Other current liabilities	116	121
Operating lease liabilities	326	331
Total operating lease liabilities	$ 442	$ 452
Finance Leases		
Land and buildings	$ 13	$ 24
Machinery and equipment	38	18
Accumulated depreciation	(16)	(16)
Net property, plant and equipment	$ 35	$ 26
Current portion of long-term debt	$ 8	$ 6
Long-term debt	30	21
Total finance lease liabilities	$ 38	$ 27
Weighted-average remaining lease term		
Operating leases	5.5 years	5.1 years
Finance leases	7.4 years	6.8 years
Weighted-average discount rate		
Operating leases	3.3 %	3.7 %
Finance leases	3.5 %	7.6 %

Maturities of lease liabilities at December 31, 2020 follows:

	Operating Leases		Finance Leases	
2021	$	129	$	10
2022		103		8
2023		78		6
2024		54		5
2025		30		2
Thereafter		91		11
Total lease payments		485		42
Less imputed interest		43		4
Total present value of lease liabilities	$	442	$	38

Note 8. DEBT

A summary of long-term debt, including the current portion, follows:

	December 31			
	2020		2019	
3.875% debentures due 2020 ($150 converted to floating rate by interest rate swap)	$	—	$	239
3.47% notes due 2021 ($275 converted to floating rate by interest rate swap)		300		300
0.02% Euro notes due 2021		737		674
8.10% debentures due 2022 ($100 converted to floating rate by interest rate swap)		100		100
2.75% senior notes due 2022 ($1,400 converted to floating rate by interest rate swap)		1,600		1,600
3.68% notes due 2023 ($200 converted to floating rate by interest rate swap)		300		300
0.75% Euro notes due 2024		676		617
6.50% debentures due 2025		145		145
0.70% Euro notes due 2025		614		562
3.10% senior notes due 2027		700		700
7.65% debentures due 2029 ($50 converted to floating rate by interest rate swap)		200		200
4.00% senior notes due 2032		700		700
5.45% debentures due 2034 ($25 converted to floating rate by interest rate swap)		136		137
5.80% notes due 2037		240		240
4.15% senior notes due 2042		1,000		1,000
3.92% senior notes due 2047		300		300
5.25% to 7.875% notes (maturities ranging from 2024 to 2035, including $25 converted to floating rate by interest rate swap)		165		165
Other		144		88
Total long-term debt		8,057		8,067
Less current portion of long-term debt		(1,047)		(248)
Long-term debt less current portion	$	7,010	$	7,819

Substantially all these long-term debt instruments are fully and unconditionally guaranteed on an unsubordinated, unsecured basis by Eaton and certain of its direct and indirect subsidiaries (the Senior Notes). Further, as of December 31, 2020 all of these long-term debt instruments, except the 3.47% notes due 2021, the 0.02% Euro notes due 2021, the 3.68% notes due 2023, the 0.75% Euro notes due 2024, and the 0.70% Euro notes due 2025, are registered by Eaton Corporation under the Securities Act of 1933, as amended (the Registered Senior Notes).

The Company maintains long-term revolving credit facilities totaling $2,000, consisting of a $750 five-year revolving credit facility that will expire November 17, 2022, a $500 four-year revolving credit facility that will expire November 7, 2023, and a $750 five-year revolving credit facility that will expire November 7, 2024. The revolving credit facilities are used to support commercial paper borrowings and are fully and unconditionally guaranteed by Eaton and certain of its direct and indirect subsidiaries on an unsubordinated, unsecured basis. There were no borrowings outstanding under Eaton's revolving credit facilities at December 31, 2020 or 2019. The Company had available lines of credit of $1,010 from various banks primarily for the issuance of letters of credit, of which there was $268 outstanding at December 31, 2020. Borrowings outside the United States are generally denominated in local currencies.

Eaton is in compliance with each of its debt covenants for all periods presented.

Maturities of long-term debt for each of the next five years follow:

2021	$ 1,047
2022	1,708
2023	306
2024	746
2025	762

Interest paid on debt follows:

2020	$ 216
2019	279
2018	313

Note 9. RETIREMENT BENEFITS PLANS

Eaton has defined benefits pension plans and other postretirement benefits plans.

Obligations and Funded Status

	United States pension liabilities		Non-United States pension liabilities		Other postretirement liabilities	
	2020	2019	2020	2019	2020	2019
Funded status						
Fair value of plan assets	$ 3,463	$ 3,433	$ 2,137	$ 1,903	$ 20	$ 23
Benefit obligations	(4,121)	(4,028)	(3,036)	(2,747)	(375)	(378)
Funded status	$ (658)	$ (595)	$ (899)	$ (844)	$ (355)	$ (355)
Amounts recognized in the Consolidated Balance Sheets						
Non-current assets	$ —	$ —	$ 95	$ 73	$ —	$ —
Current liabilities	(36)	(23)	(28)	(27)	(25)	(27)
Non-current liabilities	(622)	(572)	(966)	(890)	(330)	(328)
Total	$ (658)	$ (595)	$ (899)	$ (844)	$ (355)	$ (355)
Amounts recognized in Accumulated other comprehensive loss (pre-tax)						
Net actuarial (gain) loss	$ 1,046	$ 1,096	$ 1,005	$ 879	$ 1	$ (8)
Prior service cost (credit)	5	7	21	25	(3)	(17)
Total	$ 1,051	$ 1,103	$ 1,026	$ 904	$ (2)	$ (25)

Change in Benefit Obligations

	United States pension liabilities		Non-United States pension liabilities		Other postretirement liabilities	
	2020	2019	2020	2019	2020	2019
Balance at January 1	$ 4,028	$ 3,633	$ 2,747	$ 2,285	$ 378	$ 378
Service cost	97	91	73	58	2	2
Interest cost	103	138	45	57	9	14
Actuarial (gain) loss	223	435	217	315	11	14
Gross benefits paid	(330)	(270)	(121)	(102)	(49)	(60)
Currency translation	—	—	137	47	2	2
Plan amendments	—	1	1	—	—	1
Acquisitions and divestitures	—	—	—	(4)	—	—
Benefit obligation reclassified to held for sale	—	—	(65)	(4)	—	—
Other	—	—	2	95	22	27
Balance at December 31	$ 4,121	$ 4,028	$ 3,036	$ 2,747	$ 375	$ 378
Accumulated benefit obligation	$ 4,054	$ 3,883	$ 2,862	$ 2,592		

Actuarial losses related to changes in the United States and Non-United States benefit obligations in 2020 of $223 and $217, respectively, were primarily due to decreases in the discount rates used to measure the obligations, partially offset by curtailment gains related to amendments to freeze the Company's Unites States pension plans for its non-union employees. The freeze is effective January 1, 2021 for non-union U.S. employees whose retirement benefit was determined under a cash balance formula and effective January 1, 2026 for non-union U.S. employees whose retirement benefit is determined under a final average pay formula. Actuarial losses related to changes in the United States and Non-United States benefit obligations in 2019 of $435 and $315, respectively, were primarily due to decreases in the discount rates used to measure the obligations.

Change in Plan Assets

	United States pension liabilities		Non-United States pension liabilities		Other postretirement liabilities	
	2020	2019	2020	2019	2020	2019
Balance at January 1	$ 3,433	$ 3,068	$ 1,903	$ 1,560	$ 23	$ 37
Actual return on plan assets	342	618	185	230	1	5
Employer contributions	18	17	104	102	23	15
Gross benefits paid	(330)	(270)	(121)	(102)	(49)	(60)
Currency translation	—	—	69	58	—	—
Plan assets reclassified to held for sale	—	—	(5)	—	—	—
Other	—	—	2	55	22	26
Balance at December 31	$ 3,463	$ 3,433	$ 2,137	$ 1,903	$ 20	$ 23

The components of pension plans with an accumulated benefit obligation in excess of plan assets at December 31 follow:

	United States pension liabilities		Non-United States pension liabilities	
	2020	2019	2020	2019
Accumulated benefit obligation	$ 4,054	$ 3,883	$ 2,586	$ 1,028
Fair value of plan assets	3,463	3,433	1,756	242

The components of pension plans with a projected benefit obligation in excess of plan assets at December 31 follow:

	United States pension liabilities		Non-United States pension liabilities	
	2020	2019	2020	2019
Projected benefit obligation	$ 4,121	$ 4,028	$ 2,763	$ 2,502
Fair value of plan assets	3,463	3,433	1,770	1,585

Other postretirement benefit plans with accumulated postretirement benefit obligations in excess of plan assets have been disclosed in the Obligations and Funded Status table.

Changes in pension and other postretirement benefit liabilities recognized in Accumulated other comprehensive loss follow:

	United States pension liabilities		Non-United States pension liabilities		Other postretirement liabilities	
	2020	2019	2020	2019	2020	2019
Balance at January 1	$ 1,103	$ 1,160	$ 904	$ 710	$ (25)	$ (52)
Prior service cost arising during the year	—	1	1	—	—	1
Net loss (gain) arising during the year	112	52	141	231	10	11
Currency translation	—	—	48	15	—	1
Other	—	—	2	—	—	—
Less amounts included in expense during the year	(164)	(110)	(70)	(52)	13	14
Net change for the year	(52)	(57)	122	194	23	27
Balance at December 31	$ 1,051	$ 1,103	$ 1,026	$ 904	$ (2)	$ (25)

Benefits Expense

	United States pension benefit expense			Non-United States pension benefit expense			Other postretirement benefits expense		
	2020	2019	2018	2020	2019	2018	2020	2019	2018
Service cost	$ 97	$ 91	$ 100	$ 73	$ 58	$ 63	$ 2	$ 2	$ 2
Interest cost	103	138	122	45	57	52	9	14	13
Expected return on plan assets	(231)	(235)	(253)	(109)	(106)	(105)	—	(2)	(3)
Amortization	102	62	94	60	38	39	(13)	(14)	(13)
	71	56	63	69	47	49	(2)	—	(1)
Settlements, curtailments and special termination benefits	62	48	46	10	14	2	—	—	—
Total expense	$ 133	$ 104	$ 109	$ 79	$ 61	$ 51	$ (2)	$ —	$ (1)

Total pension benefits expense of $165 for 2019 includes $8 of settlement expense related to the sale of the Automotive Fluid Conveyance Business discussed in Note 2. The components of retirement benefits expense other than service costs are included in Other expense - net.

Retirement Benefits Plans Assumptions

In 2018, 2019, and 2020, for purposes of determining liabilities related to the majority of its plans in the United States, the Company used mortality tables that are based on the Company's own experience and generational improvement scales that are based on MP-2018, MP-2019, and MP-2020, respectively.

To estimate the service and interest cost components of net periodic benefit cost for the vast majority of its defined benefits pension and other postretirement benefits plans, the Company used a spot rate approach by applying the specific spot rates along the yield curve used to measure the benefit obligation at the beginning of the period to the relevant projected cash flows.

Pension Plans

	United States pension plans			Non-United States pension plans		
	2020	2019	2018	2020	2019	2018
Assumptions used to determine benefit obligation at year-end						
Discount rate	2.48 %	3.22 %	4.28 %	1.59 %	2.02 %	2.83 %
Rate of compensation increase	3.12 %	3.14 %	3.14 %	3.02 %	3.05 %	3.10 %
Interest rate used to credit cash balance plans	2.02 %	2.59 %	3.13 %	0.53 %	0.54 %	2.60 %
Assumptions used to determine expense						
Discount rate used to determine benefit obligation	3.22 %	4.28 %	3.64 %	2.02 %	2.83 %	2.62 %
Discount rate used to determine service cost	3.34 %	4.39 %	3.78 %	2.78 %	4.02 %	3.54 %
Discount rate used to determine interest cost	2.75 %	3.94 %	3.19 %	1.82 %	2.56 %	2.31 %
Expected long-term return on plan assets	7.25 %	7.25 %	7.52 %	5.84 %	6.42 %	6.40 %
Rate of compensation increase	3.14 %	3.14 %	3.15 %	3.05 %	3.10 %	3.11 %
Interest rate used to credit cash balance plans	2.59 %	3.13 %	3.02 %	0.54 %	2.60 %	2.91 %

The expected long-term rate of return on pension assets was determined for each country and reflects long-term historical data taking into account each plan's target asset allocation. The expected long-term rates of return on pension assets for United States pension plans and Non-United States pension plans for 2021 are 6.75% and 5.62%, respectively. The discount rates were determined using appropriate bond data for each country.

Other Postretirement Benefits Plans

Substantially all of the obligation for other postretirement benefits plans relates to United States plans. Assumptions used to determine other postretirement benefits obligations and expense follow:

	Other postretirement benefits plans		
	2020	2019	2018
Assumptions used to determine benefit obligation at year-end			
Discount rate	2.37 %	3.13 %	4.23 %
Health care cost trend rate assumed for next year	7.05 %	6.95 %	7.10 %
Ultimate health care cost trend rate	4.75 %	4.75 %	4.75 %
Year ultimate health care cost trend rate is achieved	2030	2029	2028
Assumptions used to determine expense			
Discount rate used to determine benefit obligation	3.13 %	4.23 %	3.55 %
Discount rate used to determine service cost	3.25 %	4.29 %	3.62 %
Discount rate used to determine interest cost	2.67 %	3.85 %	3.04 %
Initial health care cost trend rate	6.95 %	7.10 %	8.25 %
Ultimate health care cost trend rate	4.75 %	4.75 %	4.75 %
Year ultimate health care cost trend rate is achieved	2029	2028	2027

Employer Contributions to Retirement Benefits Plans

Contributions to pension plans that Eaton expects to make in 2021, and made in 2020, 2019 and 2018, follow:

	2021	2020	2019	2018
United States plans	$ 236	$ 18	$ 17	$ 17
Non-United States plans	101	104	102	109
Total contributions	$ 337	$ 122	$ 119	$ 126

The following table provides the estimated pension and other postretirement benefit payments for each of the next five years, and the five years thereafter in the aggregate. For other postretirement benefits liabilities, the expected subsidy receipts related to the Medicare Prescription Drug, Improvement, and Modernization Act of 2003 would reduce the gross payments listed below.

			Estimated other postretirement benefit payments	
	Estimated United States pension payments	Estimated non-United States pension payments	Gross	Medicare prescription drug subsidy
2021	$ 406	$ 100	$ 28	$ (1)
2022	298	101	31	—
2023	289	105	27	—
2024	280	107	26	—
2025	272	112	24	—
2026 - 2030	1,218	613	107	(1)

Pension Plan Assets

Investment policies and strategies are developed on a country specific basis. The United States plans, representing 62% of worldwide pension assets, and the United Kingdom plans representing 30% of worldwide pension assets, are invested primarily for growth, as the majority of the assets are in plans with active participants and ongoing accruals. In general, the plans have their primary allocation to diversified global equities, primarily through index funds in the form of common collective and other trusts. The United States plans' target allocation is 25% United States equities, 25% non-United States equities, 8% real estate (primarily equity of real estate investment trusts), 37% debt securities and 5% other, including private equity and cash equivalents. The United Kingdom plans' target asset allocations are 48% equities and the remainder in debt securities, cash equivalents and real estate investments. The equity risk for the plans is managed through broad geographic diversification and diversification across industries and levels of market capitalization. The majority of debt allocations for these plans are longer duration government and corporate debt. The United States, United Kingdom and Canada pension plans are authorized to use derivatives to achieve more economically desired market exposures and to use futures, swaps and options to gain or hedge exposures.

Fair Value Measurements

Financial instruments included in pension and other postretirement benefits plan assets are categorized into a fair value hierarchy of three levels, based on the degree of subjectivity inherent in the valuation methodology as follows:

Level 1 - Quoted prices (unadjusted) for identical assets in active markets.

Level 2 - Quoted prices for similar assets in active markets, and inputs that are observable for the asset, either directly or indirectly, for substantially the full term of the financial instrument.

Level 3 - Unobservable prices or inputs.

Certain investments that are measured at fair value using the net asset value per share practical expedient have not been categorized in the fair value hierarchy and are being presented in the tables to permit a reconciliation to total plan assets.

Pension Plans

A summary of the fair value of pension plan assets at December 31, 2020 and 2019, follows:

	Total	Quoted prices in active markets for identical assets (Level 1)	Other observable inputs (Level 2)	Unobservable inputs (Level 3)[1]
2020				
Common collective trusts				
Non-United States equity and global equities	$ 610	$ —	$ 610	$ —
United States equity	73	—	73	—
Fixed income	681	—	681	—
Fixed income securities	1,021	—	1,021	—
United States treasuries	316	316	—	—
Bank loans	110	—	110	—
Real estate	419	221	14	184
Cash equivalents	184	71	113	—
Exchange traded funds	88	88	—	—
Other	213	—	39	174
Common collective and other trusts measured at net asset value	1,987			
Money market funds measured at net asset value	6			
Pending purchases and sales of plan assets, and interest receivable	(108)			
Total pension plan assets	$ 5,600	$ 696	$ 2,661	$ 358

[1] These pension plan assets include private real estate, private credit and private equity funds that generally have redemption notice periods of six months or longer, and are not eligible for redemption until the underlying assets are liquidated or distributed. The Company has unfunded commitments to these funds of approximately $254 at December 31, 2020, which will be satisfied by a reallocation of pension plan assets.

	Total	Quoted prices in active markets for identical assets (Level 1)	Other observable inputs (Level 2)	Unobservable inputs (Level 3)[1]
2019				
Common collective trusts				
Non-United States equity and global equities	$ 606	$ —	$ 606	$ —
United States equity	74	—	74	—
Fixed income	571	—	571	—
Fixed income securities	885	—	885	—
United States treasuries	330	330	—	—
Bank loans	104	—	104	—
Real estate	299	225	13	61
Cash equivalents	196	67	129	—
Exchange traded funds	79	79	—	—
Other	167	—	38	129
Common collective and other trusts measured at net asset value	2,108			
Money market funds measured at net asset value	6			
Pending purchases and sales of plan assets, and interest receivable	(89)			
Total pension plan assets	$ 5,336	$ 701	$ 2,420	$ 190

[1] These pension plan assets include private real estate, private credit and private equity funds that generally have redemption notice periods of six months or longer, and are not eligible for redemption until the underlying assets are liquidated or distributed. The Company has unfunded commitments to these funds of approximately $334 at December 31, 2019, which will be satisfied by a reallocation of pension plan assets.

The fair value measurement of plan assets using significant unobservable inputs (Level 3) changed during 2019 and 2020 due to the following:

	Real estate	Other	Total
Balance at January 1, 2019	$ 21	$ 75	$ 96
Actual return on plan assets:			
Gains (losses) relating to assets still held at year-end	4	12	16
Purchases, sales, settlements - net	36	42	78
Transfers into or out of Level 3	—	—	—
Balance at December 31, 2019	61	129	190
Actual return on plan assets:			
Gains (losses) relating to assets still held at year-end	2	12	14
Purchases, sales, settlements - net	121	33	154
Transfers into or out of Level 3	—	—	—
Balance at December 31, 2020	$ 184	$ 174	$ 358

Other Postretirement Benefits Plans

A summary of the fair value of other postretirement benefits plan assets at December 31, 2020 and 2019, follows:

	Total	Quoted prices in active markets for identical assets (Level 1)	Other observable inputs (Level 2)	Unobservable inputs (Level 3)
2020				
Cash equivalents	$ 3	$ 3	$ —	$ —
Common collective and other trusts measured at net asset value	17			
Total other postretirement benefits plan assets	$ 20	$ 3	$ —	$ —

	Total	Quoted prices in active markets for identical assets (Level 1)	Other observable inputs (Level 2)	Unobservable inputs (Level 3)
2019				
Cash equivalents	$ 5	$ 5	$ —	$ —
Common collective and other trusts measured at net asset value	18			
Total other postretirement benefits plan assets	$ 23	$ 5	$ —	$ —

Valuation Methodologies

Following is a description of the valuation methodologies used for pension and other postretirement benefits plan assets measured at fair value. There have been no changes in the methodologies used at December 31, 2020 and 2019.

Common collective and other trusts - Valued at the net unit value of units held by the trust at year end. The unit value is determined by the total value of fund assets divided by the total number of units of the fund owned. The equity investments in collective trusts are predominantly in index funds for which the underlying securities are actively traded in public markets based upon readily measurable prices. The investments in other trusts are predominantly in exchange traded funds for which the underlying securities are actively traded in public markets based upon readily measurable prices. Common collective and other trusts measured at fair value using the net asset value per share practical expedient have not been categorized in the fair value hierarchy and are being presented in the tables above to permit a reconciliation of the fair value hierarchy to the total plan assets.

Fixed income securities - These securities consist of publicly traded United States and non-United States fixed interest obligations (principally corporate and government bonds and debentures). The fair value of corporate and government debt securities is determined through third-party pricing models that consider various assumptions, including time value, yield curves, credit ratings, and current market prices. The Company verifies the results of trustees or custodians and evaluates the pricing classification of these securities by performing analyses using other third-party sources.

United States treasuries - Valued at the closing price of each security.

Bank loans - These securities consist of senior secured term loans of publicly traded and privately held United States and non-United States floating rate obligations (principally corporations of non-investment grade rating). The fair value is determined through third-party pricing models that primarily utilize dealer quoted current market prices. The Company verifies the results of trustees or custodians and evaluates the pricing classification of these securities by performing analyses using other third-party sources.

Real estate - Consists of direct investments in the stock of publicly traded companies and investments in pooled funds that invest directly in real estate. The publicly traded companies are valued based on the closing price reported in an active market on which the individual securities are traded and as such are classified as Level 1. The pooled funds rely on appraisal-based valuations and as such are classified as Level 3.

Cash equivalents - Primarily certificates of deposit, commercial paper, and repurchase agreements.

Exchange traded funds - Valued at the closing price of the exchange traded fund's shares.

Money market funds - Money market funds measured at fair value using the net asset value per share practical expedient have not been categorized in the fair value hierarchy and are being presented in the tables above to permit a reconciliation of the fair value hierarchy to the total plan assets.

Other - Primarily insurance contracts for international plans and also futures contracts and over-the-counter options. These investments are valued based on the closing prices of future contracts or indices as available on Bloomberg or similar service, private credit and private equity investments.

For additional information regarding fair value measurements, see Note 14.

Defined Contribution Plans

The Company has various defined contribution benefit plans, primarily consisting of the plans in the United States. The total contributions related to these plans are charged to expense and were as follows:

2020	$	111
2019		130
2018		124

Note 10. COMMITMENTS AND CONTINGENCIES

Legal Contingencies

Eaton is subject to a broad range of claims, administrative and legal proceedings such as lawsuits that relate to contractual allegations, tax audits, patent infringement, personal injuries, antitrust matters, and employment-related matters. Eaton is also subject to asbestos claims from historic products which may have contained asbestos. Insurance may cover some of the costs associated with these claims and proceedings. Although it is not possible to predict with certainty the outcome or cost of these matters, the Company believes they will not have a material adverse effect on the consolidated financial statements.

In December 2011, Pepsi-Cola Metropolitan Bottling Company, Inc. (“Pepsi”) filed an action against (a) Cooper Industries, LLC, Cooper Industries, Ltd., Cooper Holdings, Ltd., Cooper US, Inc., and Cooper Industries plc (collectively, “Cooper”), (b) M&F Worldwide Corp., Mafco Worldwide Corp., Mafco Consolidated Group LLC, and PCT International Holdings, Inc. (collectively, “Mafco”), and (c) the Pneumo Abex Asbestos Claims Settlement Trust (the “Trust”) in Texas state court. Pepsi alleged that it was harmed by a 2011 settlement agreement (“2011 Settlement”) among Cooper, Mafco, and Pneumo Abex, LLC (“Pneumo,” which prior to the 2011 Settlement was a Mafco subsidiary), which settlement resolved litigation that Pneumo had previously brought against Cooper involving, among other things, a guaranty related to Pneumo’s friction products business. In November 2015, after a Texas court ruled that Pepsi's claims should be heard in arbitration, Pepsi filed a demand for arbitration against Cooper, Mafco, the Trust, and Pneumo. Pepsi subsequently dropped claims against all parties except Cooper. An arbitration under the auspices of the American Arbitration Association commenced in October 2017. Pepsi’s experts opined, among other things, that the value contributed to the Trust for a release of the guaranty was below reasonably equivalent value, and that an inability of Pneumo to satisfy future liabilities could result in plaintiffs suing Pepsi under various theories. Cooper submitted various expert reports and, among other things, Cooper’s experts opined that Pepsi had no basis to seek any damages and that Cooper paid reasonably equivalent value for the release of its indemnity obligations under the guaranty. The arbitration proceedings closed in December 2017. On July 11, 2018, the arbitration panel made certain findings and concluded that the value contributed to the Trust did not constitute reasonably equivalent value, but ordered the parties to recalculate the amount that should have been contributed to the Trust as of the date of the 2011 transaction. Based on the findings made by the panel and the recalculation ordered by the panel, Cooper believed that no additional amount should be contributed. Pepsi argued that an additional $347 should be contributed. Cooper and its expert disagreed with Pepsi’s argument and believed that Pepsi’s recalculation was flawed and failed to comply with the instructions of the panel. On August 23, 2018, the panel issued its final award and ordered Cooper to pay $293 to Pneumo Abex. On August 30, 2018, Pepsi sought to confirm the award in Texas state court, which Cooper opposed on October 9, 2018. Cooper further requested that the court vacate the award on various grounds, including that Cooper was prejudiced by the conduct of the proceedings, the panel exceeded its powers, and because the panel denied Cooper a full and fair opportunity to present certain evidence. The court confirmed the award at the confirmation hearing, which was held on October 12, 2018. On November 2, 2018, the Company appealed. On November 28, 2018, the Company paid $297, the full judgment plus accrued post-judgment interest, to Pneumo Abex and preserved its rights, including to appeal. On April 25, 2019, the appeal that Cooper filed was dismissed.

Environmental Contingencies

Eaton has established policies to ensure that its operations are conducted in keeping with good corporate citizenship and with a positive commitment to the protection of the natural and workplace environments. The Company requires that its manufacturing facilities be certified to ISO 14001, an international standard for environmental management systems. The Company routinely reviews EHS performance at each of its facilities and continuously strives to improve pollution prevention.

Eaton is involved in remedial response and voluntary environmental remediation at a number of sites, including certain of its currently-owned or formerly-owned plants. The Company has also been named a potentially responsible party under the United States federal Superfund law, or the state equivalents thereof, at a number of disposal sites. The Company became involved in these sites as a result of government action or in connection with business acquisitions. At the end of 2020, the Company was involved with a total of 114 sites worldwide, including the Superfund sites mentioned above, with none of these sites being individually significant to the Company.

Remediation activities, generally involving soil and/or groundwater contamination, include pre-cleanup activities such as fact finding and investigation, risk assessment, feasibility study, design and action planning, performance (where actions may range from monitoring, to removal of contaminants, to installation of longer-term remediation systems), and operation and maintenance of a remediation system. The extent of expected remediation activities and costs varies by site. A number of factors affect the cost of environmental remediation, including the number of parties involved at a particular site, the determination of the extent of contamination, the length of time the remediation may require, the complexity of environmental regulations, and the continuing advancement of remediation technology. Taking these factors into account, Eaton has estimated the costs of remediation, which will be paid over a period of years. The Company accrues an amount on an undiscounted basis, consistent with the estimates of these costs, when it is probable that a liability has been incurred. Actual results may differ from these estimates. At December 31, 2020 and 2019, the Company had an accrual totaling $103 and $104, respectively, for these costs.

Based upon Eaton's analysis and subject to the difficulty in estimating these future costs, the Company expects that any sum it may be required to pay in connection with environmental matters is not reasonably possible to exceed the recorded liability by an amount that would have a material effect on its financial position, results of operations or cash flows.

Warranty Accruals

Product warranty accruals are established at the time the related sale is recognized through a charge to Cost of products sold. Warranty accrual estimates are based primarily on historical warranty claim experience and specific customer contracts. Provisions for warranty accruals are comprised of basic warranties for products sold, as well as accruals for product recalls and other events when they are known and estimable. A summary of the current and long-term warranty accruals follows:

	2020	2019	2018
Balance at January 1	$ 187	$ 176	$ 188
Provision	100	204	139
Settled	(130)	(175)	(145)
Other	2	(2)	(6)
Warranty accruals reclassified to held for sale	(8)	(16)	—
Balance at December 31	$ 151	$ 187	$ 176

Note 11. INCOME TAXES

Eaton Corporation plc is domiciled in Ireland. Income (loss) before income taxes and income tax (benefit) expense are summarized below based on the geographic location of the operation to which such earnings and income taxes are attributable.

	Income (loss) before income taxes		
	2020	2019	2018
Ireland	$ (132)	$ (201)	$ (365)
Foreign	1,878	2,792	2,789
Total income before income taxes	$ 1,746	$ 2,591	$ 2,424

	Income tax expense (benefit)		
	2020	2019	2018
Current			
Ireland	$ 15	$ 26	$ 47
Foreign	441	410	370
Total current income tax expense	456	436	417
Deferred			
Ireland	—	3	6
Foreign	(125)	(61)	(145)
Total deferred income tax expense (benefit)	(125)	(58)	(139)
Total income tax expense	$ 331	$ 378	$ 278

Reconciliations of income taxes from the Ireland national statutory rate of 25% to the consolidated effective income tax rate follow:

	2020	2019	2018
Income taxes at the applicable statutory rate	25.0 %	25.0 %	25.0 %
Ireland operations			
Ireland tax on trading income	(0.3)%	(1.0)%	(2.0)%
Nondeductible interest expense	2.7 %	3.9 %	7.8 %
Ireland Other - net	0.4 %	0.1 %	0.1 %
Foreign operations			
Nondeductible goodwill – sale of business	5.3 %	— %	— %
Tax on foreign currency loss	— %	— %	(1.6)%
Earnings taxed at other than the applicable statutory tax rate	(16.0)%	(14.8)%	(19.6)%
Other items	2.3 %	3.3 %	2.1 %
Worldwide operations			
Adjustments to tax liabilities	(0.6)%	(0.5)%	1.1 %
Adjustments to valuation allowances	0.2 %	(1.4)%	(1.4)%
Effective income tax expense rate	19.0 %	14.6 %	11.5 %

During 2020, income tax expense of $331 was recognized (an effective tax rate of 19.0%) compared to income tax expense of $378 in 2019 (an effective tax rate of 14.6%) and income tax expense of $278 in 2018 (an effective tax rate of 11.5%). The increase in the effective tax rate from 14.6% in 2019 to 19.0% in 2020 was primarily due to the tax expense on the gain from the sale of the Lighting business discussed in Note 2, partially offset by a tax benefit on the restructuring charges discussed in Note 16. The 2018 effective tax rate of 11.5% was lower than the 2019 effective tax rate of 14.6% primarily due to the tax impact of the 2018 arbitration decision expense discussed in Note 10.

With the exception of a $6 liability related to foreign subsidiaries considered as held for sale, no provision has been made for income taxes on undistributed earnings of foreign subsidiaries of approximately $28.9 billion at December 31, 2020, since it is the Company's intention to indefinitely reinvest undistributed earnings of its foreign subsidiaries. The Company expects to deploy capital to those markets which offer particularly attractive growth opportunities. The cash that is permanently reinvested is typically used to expand operations either organically or through acquisitions. It is not practicable to estimate the additional income taxes and applicable withholding taxes that would be payable on the remittance of such undistributed earnings.

Worldwide income tax payments, net of tax refunds, follow:

2020	$ 391
2019	425
2018	379

Deferred Income Tax Assets and Liabilities

Components of noncurrent deferred income taxes follow:

	2020	2019
	Noncurrent assets and liabilities	Noncurrent assets and liabilities
Accruals and other adjustments		
Employee benefits	$ 553	$ 514
Depreciation and amortization	(1,101)	(1,245)
Other accruals and adjustments	505	498
Ireland income tax loss carryforwards	1	1
Foreign income tax loss carryforwards	1,815	1,826
Foreign income tax credit carryforwards	309	349
Valuation allowance for income tax loss and income tax credit carryforwards	(1,863)	(1,914)
Other valuation allowances	(67)	(52)
Total deferred income taxes	152	(23)
Deferred income taxes reported as held for sale	3	1
Deferred income taxes	$ 149	$ (24)

At December 31, 2020, Eaton Corporation plc and its foreign subsidiaries had income tax loss carryforwards and income tax credit carryforwards that are available to reduce future taxable income or tax liabilities. These carryforwards and their respective expiration dates are summarized below:

	2021 through 2025	2026 through 2030	2031 through 2035	2036 through 2045	Not subject to expiration	Valuation allowance
Ireland income tax loss carryforwards	$ —	$ —	$ —	$ —	$ 8	$ —
Ireland deferred income tax assets for income tax loss carryforwards	—	—	—	—	1	(1)
Foreign income tax loss carryforwards	641	7,427	893	251	3,067	—
Foreign deferred income tax assets for income tax loss carryforwards	88	690	235	76	751	(1,655)
Foreign deferred income tax assets for income tax loss carryforwards after ASU 2013-11	76	686	226	76	751	(1,655)
Foreign income tax credit carryforwards	110	169	38	2	51	(207)
Foreign income tax credit carryforwards after ASU 2013-11	74	144	38	2	51	(207)

Recoverability of Deferred Income Tax Assets

Eaton is subject to the income tax laws in the jurisdictions in which it operates. In order to determine its income tax provision for financial statement purposes, Eaton must make significant estimates and judgments about its business operations in these jurisdictions. These estimates and judgments are also used in determining the deferred income tax assets and liabilities that have been recognized for differences between the financial statement and income tax basis of assets and liabilities, and income tax loss carryforwards and income tax credit carryforwards.

Management evaluates the realizability of deferred income tax assets for each of the jurisdictions in which it operates. If the Company experiences cumulative pre-tax income in a particular jurisdiction in the three-year period including the current and prior two years, management normally concludes that the deferred income tax assets will more likely than not be realizable and no valuation allowance is recognized, unless known or planned operating developments, or changes in tax laws, would lead management to conclude otherwise. However, if the Company experiences cumulative pre-tax losses in a particular jurisdiction in the three-year period including the current and prior two years, management then considers a series of factors in the determination of whether the deferred income tax assets can be realized. These factors include historical operating results, known or planned operating developments, the period of time over which certain temporary differences will reverse, consideration of the utilization of certain deferred income tax liabilities, tax law carryback capability in the particular country, prudent and feasible tax planning strategies, changes in tax laws, and estimates of future earnings and taxable income using the same assumptions as those used for the Company's goodwill and other impairment testing. After evaluation of these factors, if the deferred income tax assets are expected to be realized within the tax carryforward period allowed for that specific country, management would conclude that no valuation allowance would be required. To the extent that the deferred income tax assets exceed the amount that is expected to be realized within the tax carryforward period for a particular jurisdiction, management would establish a valuation allowance.

Applying the above methodology, valuation allowances have been established for certain deferred income tax assets to the extent they are not expected to be realized within the particular tax carryforward period.

Unrecognized Income Tax Benefits

A summary of gross unrecognized income tax benefits follows:

	2020	2019	2018
Balance at January 1	$ 1,001	$ 913	$ 735
Increases and decreases as a result of positions taken during prior years			
Transfers from valuation allowances	—	15	2
Other increases, including currency translation	10	22	164
Other decreases, including currency translation	(10)	(10)	(35)
Increases related to acquired businesses	7	—	—
Increases as a result of positions taken during the current year	58	80	69
Decreases relating to settlements with tax authorities	(26)	(16)	(3)
Decreases as a result of a lapse of the applicable statute of limitations	(4)	(3)	(19)
Balance at December 31	$ 1,036	$ 1,001	$ 913

Eaton recognizes an income tax benefit from an uncertain tax position only if it is more likely than not that the benefit would be sustained upon examination by taxing authorities, based on the technical merits of the position. The Company evaluates and adjusts the amount of unrecognized income tax benefits based on changes in facts and circumstances. The Company does not enter into any of the United States Internal Revenue Service (IRS) Listed Transactions as set forth in Treasury Regulation 1.6011-4.

If all unrecognized income tax benefits were recognized, the net impact on the provision for income tax expense would be $681, which includes the impact of deferred tax netting pursuant to ASU 2013-11.

As of December 31, 2020 and 2019, Eaton had accrued approximately $110 and $93, respectively, for the payment of worldwide interest and penalties, which are not included in the table of unrecognized income tax benefits above. Eaton recognizes interest and penalties related to unrecognized income tax benefits in the provision for income tax expense.

The resolution of the majority of Eaton's unrecognized income tax benefits is dependent upon uncontrollable factors such as the prospect of retroactive regulations, new case law, and the willingness of the income tax authority to settle the issue, including the timing thereof. Therefore, for the majority of unrecognized income tax benefits, it is not reasonably possible to estimate the increase or decrease in the next 12 months. For each of the unrecognized income tax benefits where it is possible to estimate the increase or decrease in the balance within the next 12 months, the Company does not anticipate any significant change.

Eaton or its subsidiaries file income tax returns in Ireland and many countries around the world. With only a few exceptions, Irish and non-United States subsidiaries of Eaton are no longer subject to examinations for years before 2012.

The United States Internal Revenue Service ("IRS") has completed its examination of the consolidated income tax returns of the Company's United States subsidiaries ("Eaton US") for 2005 through 2010 and has issued Statutory Notices of Deficiency (Notices) as discussed below. The statute of limitations on these tax years remains open until the matters are resolved. The IRS has also completed its examination of the consolidated income tax returns of Eaton US for 2011 through 2013 and has issued proposed adjustments as discussed below. The statute of limitations on these tax years remains open until December 31, 2021. The IRS is currently examining tax years 2014 through 2016. The statute of limitations for tax years 2014 through 2016 is open until December 31, 2021. Tax years 2017 through 2019 are still subject to examination by the IRS.

Eaton US is also under examination for the income tax filings in various states and localities of the United States. Income tax returns of states and localities within the United States will be reopened to the extent of United States federal income tax adjustments, if any, going back to 2005 when those audit years are finalized.

In 2011, the IRS issued a Notice for Eaton US for the 2005 and 2006 tax years (the 2011 Notice). The 2011 Notice proposed assessments of $75 in additional taxes plus $52 in penalties related primarily to transfer pricing adjustments for products manufactured in the Company's facilities in Puerto Rico and the Dominican Republic and sold to affiliated companies located in the United States. Eaton US has set its transfer prices for products sold between these affiliates at the same prices that Eaton US sells such products to third parties as required by two successive Advance Pricing Agreements (APAs) Eaton US entered into with the IRS that governed the 2005-2010 tax years. Eaton US has continued to apply the arms-length transfer pricing methodology for 2011 through the current reporting period. Immediately prior to the 2011 Notice being issued, the IRS sent a letter stating that it was retrospectively canceling the APAs. Eaton US contested the proposed assessments in United States Tax Court. The case involved both whether the APAs should be enforced and, if not, the appropriate transfer pricing methodology. On July 26, 2017, the United States Tax Court issued a ruling in which it agreed with Eaton US that the IRS must abide by the terms of the APAs for the tax years 2005-2006. The Tax Court's ruling on the APAs did not have a material impact on Eaton's consolidated financial statements.

In 2014, Eaton US received a Notice from the IRS for the 2007 through 2010 tax years (the 2014 Notice) proposing assessments of $190 in additional taxes plus $72 in penalties, net of agreed credits and deductions, which the Company has also contested in Tax Court. The proposed assessments pertain primarily to the same transfer pricing issues and APA for which the Tax Court has issued its ruling during 2017 as noted above. The Company believes that the Tax Court's ruling for tax years 2005-2006 will also be applicable to the 2007-2010 years. Following the issuance of the Tax Court's ruling, Eaton and the IRS recognized that the ruling on the enforceability of the APAs did not address a secondary issue regarding the transfer pricing for a certain royalty paid from 2006-2010. Eaton US reported a consistent royalty rate for 2006-2010. The IRS has agreed to the royalty rate as reported by Eaton US in 2006. Although the IRS has not proposed an alternative rate, it has not agreed to apply the same royalty rate in the 2007-2010 years.

The 2014 Notice also includes a separate proposed assessment involving the recognition of income for several of Eaton US's controlled foreign corporations. The Company believes that the proposed assessment is without merit and is contesting the matter in Tax Court. In October 2017, Eaton and the IRS both moved for partial summary judgment on this issue. On February 25, 2019 the Tax Court granted the IRS's motion for partial summary judgment and denied Eaton's. The Company intends to appeal the Tax Court's partial summary judgment decision to the United States Sixth Circuit Court of Appeals. The Company believes that it will be successful on appeal and has not recorded any additional impact of the Tax Court's decision in its consolidated financial statements. The total potential impact of the Tax Court's partial summary judgment decision on the controlled foreign corporation income recognition issue is not estimable until all matters in the open tax years have been resolved.

In 2018 the IRS completed its examination of the Eaton US tax years 2011 through 2013 and has proposed adjustments to certain transfer pricing tax positions, including adjustments similar to those proposed in the 2011 and 2014 Notices for products manufactured in the Company's facilities in Puerto Rico and the Dominican Republic and sold to affiliated companies located in the United States. The IRS also proposed adjustments involving the recognition of income for several of Eaton US's controlled foreign corporation, which is the same issue included in the 2014 Notice described above and subject to litigation in Tax Court. The Company is pursuing its administrative appeals alternatives with respect to the IRS adjustments and believes that final resolution of the proposed adjustments will not have a material impact on its consolidated financial statements.

During 2010, the Company received a tax assessment, which included interest and penalties, in Brazil for the tax years 2005 through 2008 that relates to the amortization of certain goodwill generated from the acquisition of third-party businesses and corporate reorganizations. In 2018 the Company received an unfavorable result at the final tax administrative appeals level, resulting in an alleged tax deficiency of $24 plus $67 of interest and penalties (translated at the December 31, 2020 exchange rate). During 2014, the Company received a tax assessment, which included interest and penalties, for the 2009 through 2012 tax years (primarily relating to the same issues concerning the 2005 through 2008 tax years). In November 2019, the Company received an unfavorable result at the final tax administrative appeals level, resulting in an alleged tax deficiency of $26 plus $91 of interest and penalties (translated at the December 31, 2020 exchange rate). The Company is challenging both of the assessments in the judicial system. Challenges in the judicial system are expected to take up to 10 years to resolve and require provision of certain assets as security for the alleged deficiencies. As of December 31, 2020, the Company pledged Brazilian real estate assets with net book value of $10 (translated at the December 31, 2020 exchange rate). During January 2021, the Company pledged additional Brazilian real estate assets with net book value of $5 and provided additional security in the form of a bond of $78 and cash deposit of $3 (translated at the December 31, 2020 exchange rate). The Company continues to believe that final resolution of both of the assessments will not have a material impact on its consolidated financial statements.

Note 12. EATON SHAREHOLDERS' EQUITY

There are 750 million Eaton ordinary shares authorized ($0.01 par value per share), 398.1 million and 413.3 million of which were issued and outstanding at December 31, 2020 and 2019, respectively. Eaton's Memorandum and Articles of Association authorized 40 thousand deferred ordinary shares (€1.00 par value per share) and 10 thousand preferred A shares ($1.00 par value per share), all of which were issued and outstanding at December 31, 2020 and 2019, and 10 million serial preferred shares ($0.01 par value per share), none of which is outstanding at December 31, 2020 and 2019. At December 31, 2020, there were 11,390 holders of record of Eaton ordinary shares. Additionally, 16,400 current and former employees were shareholders through participation in the Eaton Savings Plan, the Eaton Personal Investment Plan, or the Eaton Puerto Rico Retirement Savings Plan.

On February 27, 2019, the Board of Directors adopted a new share repurchase program for share repurchases up to $5,000 of ordinary shares (2019 Program). Under the 2019 Program, the ordinary shares are expected to be repurchased over time, depending on market conditions, the market price of ordinary shares, capital levels, and other considerations. During 2020 and 2019, 17.1 million and 12.5 million ordinary shares, respectively, were repurchased under the 2019 Program in the open market at a total cost of $1,608 and $1,000, respectively.

Eaton has deferral plans that permit certain employees and directors to defer a portion of their compensation. A trust contains $3 and $5 of ordinary shares and marketable securities at December 31, 2020 and 2019, respectively, to fund a portion of these liabilities. The marketable securities were included in Other assets and the ordinary shares were included in Shareholders' equity at historical cost.

On February 24, 2021, Eaton's Board of Directors declared a quarterly dividend of $0.76 per ordinary share, a 4% increase over the dividend paid in the fourth quarter of 2020. The dividend is payable on March 30, 2021 to shareholders of record on March 16, 2021.

Comprehensive Income (Loss)

Comprehensive income (loss) consists primarily of net income, currency translation and related hedging instruments, changes in unrecognized costs of pension and other postretirement benefits, and changes in the effective portion of open derivative contracts designated as cash flow hedges. The following table summarizes the pre-tax and after-tax amounts recognized in Comprehensive income (loss):

	2020		2019		2018	
	Pre-tax	After-tax	Pre-tax	After-tax	Pre-tax	After-tax
Currency translation and related hedging instruments						
Gain (loss) from currency translation and related hedging instruments	$ 154	$ 164	$ 15	$ 16	$ (613)	$ (609)
Translation reclassified to earnings	37	37	—	—	—	—
	191	201	15	16	(613)	(609)
Pensions and other postretirement benefits						
Prior service credit (cost) arising during the year	(1)	(1)	(2)	(2)	(25)	(20)
Net gain (loss) arising during the year	(263)	(203)	(294)	(232)	(358)	(274)
Currency translation	(48)	(37)	(16)	(13)	37	29
Other	(2)	(1)	—	—	—	5
Amortization of actuarial loss and prior service cost reclassified to earnings	221	169	148	117	168	121
	(93)	(73)	(164)	(130)	(178)	(139)
Cash flow hedges						
Gain (loss) on derivatives designated as cash flow hedges	(60)	(47)	(33)	(27)	(8)	(6)
Changes in cash flow hedges reclassified to earnings	17	14	(5)	(4)	16	13
Cash flow hedges, net of reclassification adjustments	(43)	(33)	(38)	(31)	8	7
Other comprehensive income (loss) attributable to Eaton ordinary shareholders	$ 55	$ 95	$ (187)	$ (145)	$ (783)	$ (741)

The changes in Accumulated other comprehensive loss follow:

	Currency translation and related hedging instruments	Pensions and other postretirement benefits	Cash flow hedges	Total
Balance at January 1, 2020	$ (2,848)	$ (1,408)	$ (34)	$ (4,290)
Other comprehensive income (loss) before reclassifications	164	(242)	(47)	(125)
Amounts reclassified from Accumulated other comprehensive loss (income)	37	169	14	220
Net current-period Other comprehensive income (loss)	201	(73)	(33)	95
Balance at December 31, 2020	$ (2,647)	$ (1,481)	$ (67)	$ (4,195)

The reclassifications out of Accumulated other comprehensive loss follow:

	December 31, 2020	Consolidated Statements of Income classification
Currency translation losses		
Sale of business	$ (37)	Gain on sale of business
Tax benefit	—	
Total, net of tax	(37)	
Amortization of defined benefits pension and other postretirement benefits items		
Actuarial loss and prior service cost	(221)	[1]
Tax benefit	52	
Total, net of tax	(169)	
Gains and (losses) on cash flow hedges		
Currency exchange contracts	(18)	Net sales and Cost of products sold
Commodity contracts	1	Cost of products sold
Tax benefit	3	
Total, net of tax	(14)	
Total reclassifications for the period	$ (220)	

[1] These components of Accumulated other comprehensive loss are included in the computation of net periodic benefit cost. See Note 9 for additional information about defined benefits pension and other postretirement benefits items.

Net Income Per Share Attributable to Eaton Ordinary Shareholders

A summary of the calculation of net income per share attributable to Eaton ordinary shareholders follows:

(Shares in millions)	2020	2019	2018
Net income attributable to Eaton ordinary shareholders	$ 1,410	$ 2,211	$ 2,145
Weighted-average number of ordinary shares outstanding - diluted	404.0	420.8	436.9
Less dilutive effect of equity-based compensation	1.8	1.8	2.6
Weighted-average number of ordinary shares outstanding - basic	402.2	419.0	434.3
Net income per share attributable to Eaton ordinary shareholders			
Diluted	$ 3.49	$ 5.25	$ 4.91
Basic	3.51	5.28	4.93

In 2020, 2019, and 2018, 0.6 million, 0.8 million, and 0.5 million stock options, respectively, were excluded from the calculation of diluted net income per share attributable to Eaton ordinary shareholders because the exercise price of the options exceeded the average market price of the ordinary shares during the period and their effect, accordingly, would have been antidilutive.

Note 13. EQUITY-BASED COMPENSATION

Eaton recognizes equity-based compensation expense based on the grant date fair value of the award. Awards with service conditions or both service and market conditions are expensed over the period during which an employee is required to provide service in exchange for the award. Awards with both service and performance conditions are expensed over the period an employee is required to provide service based on the number of units for which achievement of the performance objective is probable. The Company estimates forfeitures as part of recording equity-based compensation expense.

Restricted Stock Units and Awards

Restricted stock units (RSUs) and restricted stock awards (RSAs) have been issued to certain employees and directors. The fair value of RSUs and RSAs are determined based on the closing market price of the Company's ordinary shares at the date of grant. The RSUs entitle the holder to receive one ordinary share for each RSU upon vesting, generally over three years. RSAs are issued and outstanding at the time of grant, but remain subject to forfeiture until vested, generally over ten years. A summary of the RSU and RSA activity for 2020 follows:

(Restricted stock units and awards in millions)	Number of restricted stock units and awards	Weighted-average fair value per unit and award
Non-vested at January 1	1.7	$ 76.79
Granted	0.7	97.75
Vested	(0.8)	78.58
Forfeited	(0.1)	85.21
Non-vested at December 31	1.5	$ 85.09

Information related to RSUs and RSAs follows:

	2020	2019	2018
Pre-tax expense for RSUs and RSAs	$ 58	$ 57	$ 59
After-tax expense for RSUs and RSAs	46	45	46
Fair value of vested RSUs and RSAs	75	103	71

As of December 31, 2020, total compensation expense not yet recognized related to non-vested RSUs and RSAs was $73, and the weighted-average period in which the expense is expected to be recognized is 2.1 years. Excess tax benefit for RSUs and RSAs totaled $2, $3 and $3 for 2020, 2019, and 2018, respectively.

Performance Share Units

Performance share units (PSUs) have been issued to certain employees that vest based on the satisfaction of a three-year service period and total shareholder return relative to that of a group of peers. Awards earned at the end of the three-year vesting period range from 0% to 200% of the targeted number of PSUs granted based on the ranking of total shareholder return of the Company, assuming reinvestment of all dividends, relative to a defined peer group of companies. Equity-based compensation expense for these PSUs is recognized over the period during which an employee is required to provide service in exchange for the award. Upon vesting, dividends that have accumulated during the vesting period are paid on earned awards.

The Company uses a Monte Carlo simulation to estimate the fair value of PSUs with market conditions. The principal assumptions utilized in valuing these PSUs include the expected stock price volatility (based on the most recent 3-year period as of the grant date) and the risk-free interest rate (an estimate based on the yield of United States Treasury zero coupon bonds with a three-year maturity as of the grant date). A summary of the assumptions used in determining fair value of these PSUs follows:

	2020	2019	2018
Expected volatility	21 %	21 %	22 %
Risk-free interest rate	1.16 %	2.42 %	2.38 %
Weighted-average fair value of PSUs granted	$ 121.01	$ 92.50	$ 100.86

A summary of these PSUs that vested follows:

(Performance share units in millions)	2020	2019	2018
Percent payout	178 %	130 %	116 %
Shares vested	0.4	0.3	0.5

A summary of the 2020 activity for these PSUs follows:

(Performance share units in millions)	Number of performance share units	Weighted-average fair value per unit
Non-vested at January 1	0.6	$ 96.14
Granted[1]	0.2	121.01
Adjusted for performance results achieved[2]	0.2	100.86
Vested	(0.4)	100.86
Forfeited	(0.1)	101.56
Non-vested at December 31	0.5	$ 105.47

[1] Performance shares granted assuming the Company will perform at target relative to peers.

[2] Adjustments for the number of shares vested under the 2018 awards at the end of the three-year performance period ended December 31, 2020, being higher than the target number of shares.

Information related to PSUs follows:

	2020	2019	2018
Pre-tax expense for PSUs	$ 25	$ 21	$ 28
After-tax expense for PSUs	20	17	22

As of December 31, 2020, total compensation expense not yet recognized related to non-vested PSUs was $31 and the weighted-average period in which the expense is to be recognized is 1.7 years. Excess tax benefit for PSUs totaled $3 and $1 in 2020 and 2019, respectively, and there was no excess tax benefit for PSUs in 2018.

Stock Options

Under various plans, stock options have been granted to certain employees and directors to purchase ordinary shares at prices equal to fair market value on the date of grant. Substantially all of these options vest ratably during the three-year period following the date of grant and expire 10 years from the date of grant. Compensation expense is recognized for stock options based on the fair value of the options at the date of grant and amortized on a straight-line basis over the period the employee or director is required to provide service.

The Company uses a Black-Scholes option pricing model to estimate the fair value of stock options. The principal assumptions utilized in valuing stock options include the expected stock price volatility (based on the most recent historical period equal to the expected life of the option); the expected option life (an estimate based on historical experience); the expected dividend yield; and the risk-free interest rate (an estimate based on the yield of United States Treasury zero coupon with a maturity equal to the expected life of the option). A summary of the assumptions used in determining the fair value of stock options follows:

	2020	2019	2018
Expected volatility	24 %	23 %	26 %
Expected option life in years	6.6	6.6	6.7
Expected dividend yield	3.2 %	3.2 %	3.0 %
Risk-free interest rate	0.5 to 1.5%	1.9 to 2.6%	2.6 to 2.9%
Weighted-average fair value of stock options granted	$ 15.55	$ 14.08	$ 16.93

A summary of stock option activity follows:

(Options in millions)	Weighted-average exercise price per option		Options	Weighted-average remaining contractual life in years	Aggregate intrinsic value	
Outstanding at January 1, 2020	$	69.95	4.1			
Granted		98.16	0.7			
Exercised		63.49	(1.1)			
Forfeited and canceled		83.42	(0.1)			
Outstanding at December 31, 2020	$	76.93	3.6	6.4	$	156.6
Exercisable at December 31, 2020	$	70.02	2.4	5.3	$	117.9
Reserved for future grants at December 31, 2020			24.8			

The aggregate intrinsic value in the table above represents the total excess of the $120.14 closing price of Eaton ordinary shares on the last trading day of 2020 over the exercise price of the stock option, multiplied by the related number of options outstanding and exercisable. The aggregate intrinsic value is not recognized for financial accounting purposes and the value changes based on the daily changes in the fair market value of the Company's ordinary shares.

Information related to stock options follows:

	2020		2019		2018	
Pre-tax expense for stock options	$	9	$	9	$	11
After-tax expense for stock options		7		7		9
Proceeds from stock options exercised		70		67		29
Income tax benefit related to stock options exercised						
Tax benefit classified in operating activities in the Consolidated Statements of Cash Flows		10		4		3
Intrinsic value of stock options exercised		50		29		17
Total fair value of stock options vested	$	9	$	9	$	11
Stock options exercised, in millions of options		1.1		1.2		0.6

As of December 31, 2020, total compensation expense not yet recognized related to non-vested stock options was $10, and the weighted-average period in which the expense is expected to be recognized is 1.8 years.

Note 14. FAIR VALUE MEASUREMENTS

Fair value is measured based on an exit price, representing the amount that would be received to sell an asset or paid to satisfy a liability in an orderly transaction between market participants. Fair value is a market-based measurement that should be determined based on assumptions that market participants would use in pricing an asset or liability. As a basis for considering such assumptions, a fair value hierarchy is established, which categorizes the inputs used in measuring fair value as follows: (Level 1) observable inputs such as quoted prices in active markets; (Level 2) inputs, other than the 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.

A summary of financial instruments recognized at fair value, and the fair value measurements used, follows:

	Total	Quoted prices in active markets for identical assets (Level 1)	Other observable inputs (Level 2)	Unobservable inputs (Level 3)
2020				
Cash	$ 438	$ 438	$ —	$ —
Short-term investments	664	664	—	—
Net derivative contracts	31	—	31	—
2019				
Cash	$ 370	$ 370	$ —	$ —
Short-term investments	221	221	—	—
Net derivative contracts	53	—	53	—

Eaton values its financial instruments using an industry standard market approach, in which prices and other relevant information is generated by market transactions involving identical or comparable assets or liabilities. No financial instruments were measured using unobservable inputs.

Other Fair Value Measurements

Long-term debt and the current portion of long-term debt had a carrying value of $8,057 and fair value of $9,075 at December 31, 2020 compared to $8,067 and $8,638, respectively, at December 31, 2019. The fair value of Eaton's debt instruments was estimated using prevailing market interest rates on debt with similar creditworthiness, terms and maturities and is considered a Level 2 fair value measurement.

Short-Term Investments

Eaton invests excess cash generated from operations in short-term marketable investments. A summary of the carrying value, which approximates the fair value due to the short-term maturities of these investments, follows:

	2020	2019
Time deposits and certificates of deposit with banks	$ 168	$ 150
Money market investments	496	71
Total short-term investments	$ 664	$ 221

Note 15. DERIVATIVE FINANCIAL INSTRUMENTS AND HEDGING ACTIVITIES

In the normal course of business, Eaton is exposed to certain risks related to fluctuations in interest rates, currency exchange rates and commodity prices. The Company uses various derivative and non-derivative financial instruments, primarily interest rate swaps, currency forward exchange contracts, currency swaps and, commodity contracts to manage risks from these market fluctuations. The instruments used by Eaton are straightforward, non-leveraged instruments. The counterparties to these instruments are financial institutions with strong credit ratings. Eaton maintains control over the size of positions entered into with any one counterparty and regularly monitors the credit rating of these institutions. Such instruments are not purchased and sold for trading purposes.

Derivative financial instruments are accounted for at fair value and recognized as assets or liabilities in the Consolidated Balance Sheets. Accounting for the gain or loss resulting from the change in the fair value of the derivative financial instrument depends on whether it has been designated, and is effective, as part of a hedging relationship and, if so, as to the nature of the hedging activity. Eaton formally documents all relationships between derivative financial instruments accounted for as designated hedges and the hedged item, as well as its risk-management objective and strategy for undertaking the hedge transaction. This process includes linking derivative financial instruments to a recognized asset or liability, specific firm commitment, forecasted transaction, or net investment in a foreign operation. These financial instruments can be designated as:

- Hedges of the change in the fair value of a recognized fixed-rate asset or liability, or the firm commitment to acquire such an asset or liability (a fair value hedge); for these hedges, the gain or loss from the derivative financial instrument, as well as the offsetting loss or gain on the hedged item attributable to the hedged risk, are recognized in income during the period of change in fair value.
- Hedges of the variable cash flows of a recognized variable-rate asset or liability, or the forecasted acquisition of such an asset or liability (a cash flow hedge); for these hedges, the gain or loss from the derivative financial instrument is recognized in Accumulated other comprehensive income and reclassified to income in the same period when the gain or loss on the hedged item is included in income.
- Hedges of the currency exposure related to a net investment in a foreign operation (a net investment hedge); for these hedges, the gain or loss from the derivative financial instrument is recognized in Accumulated other comprehensive income and reclassified to income in the same period when the gain or loss related to the net investment in the foreign operation is included in income.

The gain or loss from a derivative financial instrument designated as a hedge is classified in the same line of the Consolidated Statements of Income as the offsetting loss or gain on the hedged item. The cash flows resulting from these financial instruments are classified in operating activities on the Consolidated Statements of Cash Flows.

For derivatives that are not designated as a hedge, any gain or loss is immediately recognized in income. The majority of derivatives used in this manner relate to risks resulting from assets or liabilities denominated in a foreign currency and certain commodity contracts that arise in the normal course of business.

Eaton uses certain of its debt denominated in foreign currency to hedge portions of its net investments in foreign operations against foreign currency exposure (net investment hedges). Foreign currency denominated debt designated as non-derivative net investment hedging instruments had a carrying value on an after-tax basis of $2,020 and $1,845 at December 31, 2020 and 2019, respectively. See Note 8 for additional information about debt.

Interest Rate Risk

Eaton has entered into fixed-to-floating interest rate swaps to manage interest rate risk of certain long-term debt. These interest rate swaps are accounted for as fair value hedges of certain long-term debt. The maturity of the swap corresponds with the maturity of the debt instrument as noted in the table of long-term debt in Note 8. Eaton also entered into several forward starting floating-to-fixed interest rate swaps to manage interest rate risk on a future anticipated debt issuance.

A summary of interest rate swaps outstanding at December 31, 2020, follows:

Fixed-to-Floating Interest Rate Swaps

Notional amount	Fixed interest rate received	Floating interest rate paid	Basis for contracted floating interest rate paid
$ 275	3.47%	2.25%	1 month LIBOR + 1.74%
100	8.10%	6.42%	1 month LIBOR + 5.90%
1,400	2.75%	1.20%	1 month LIBOR + 0.58%
200	3.68%	1.58%	1 month LIBOR + 1.07%
25	7.63%	3.16%	6 month LIBOR + 2.48%
50	7.65%	3.03%	6 month LIBOR + 2.57%
25	5.45%	1.02%	6 month LIBOR + 0.28%

Forward Starting Floating-to-Fixed Interest Rate Swaps

Notional amount	Floating interest rate to be received	Fixed interest rate to be paid	Basis for contracted floating interest rate received
$ 50	—%	3.10%	3 month LIBOR + 0.00%
50	—%	3.06%	3 month LIBOR + 0.00%
50	—%	2.80%	3 month LIBOR + 0.00%
50	—%	2.81%	3 month LIBOR + 0.00%
50	—%	2.64%	3 month LIBOR + 0.00%
50	—%	2.64%	3 month LIBOR + 0.00%
50	—%	2.30%	3 month LIBOR + 0.00%
50	—%	2.08%	3 month LIBOR + 0.00%
50	—%	1.77%	3 month LIBOR + 0.00%
50	—%	1.51%	3 month LIBOR + 0.00%
50	—%	1.50%	3 month LIBOR + 0.00%
50	—%	1.20%	3 month LIBOR + 0.00%
50	—%	1.14%	3 month LIBOR + 0.00%
50	—%	0.81%	3 month LIBOR + 0.00%
50	—%	1.24%	3 month LIBOR + 0.00%
50	—%	1.31%	3 month LIBOR + 0.00%
50	—%	0.71%	3 month LIBOR + 0.00%
50	—%	0.78%	3 month LIBOR + 0.00%

Derivative Financial Statement Impacts

The fair value of derivative financial instruments recognized in the Consolidated Balance Sheets follows:

	Notional amount	Other current assets	Other noncurrent assets	Other current liabilities	Other noncurrent liabilities	Type of hedge	Term
December 31, 2020							
Derivatives designated as hedges							
Fixed-to-floating interest rate swaps	$ 2,075	$ 2	$ 100	$ —	$ —	Fair value	6 months to 14 years
Forward starting floating-to-fixed interest rate swaps	900	—	17	—	108	Cash flow	12 to 32 years
Currency exchange contracts	946	20	6	20	1	Cash flow	1 to 36 months
Commodity contracts	24	4	—	—	—	Cash flow	1 to 12 months
Total		$ 26	$ 123	$ 20	$ 109		
Derivatives not designated as hedges							
Currency exchange contracts	$ 5,227	$ 43		$ 34			1 to 12 months
Commodity contracts	18	2		—			1 month
Total		$ 45		$ 34			
December 31, 2019							
Derivatives designated as hedges							
Fixed-to-floating interest rate swaps	$ 2,225	$ —	$ 57	$ —	$ —	Fair value	12 months to 15 years
Forward starting floating-to-fixed interest rate swaps	500	—	3	—	42	Cash flow	13 to 33 years
Currency exchange contracts	1,146	14	3	11	6	Cash flow	1 to 36 months
Commodity contracts	9	—	—	—	—	Cash flow	1 to 9 months
Total		$ 14	$ 63	$ 11	$ 48		
Derivatives not designated as hedges							
Currency exchange contracts	$ 4,975	$ 48		$ 13			1 to 12 months
Commodity contracts	3	—		—			1 month
Total		$ 48		$ 13			

The currency exchange contracts shown in the table above as derivatives not designated as hedges are primarily contracts entered into to manage currency volatility or exposure on intercompany receivables, payables and loans. While Eaton does not elect hedge accounting treatment for these derivatives, Eaton targets managing 100% of the intercompany balance sheet exposure to minimize the effect of currency volatility related to the movement of goods and services in the normal course of its operations. This activity represents the great majority of these currency exchange contracts. The cash flows resulting from the settlement of these derivatives have been classified in investing activities in the Consolidated Statement of Cash Flows.

As of December 31, 2020, the volume of outstanding commodity contracts that were entered into to hedge forecasted transactions:

Commodity	December 31, 2020		Term
Copper	7	millions of pounds	1 to 12 months
Gold	1,474	Troy ounces	1 to 12 months

The following amounts were recorded on the Consolidated Balance Sheets related to fixed-to-floating interest rate swaps:

Location on Consolidated Balance Sheets	Carrying amount of the hedged assets (liabilities) December 31, 2020	Carrying amount of the hedged assets (liabilities) December 31, 2019	Cumulative amount of fair value hedging adjustment included in the carrying amount of the hedged asset (liabilities) [(a)] December 31, 2020	Cumulative amount of fair value hedging adjustment included in the carrying amount of the hedged asset (liabilities) [(a)] December 31, 2019
Long-term debt	$ (2,688)	$ (2,838)	$ (139)	$ (97)

[(a)] At December 31, 2020 and 2019, these amounts include the cumulative liability amount of fair value hedging adjustments remaining for which the hedge accounting has been discontinued of $37 and $40, respectively.

The impact of hedging activities to the Consolidated Statements of Income are as follow:

	2020 Net Sales	2020 Cost of products sold	2020 Interest expense - net
Amounts from Consolidated Statements of Income	$ 17,858	$ 12,408	$ 149
Gain (loss) on derivatives designated as cash flow hedges			
Currency exchange contracts			
Hedged item	$ 13	$ 5	$ —
Derivative designated as hedging instrument	(13)	(5)	—
Commodity contracts			
Hedged item	$ —	$ (1)	$ —
Derivative designated as hedging instrument	—	1	—
Gain (loss) on derivatives designated as fair value hedges			
Fixed-to-floating interest rate swaps			
Hedged item	$ —	$ —	$ (45)
Derivative designated as hedging instrument	—	—	45

	2019		
	Net Sales	Cost of products sold	Interest expense - net
Amounts from Consolidated Statements of Income	$ 21,390	$ 14,338	$ 199
Gain (loss) on derivatives designated as cash flow hedges			
Currency exchange contracts			
Hedged item	$ 7	$ (12)	$ —
Derivative designated as hedging instrument	(7)	12	—
Commodity contracts			
Hedged item	$ —	$ —	$ —
Derivative designated as hedging instrument	—	—	—
Gain (loss) on derivatives designated as fair value hedges			
Fixed-to-floating interest rate swaps			
Hedged item	$ —	$ —	$ (62)
Derivative designated as hedging instrument	—	—	62

The impact of derivatives not designated as hedges to the Consolidated Statements of Income are as follow:

	Gain (loss) recognized in Consolidated Statements of Income		Consolidated Statements of Income classification
	2020	2019	
Gain (loss) on derivatives not designated as hedges			
Currency exchange contracts	$ 72	$ 73	Interest expense - net
Commodity Contracts	4	—	Cost of products sold
Total	$ 76	$ 73	

The impact of derivative and non-derivative instruments designated as hedges to the Consolidated Statements of Income and Comprehensive Income follow:

	Gain (loss) recognized in other comprehensive (loss) income		Location of gain (loss) reclassified from Accumulated other comprehensive loss	Gain (loss) reclassified from Accumulated other comprehensive loss	
	2020	2019		2020	2019
Derivatives designated as cash flow hedges					
Forward starting floating-to-fixed interest rate swaps	$ (52)	$ (36)	Interest expense - net	$ —	$ —
Currency exchange contracts	(13)	3	Net sales and Cost of products sold	(18)	5
Commodity contracts	5	—	Cost of products sold	1	—
Non-derivative designated as net investment hedges					
Foreign currency denominated debt	(173)	15	Interest expense - net	—	—
Total	$ (233)	$ (18)		$ (17)	$ 5

At December 31, 2020, a gain of $4 of estimated unrealized net gains or losses associated with our cash flow hedges were expected to be reclassified to income from Accumulated other comprehensive loss within the next twelve months. These reclassifications relate to our designated foreign currency and commodity hedges that will mature in the next 12 months.

Note 16. RESTRUCTURING CHARGES

In the second quarter of 2020, Eaton decided to undertake a multi-year restructuring program to reduce its cost structure and gain efficiencies in its business segments and at corporate in order to respond to declining market conditions. Restructuring charges incurred under this program were $214 in 2020. These restructuring activities are expected to incur additional expenses of $61 and $5 in 2021 and 2022, respectively, primarily comprised of plant closing and other costs, resulting in total estimated charges of $280 for the entire program.

A summary of restructuring program charges follows:

	2020
Workforce reductions	$ 172
Plant closing and other	42
Total before income taxes	214
Income tax benefit	44
Total after income taxes	$ 170
Per ordinary share - diluted	$ 0.42

Restructuring program charges related to the following segments:

	2020
Electrical Americas	$ 18
Electrical Global	55
Aerospace	34
Vehicle	102
eMobility	1
Corporate	4
Total	$ 214

A summary of liabilities related to workforce reductions, plant closing and other associated costs follows:

	Workforce reductions	Plant closing and other	Total
Balance at January 1, 2020	$ —	$ —	$ —
Liability recognized	172	42	214
Payments, utilization and translation	(33)	(39)	(72)
Balance at December 31, 2020	$ 139	$ 3	$ 142

These restructuring program charges were included in Cost of products sold, Selling and administrative expense, Research and development expense, or Other expense - net, as appropriate. In Business Segment Information, these restructuring program charges are treated as Corporate items. See Note 17 for additional information about business segments.

Note 17. BUSINESS SEGMENT AND GEOGRAPHIC REGION INFORMATION

Operating segments are defined as components of an enterprise about which separate financial information is available that is evaluated on a regular basis by the chief operating decision maker, or decision making group, in deciding how to allocate resources to an individual segment and in assessing performance. Eaton's segments are as follows:

Electrical Americas and Electrical Global

The Electrical Americas segment consists of electrical components, industrial components, power distribution and assemblies, residential products, single and three phase power quality, wiring devices, circuit protection, utility power distribution, power reliability equipment, and services that are primarily produced and sold in North and America. The Electrical Global segment consists of electrical components, industrial components, power distribution and assemblies, single phase and three phase power quality, and services that are primarily produced and sold outside of North and South America; as well as hazardous duty electrical equipment, emergency lighting, fire detection, intrinsically safe explosion-proof instrumentation, and structural support systems that are produced and sold globally. The principal markets for these segments are industrial, institutional, governmental, utility, commercial, residential and information technology. These products are used wherever there is a demand for electrical power in commercial buildings, data centers, residences, apartment and office buildings, hospitals, factories, utilities, and industrial and energy facilities. The segments share certain common global customers, but a large number of customers are located regionally. Sales are made through distributors, resellers, and manufacturers' representatives, as well as directly to original equipment manufacturers, utilities, and certain other end users.

Hydraulics

The Hydraulics segment is a global leader in hydraulics components, systems and services for industrial and mobile equipment. Eaton offers a wide range of power products including pumps, motors and hydraulic power units; a broad range of controls and sensing products including valves, cylinders and electronic controls; a full range of fluid conveyance products including industrial and hydraulic hose, fittings, and assemblies, thermoplastic hose and tubing, couplings, connectors, and assembly equipment; industrial drum and disc brakes. The principal markets for the Hydraulics segment include renewable energy, marine, agriculture, oil and gas, construction, mining, forestry, utility, material handling, truck and bus, machine tools, molding, primary metals, and power generation. Key manufacturing customers in these markets and other customers are located globally. Products are sold and serviced through a variety of channels.

Aerospace

The Aerospace segment is a leading global supplier of aerospace fuel, hydraulics, and pneumatic systems for commercial and military use, as well as filtration systems for industrial applications. Products include hydraulic power generation systems for aerospace applications including pumps, motors, hydraulic power units, hose and fittings, electro-hydraulic pumps; controls and sensing products including valves, cylinders, electronic controls, electromechanical actuators, sensors, aircraft flap and slat systems and nose wheel steering systems; fluid conveyance products, including hose, thermoplastic tubing, fittings, adapters, couplings, sealing and ducting; fuel systems including fuel pumps, sensors, valves, adapters and regulators; high performance interconnect products including wiring connectors and cables. The Aerospace segment also includes filtration systems including hydraulic filters, bag filters, strainers and cartridges; and golf grips. The principal markets for the Aerospace segment are manufacturers of commercial and military aircraft and related after-market customers, as well as industrial applications. These manufacturers and other customers operate globally. Products are sold and serviced through a variety of channels.

Vehicle

The Vehicle segment is a leader in the design, manufacture, marketing, and supply of: drivetrain, powertrain systems and critical components that reduce emissions and improve fuel economy, stability, performance, and safety of cars, light trucks, and commercial vehicles. Products include transmissions, clutches, hybrid power systems, superchargers, engine valves and valve actuation systems, cylinder heads, locking and limited slip differentials, transmission controls, and fuel vapor components for the global vehicle industry. The principal markets for the Vehicle segment are original equipment manufacturers and aftermarket customers of heavy-, medium-, and light-duty trucks, SUVs, CUVs, passenger cars and agricultural equipment.

eMobility

The eMobility segment designs, manufactures, markets, and supplies electrical and electronic components and systems that improve the power management and performance of both on-road and off-road vehicles. Products include high voltage inverters, converters, fuses, onboard chargers, circuit protection units, vehicle controls, power distribution, fuel tank isolation valves, and commercial vehicle hybrid systems. The principle markets for the eMobility segment are original equipment manufacturers and aftermarket customers of passenger cars, commercial vehicles, and construction, agriculture, and mining equipment.

Other Information

No single customer represented greater than 10% of net sales in 2020, 2019 or 2018, respectively.

The accounting policies of the business segments are generally the same as the policies described in Note 1, except that operating profit only reflects the service cost component and the cost of any special termination benefits related to pensions and other postretirement benefits. Intersegment sales and transfers are accounted for at the same prices as if the sales and transfers were made to third parties. These intersegment sales are eliminated in consolidation. Operating profit includes the operating profit from intersegment sales.

For purposes of business segment performance measurement, the Company does not allocate items that are of a non-operating nature or are of a corporate or functional governance nature. Corporate expenses consist of all the Company's costs associated with acquisitions, divestitures, and gains and losses on the sale of certain businesses, restructuring program costs (Note 16) and corporate office expenses including compensation, benefits, occupancy, depreciation, and other administrative costs. Identifiable assets of the business segments exclude goodwill, other intangible assets, and general corporate assets, which principally consist of certain cash, short-term investments, deferred income taxes, certain accounts receivable, certain property, plant and equipment, and certain other assets.

Business Segment Information

	2020	2019	2018
Net sales			
Electrical Americas	$ 6,680	$ 8,175	$ 7,914
Electrical Global	4,703	5,172	5,159
Hydraulics	1,842	2,204	2,392
Aerospace	2,223	2,480	2,335
Vehicle	2,118	3,038	3,489
eMobility	292	321	320
Total net sales	$ 17,858	$ 21,390	$ 21,609
Segment operating profit (loss)			
Electrical Americas	$ 1,352	$ 1,549	$ 1,372
Electrical Global	750	897	833
Hydraulics	186	193	267
Aerospace	414	595	503
Vehicle	243	460	611
eMobility	(8)	17	44
Total segment operating profit	2,937	3,711	3,630
Corporate			
Amortization of intangible assets	(354)	(367)	(382)
Interest expense - net	(149)	(199)	(258)
Pension and other postretirement benefits expense	(40)	(12)	(1)
Restructuring program charges	(214)	—	—
Arbitration decision expense	—	—	(275)
Other expense - net	(434)	(542)	(290)
Income before income taxes	1,746	2,591	2,424
Income tax expense	331	378	278
Net income	1,415	2,213	2,146
Less net income for noncontrolling interests	(5)	(2)	(1)
Net income attributable to Eaton ordinary shareholders	$ 1,410	$ 2,211	$ 2,145

	2020	2019	2018
Identifiable assets			
Electrical Americas	$ 2,333	$ 2,360	$ 2,529
Electrical Global	2,334	2,319	2,121
Hydraulics	—	1,293	1,334
Aerospace	1,363	1,562	1,118
Vehicle	1,950	2,145	2,289
eMobility	180	141	139
Total identifiable assets	8,160	9,820	9,530
Goodwill	12,903	13,456	13,328
Other intangible assets	4,175	4,638	4,846
Corporate	4,099	3,514	3,388
Assets held for sale	2,487	1,377	—
Total assets	$ 31,824	$ 32,805	$ 31,092

Capital expenditures for property, plant and equipment			
Electrical Americas	$ 95	$ 160	$ 139
Electrical Global	71	106	95
Hydraulics	41	80	98
Aerospace	59	61	48
Vehicle	77	127	143
eMobility	24	8	4
Total	367	542	527
Corporate	22	45	38
Total expenditures for property, plant and equipment	$ 389	$ 587	$ 565
Depreciation of property, plant and equipment			
Electrical Americas	$ 101	$ 118	$ 121
Electrical Global	94	93	98
Hydraulics	—	58	56
Aerospace	53	37	36
Vehicle	98	102	104
eMobility	6	5	5
Total	352	413	420
Corporate	56	52	53
Total depreciation of property, plant and equipment	$ 408	$ 465	$ 473

Geographic Region Information

Net sales are measured based on the geographic destination of sales. Long-lived assets consist of property, plant and equipment - net.

	2020	2019	2018
Net sales			
United States	$ 10,044	$ 12,336	$ 12,034
Canada	757	941	931
Latin America	939	1,312	1,442
Europe	3,818	4,311	4,553
Asia Pacific	2,300	2,490	2,649
Total	$ 17,858	$ 21,390	$ 21,609
Long-lived assets			
United States	$ 1,510	$ 1,821	$ 1,898
Canada	25	24	20
Latin America	249	316	286
Europe	738	797	723
Asia Pacific	442	538	540
Total	$ 2,964	$ 3,496	$ 3,467

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

Amounts are in millions of dollars or shares unless indicated otherwise (per share data assume dilution).

COMPANY OVERVIEW

Eaton Corporation plc (Eaton or the Company) is a power management company with 2020 net sales of $17.9 billion. Eaton's mission is to improve the quality of life and the environment through the use of power management technologies and services. We provide sustainable solutions that help our customers effectively manage electrical, hydraulic and mechanical power – more safely, more efficiently and more reliably. Eaton has approximately 92,000 employees in 60 countries and sells products to customers in more than 175 countries.

Summary of Results of Operations

During 2020, the Company's results of operations were impacted by the COVID-19 pandemic. Organic sales were down 11% in 2020 primarily due to the impact from the COVID-19 pandemic. The divestitures of the Lighting and Automotive Fluid Conveyance businesses reduced sales, partially offset by growth from the acquisitions of Souriau-Sunbank Connection Technologies (Souriau-Sunbank) and Power Distribution, Inc.

In the second quarter of 2020, Eaton decided to undertake a multi-year restructuring program to reduce its cost structure and gain efficiencies in its business segments and at corporate in order to respond to declining market conditions. Restructuring charges incurred under this program were $214 in 2020. These restructuring activities are expected to incur additional expenses of $61 and $5 in 2021 and 2022, respectively, primarily comprised of plant closing and other costs, resulting in total estimated charges of $280 for the entire program. The projected mature year savings from these restructuring actions are expected to be $200 when fully implemented in 2023. Additional information related to this restructuring is presented in Note 16.

On February 25, 2020, Eaton acquired Power Distribution, Inc. (PDI) a leading supplier of mission critical power distribution, static switching, and power monitoring equipment and services for data centers and industrial and commercial customers. The company is headquartered in Richmond, Virginia, and had 2019 sales of $125. PDI is reported within the Electrical Americas business segment.

On March 2, 2020, Eaton sold its Lighting business to Signify N.V. for a cash purchase price of $1.4 billion. The Company recognized a pre-tax gain of $221. The Lighting business, which had sales of $1.6 billion in 2019 as part of the Electrical Americas business segment, serves customers in commercial, industrial, residential and municipal markets.

On January 21, 2020, Eaton entered into an agreement to sell its Hydraulics business to Danfoss A/S, a Danish industrial company, for $3.3 billion in cash. Eaton's Hydraulics business is a global leader in hydraulics components, systems, and services for industrial and mobile equipment. The business had sales of $1.8 billion and $2.2 billion for the years ended December 31, 2020 and 2019, respectively. The transaction is subject to customary closing conditions and regulatory approvals and is expected to close by the end of the first quarter or early second quarter of 2021.

During the fourth quarter of 2019 and first quarter of 2020, the Company determined the Lighting business and Hydraulics business, respectively, met the criteria to be classified as held for sale. Therefore, assets and liabilities of these businesses have been presented as held for sale in the Consolidated Balance Sheets as of December 31, 2019 and December 31, 2020, respectively. Assets and liabilities classified as held for sale are measured at the lower of carrying value or fair value less costs to sell. There was no write-down as fair values of both the Lighting business and Hydraulics business assets less their costs to sell exceeded their respective carrying value. Depreciation and amortization expense is not recorded for the period in which Other long-lived assets are classified as held for sale.

On December 15, 2020, Eaton signed an agreement to acquire a 50 percent stake in HuanYu High Tech, a subsidiary of HuanYu Group that manufactures and markets low-voltage circuit breakers and contactors in China, and throughout the Asia-Pacific region. HuanYu High Tech had 2019 sales of $106 and has production operations in Wenzhou, China. The transaction is subject to customary closing conditions and regulatory approvals and is expected to close in the second quarter of 2021. Eaton expects to account for this investment on the equity method of accounting and will report it within the Electrical Global business segment.

On January 28, 2021, Eaton signed an agreement to acquire Tripp Lite, a leading supplier of power quality products and connectivity solutions including single-phase uninterruptible power supply systems, rack power distribution units, surge protectors, and enclosures for data centers, industrial, medical, and communications markets in the Americas. Under the terms of the agreement, Eaton will pay $1.65 billion for Tripp Lite. The transaction is subject to customary closing conditions and is expected to close in the middle of 2021. Tripp Lite will be reported within the Electrical Americas business segment.

On January 31, 2021, Eaton signed an agreement to acquire Cobham Mission Systems (CMS), a leading manufacturer of air-to-air refueling systems, environmental systems, and actuation primarily for defense markets. Under the terms of the agreement, Eaton will pay $2.83 billion. The transaction is subject to customary closing conditions and is expected to close in the second half of 2021. CMS will be reported within the Aerospace business segment.

During 2019, the Company's results of operations were impacted by negative currency translation and weaker than expected growth in the Company's end markets, particularly in the second half of 2019. Despite the declining market conditions and unfavorable impact of currency translation, the Company generated solid operating margins and Net income per ordinary share.

On April 15, 2019, Eaton completed the acquisition of an 82.275% controlling interest in Ulusoy Elektrik Imalat Taahhut ve Ticaret A.S. (Ulusoy Elektrik), a leading manufacturer of electrical switchgear based in Ankara, Turkey, with a primary focus on medium voltage solutions for industrial and utility customers. Its sales for the 12 months ended September 30, 2018 were $126. The purchase price for the shares was $214 on a cash and debt free basis. As required by the Turkish capital markets legislation, Eaton filed an application to execute a mandatory tender offer for the remaining shares shortly after the transaction closed. During the tender offer, Eaton purchased additional shares for $33 through July 2019 to increase its ownership interest to 93.7%. Ulusoy Elektrik is reported within the Electrical Global business segment.

On July 19, 2019, Eaton acquired Innovative Switchgear Solutions, Inc. (ISG), a specialty manufacturer of medium-voltage electrical equipment serving the North American utility, commercial and industrial markets. Its 2018 sales were approximately $18. ISG is reported within the Electrical Americas business segment.

On December 20, 2019, Eaton acquired the Souriau-Sunbank business of TransDigm Group Inc. for a cash purchase price of $907, net of cash received. Headquartered in Versailles, France, Souriau-Sunbank is a global leader in highly engineered electrical interconnect solutions for harsh environments in the aerospace, defense, industrial, energy, and transport markets. Eaton's Consolidated Financial Statements include Souriau-Sunbank's results of operations. Souriau-Sunbank's sales for the years ended December 31, 2020 and 2019 were $287 and $3, respectively. Souriau-Sunbank is reported within the Aerospace business segment.

On December 31, 2019, Eaton sold its Automotive Fluid Conveyance Business. The transaction resulted in a pre-tax loss of $66 which was recorded in Other expense - net. This business was reported within the Vehicle business segment.

During 2018, the Company's results of operations delivered strong sales growth as major global end markets expanded.

As discussed in Note 10, certain Eaton subsidiaries acquired in the 2012 acquisition of Cooper Industries have been ordered to pay $293 by an arbitration panel. The panel's award, issued on August 23, 2018, relate to claims brought by Pepsi-Cola Metropolitan Bottling Company, Inc. ("Pepsi") in 2011. A Texas state court confirmed the arbitration award at the confirmation hearing, which was held on October 12, 2018. On November 2, 2018, the Company appealed. On November 28, 2018, the Company paid the full judgment plus accrued post-judgment interest to Pneumo Abex and preserved its rights, including to appeal. On April 25, 2019, the appeal that Cooper Industries filed was dismissed. The impact of the arbitration award discussed in Note 10 was an after-tax expense of $206 in the third quarter of 2018, reducing earnings per share by $0.48.

Additional information related to acquisitions and divestitures of businesses, and the arbitration decision expense, is presented in Note 2 and Note 10, respectively.

A summary of Eaton's Net sales, Net income attributable to Eaton ordinary shareholders, and Net income per share attributable to Eaton ordinary shareholders - diluted follows:

	2020	2019	2018
Net sales	$ 17,858	$ 21,390	$ 21,609
Net income attributable to Eaton ordinary shareholders	1,410	2,211	2,145
Net income per share attributable to Eaton ordinary shareholders - diluted	$ 3.49	$ 5.25	$ 4.91

COVID-19

The Company was impacted by the COVID-19 pandemic in 2020. Organic sales were down 11% in 2020 primarily due to the impact from the COVID-19 pandemic. The Company monitors the pandemic’s impact throughout the world, including guidance from governmental authorities and world health organizations. Our businesses are focused on cost control to offset the volume declines. During 2020, the Company implemented the following actions:

- Reduction of senior executive base salaries in the second and third quarters
- Reduction in cash retainer for non-employee members of the Board of Directors of 50% and 25% in the second and third quarters, respectively
- Implementation of unpaid leave programs
- Elimination of merit increases for all of 2020
- Reduction of discretionary expenses and implementation of travel and hiring freezes
- Elimination of nonessential capital spending

We anticipate that several of our markets will take some time to recover. Therefore in the second quarter of 2020, we decided to undertake a multi-year restructuring program discussed in Note 16 to deal with that weakness. The principal end markets affected are commercial aerospace, oil and gas, NAFTA Class 8 trucks, and North American/European light vehicles.

Eaton's products and support services are vital to hospitals, emergency services, military sites, utilities, public works, transportation and shipping providers. In addition, data centers, retail outlets, airports and governments, as well as the networks that support schools and remote workers, rely on the Company's products to serve their customers and communities. As a result, the Company's businesses are deemed essential to continue operating by almost all governments around the world, and all of the Company's plants are currently operating.

The Company is doing the following to protect the safety and health of its workforce, as well as support customer's needs during this pandemic:

Protect our employees

- Trained our employees at sites around the world in cleaning and disinfecting protocols
- Enacted social distancing procedures, staggered shifts, a rotating office work schedule, and modified workspace and meeting space layouts
- Requiring employees to stay at home if they are feeling ill, and encouraging increased hand washing and hygiene practices across all sites
- Advised employees to take advantage of flexible work options
- Restricting visitors to all sites
- Consulting regularly with doctors and health care organizations
- Updating the Company's response plans as new information becomes available

In the event an employee suspects they have been exposed to COVID-19, or testing confirms it, sites will implement a response plan that includes:

- Mandatory quarantines
- Communication with all who may have been exposed
- Disinfecting work stations and common areas
- Shutting down the facility if warranted

These actions are aligned with preventive health protocols of governmental authorities and health organizations including the Centers for Disease Control (U.S.) and the World Health Organization.

Support our customers

Eaton has activated its business continuity management plans across the organization, which includes:

- Staying in close contact with our suppliers to manage the supply chain
- Equipping our service technicians with additional personal protective equipment as needed
- Coordinating with local, state and national governments
- Following governmental and health authorities' guidelines

RESULTS OF OPERATIONS

Non-GAAP Financial Measures

The following discussion of Consolidated Financial Results includes certain non-GAAP financial measures. These financial measures include adjusted earnings and adjusted earnings per ordinary share, each of which differs from the most directly comparable measure calculated in accordance with generally accepted accounting principles (GAAP). A reconciliation of adjusted earnings and adjusted earnings per ordinary share to the most directly comparable GAAP measure is included in the table below. Management believes that these financial measures are useful to investors because they exclude certain transactions, allowing investors to more easily compare Eaton's financial performance period to period. Management uses this information in monitoring and evaluating the on-going performance of Eaton.

Acquisition and Divestiture Charges

Eaton incurs integration charges and transaction costs to acquire businesses, and transaction costs and other charges to divest and exit businesses. Eaton also recognizes gains and losses on the sale of businesses. A summary of these Corporate items follows:

	2020	2019	2018
Acquisition integration, divestiture charges and transactions costs	$ 288	$ 198	$ —
Gain on the sale of the Lighting business	(221)	—	—
Total before income taxes	67	198	—
Income tax expense (benefit)	66	(24)	—
Total after income taxes	$ 133	$ 174	$ —
Per ordinary share - diluted	$ 0.33	$ 0.42	$ —

Acquisition integration, divestiture charges and transaction costs in 2020 are primarily related to the planned divestiture of the Hydraulics business, the divestiture of the Lighting business, the acquisitions of Souriau-Sunbank, Ulusoy Elektrik, and PDI, and other charges to exit businesses, and were included in Cost of products sold, Selling and administrative expense, Research and development expense, and Other expense - net.

Charges in 2019 related to the divestiture of the Lighting business, the acquisitions of Ulusoy Elektrik, ISG, and Souriau-Sunbank, the loss on the sale of the Automotive Fluid Conveyance business, and other charges to exit businesses, and were included in Cost of products sold, Selling and administrative expense, Research and development expense, and Other expense - net. In Business Segment Information in Note 17, these charges were included in Other expense - net.

Consolidated Financial Results

	2020	Change from 2019	2019	Change from 2018	2018
Net sales	$ 17,858	(17)%	$ 21,390	(1)%	$ 21,609
Gross profit	5,450	(23)%	7,052	(1)%	7,098
Percent of net sales	30.5 %		33.0 %		32.8 %
Income before income taxes	1,746	(33)%	2,591	7 %	2,424
Net income	1,415	(36)%	2,213	3 %	2,146
Less net income for noncontrolling interests	(5)		(2)		(1)
Net income attributable to Eaton ordinary shareholders	1,410	(36)%	2,211	3 %	2,145
Excluding acquisition and divestiture charges, after-tax	133		174		—
Excluding restructuring program charges, after-tax	170		—		—
Adjusted earnings	$ 1,713	(28)%	$ 2,385	11 %	$ 2,145
Net income per share attributable to Eaton ordinary shareholders - diluted	$ 3.49	(34)%	$ 5.25	7 %	$ 4.91
Excluding per share impact of acquisition and divestiture charges, after-tax	0.33		0.42		—
Excluding per share impact of restructuring program charges, after-tax	0.42		—		—
Adjusted earnings per ordinary share	$ 4.24	(25)%	$ 5.67	15 %	$ 4.91

Net Sales

Net sales in 2020 decreased by 17% compared to 2019 due to a decrease of 11% in organic sales, a decrease of 7% from divestitures of businesses, and a decrease of 1% from the impact of negative currency translation, partially offset by an increase of 2% from acquisitions of businesses. The decrease in organic sales in 2020 was primarily due to the impact from the COVID-19 pandemic, with lower sales in all business segments. Net sales in 2019 decreased by 1% compared to 2018 due to a decrease of 1% from the impact of negative currency translation.

Gross Profit

Gross profit margin decreased from 33.0% in 2019 to 30.5% in 2020. The decrease in gross profit margin in 2020 was primarily due to the impact from the COVID-19 pandemic, with lower sales in all business segments. Gross profit increased from 32.8% in 2018 to 33.0% in 2019. The increase in gross profit margin in 2019 was primarily due to higher sales volumes and other operating improvements in the Electrical Americas and Electrical Global business segments, and higher sales volumes and favorable product mix in the Aerospace business segment, partially offset by lower sales volumes in the Hydraulics and Vehicle business segments and the charge for expected warranty costs in the Vehicle business segment to correct the performance of a product which incorporated a defective part from a supplier.

Income Taxes

During 2020, income tax expense of $331 was recognized (an effective tax rate of 19.0%) compared to income tax expense of $378 in 2019 (an effective tax rate of 14.6%) and income tax expense of $278 in 2018 (an effective tax rate of 11.5%). The increase in the effective tax rate from 14.6% in 2019 to 19.0% in 2020 was primarily due to the tax expense on the gain from the sale of the Lighting business discussed in Note 2, partially offset by a tax benefit on the restructuring charges discussed in Note 16. The 2018 effective tax rate of 11.5% was lower than the 2019 effective tax rate of 14.6% primarily due to the tax impact of the 2018 arbitration decision expense discussed in Note 10.

Net Income

Net income attributable to Eaton ordinary shareholders of $1,410 in 2020 decreased 36% compared to $2,211 in 2019. Net income in 2020 included an after-tax gain of $91 on the sale of the Lighting business discussed in Note 2. The decrease in 2020 net income was primarily due to lower sales volumes as a result of the COVID-19 pandemic. Net income attributable to Eaton ordinary shareholders of $2,211 in 2019 increased 3% compared to $2,145 in 2018. Net income in 2018 included after-tax expense of $206 from the arbitration decision discussed in Note 10. Excluding the arbitration decision, the decrease in 2019 net income was primarily due to higher acquisition and divestiture charges and a higher effective income tax rate.

Net income per ordinary share decreased to $3.49 in 2020 compared to $5.25 in 2019. The decrease in net income per ordinary share was due to lower Net income attributable to Eaton ordinary shareholders, adjusted for the impact of the Company's share repurchases over the past year. Net income per ordinary share increased to $5.25 in 2019 compared to $4.91 in 2018. The increase in net income per ordinary share was due to higher Net income attributable to Eaton ordinary shareholders and the Company's share repurchases over the past year.

Adjusted Earnings

Adjusted earnings of $1,713 in 2020 decreased 28% compared to Adjusted earnings of $2,385 in 2019. The decrease in Adjusted earnings in 2020 was primarily due to lower Net income attributable to Eaton ordinary shareholders, adjusted for lower acquisition and divestiture charges, partially offset by higher restructuring program charges. Adjusted earnings of $2,385 in 2019 increased 11% compared to Adjusted Earnings of $2,145 in 2018. The increase in Adjusted earnings in 2019 was primarily due to higher Net income attributable to Eaton ordinary shareholders adjusted for higher acquisition integration and divestiture charges.

Adjusted earnings per ordinary share decreased to $4.24 in 2020 compared to $5.67 in 2019. The decrease in Adjusted earnings per ordinary share in 2020 was due to lower Adjusted earnings, adjusted for the impact of the Company's share repurchases over the past year. Adjusted earnings per ordinary share increased to $5.67 in 2019 compared to $4.91 in 2018. The increase in Adjusted earnings per ordinary share in 2019 was due to higher Adjusted earnings and the impact of the Company's share repurchases over the past year.

Business Segment Results of Operations

The following is a discussion of Net sales, operating profit and operating profit margin by business segment.

Electrical Americas

	2020	Change from 2019	2019	Change from 2018	2018
Net sales	$ 6,680	(18)%	$ 8,175	3 %	$ 7,914
Operating profit	$ 1,352	(13)%	$ 1,549	13 %	$ 1,372
Operating margin	20.2 %		18.9 %		17.3 %

Net sales decreased 18% in 2020 compared to 2019 due to a decrease of 17% from the divestiture of the Lighting business, and a decrease of 2% in organic sales, partially offset by an increase of 1% from the acquisition of Innovative Switchgear Solutions, Inc. and Power Distribution, Inc. The decrease in organic sales in 2020 was primarily driven by the impact of the COVID-19 pandemic, partially offset by growth in residential, data center, and utility end-markets. Net sales increased 3% in 2019 compared to 2018 due to an increase of 4% in organic sales, partially offset by a 1% decrease from the impact of negative currency translation. Organic sales grew in 2019 primarily due to strength in residential, commercial applications, industrial projects, utilities, and data centers.

The operating margin increased from 18.9% in 2019 to 20.2% in 2020. The increase in operating margin was primarily due to the favorable impact from the divestiture of the Lighting business and cost containment actions to counteract the impact of the COVID-19 pandemic, partially offset by lower volumes. The operating margin increased from 17.3% in 2018 to 18.9% in 2019. The increase in the operating margin in 2019 was primarily due to higher sales volumes and other operating improvements.

Electrical Global

	2020	Change from 2019	2019	Change from 2018	2018
Net sales	$ 4,703	(9)%	$ 5,172	— %	$ 5,159
Operating profit	$ 750	(16)%	$ 897	8 %	$ 833
Operating margin	15.9 %		17.3 %		16.1 %

Net sales decreased 9% in 2020 compared to 2019 due to a decrease of 9% in organic sales. The decrease in organic sales in 2020 was primarily driven by the impact of the COVID-19 pandemic, with particular weakness in global oil and gas markets and industrial applications. Net sales were broadly flat in 2019 compared to 2018 due to an increase of 2% in organic sales and an increase of 1% from the acquisition of Ulusoy Elektrik, offset by a 3% decrease from the impact of negative currency translation. The organic sales increase in 2019 was primarily due to strength in industrial applications and global oil and gas markets.

The operating margin decreased from 17.3% in 2019 to 15.9% in 2020. The decrease in operating margin in 2020 was primarily due to lower sales volumes and unfavorable product mix, partially offset by cost containment actions to mitigate the impact of the COVID-19 pandemic. The operating margin increased from 16.1% in 2018 to 17.3% in 2019. The operating margin increased in 2019 primarily due to higher organic sales volumes and other operating improvements.

Hydraulics

	2020	Change from 2019	2019	Change from 2018	2018
Net sales	$ 1,842	(16)%	$ 2,204	(8)%	$ 2,392
Operating profit	$ 186	(4)%	$ 193	(28)%	$ 267
Operating margin	10.1 %		8.8 %		11.2 %

Net sales decreased 16% in 2020 compared to 2019 due to a decrease of 15% in organic sales and a decrease of 1% from the impact of negative currency translation. The decrease in organic sales in 2020 was primarily due to the impact from the COVID-19 pandemic, with weakness at both OEMs and distributors globally. Net sales in 2019 decreased 8% compared to 2018 due to a decrease in organic sales of 6% and a decrease of 2% from the impact of negative currency translation. The decrease in organic sales in 2019 was due to weakness in global mobile equipment markets and destocking at both OEMs and distributors.

The operating margin increased from 8.8% in 2019 to 10.1% in 2020. The increase in operating margin in 2020 was primarily due to depreciation expense no longer being charged as a result of the business being classified as held for sale as discussed in Note 2 and cost containment actions to counteract the impact of the COVID-19 pandemic, partially offset by lower sales volumes. The operating margin decreased from 11.2% in 2018 to 8.8% in 2019. The decrease in operating margin in 2019 was primarily due to lower sales volumes, unfavorable product mix, and operating inefficiencies.

Aerospace

	2020	Change from 2019	2019	Change from 2018	2018
Net sales	$ 2,223	(10)%	$ 2,480	6 %	$ 2,335
Operating profit	$ 414	(30)%	$ 595	18 %	$ 503
Operating margin	18.6 %		24.0 %		21.5 %

Net sales decreased 10% in 2020 compared to 2019 due to a decrease of 22% in organic sales, partially offset by an increase of 12% from the acquisition of Souriau-Sunbank. The decrease in organic sales in 2020 was primarily due to the impact of the COVID-19 pandemic on commercial aviation, partially offset by growth in military sales. Net sales in 2019 increased 6% compared to 2018 due to an increase in organic sales of 7%, partially offset by a decrease of 1% from the impact of negative currency translation. The increase in organic sales during 2019 was primarily due to strength in sales to commercial OEMs, and the aftermarket.

The operating margin decreased from 24.0% in 2019 to 18.6% in 2020. The decrease was primarily due to lower sales volumes and the acquisition of Souriau-Sunbank, partially offset by cost containment actions to mitigate the impact of the COVID-19 pandemic. The operating margin increased from 21.5% in 2018 to 24.0% in 2019. The increase was primarily due to higher sales volumes and favorable product mix.

Vehicle

	2020	Change from 2019	2019	Change from 2018	2018
Net sales	$ 2,118	(30)%	$ 3,038	(13)%	$ 3,489
Operating profit	$ 243	(47)%	$ 460	(25)%	$ 611
Operating margin	11.5 %		15.1 %		17.5 %

Net sales decreased 30% in 2020 compared to 2019 due to a decrease of 24% in organic sales, a decrease of 4% from the divestiture of our Automotive Fluid Conveyance business, and a decrease of 2% from the impact of negative currency translation. The decrease in organic sales in 2020 was driven by plant shutdowns in the second quarter of 2020, lower Class 8 OEM production, and weakness in light vehicle sales primarily due to the impact from the COVID-19 pandemic. Net sales decreased 13% in 2019 compared to 2018 due to a decrease in organic sales of 11% and a decrease of 2% from the impact of negative currency translation. The decrease in organic sales in 2019 was driven by weakness in global light vehicle markets and revenues transferring over to the Eaton Cummins Automated Transmission Technologies joint venture.

The operating margin decreased from 15.1% in 2019 to 11.5% in 2020. The decrease in operating margin in 2020 was primarily due to lower sales volumes, partially offset by cost containment actions to mitigate the impact of the COVID-19 pandemic. The operating margin decreased from 17.5% in 2018 to 15.1% in 2019. The decrease in operating margin in 2019 was primarily due to lower sales volumes and a charge for expected warranty costs to correct the performance of a product which incorporated a defective part from a supplier.

eMobility

	2020	Change from 2019	2019	Change from 2018	2018
Net sales	$ 292	(9)%	$ 321	— %	$ 320
Operating profit (loss)	$ (8)	(147)%	$ 17	(61)%	$ 44
Operating margin	(2.7)%		5.3 %		13.8 %

Net sales decreased 9% in 2020 compared to 2019 due to a decrease of 9% in organic sales. The decrease in organic sales in 2020 was primarily due to the impact from the COVID-19 pandemic, with particular weakness in the legacy internal combustion engine platforms. Net sales were flat in 2019 compared to 2018 due to an increase in organic sales of 1%, offset by a decrease of 1% from the impact of negative currency translation. The increase in organic sales in 2019 was primarily due to growth in Europe.

The operating margin decreased from 5.3% in 2019 to negative 2.7% in 2020. The decrease in operating margin in 2020 was primarily due to lower sales volumes and increased research and development costs. The operating margin decreased from 13.8% in 2018 to 5.3% in 2019. The decrease in operating margin in 2019 was primarily due to increased research and development costs.

Corporate Expense

	2020	Change from 2019	2019	Change from 2018	2018
Amortization of intangible assets	$ 354	(4)%	$ 367	(4)%	$ 382
Interest expense - net	149	(25)%	199	(23)%	258
Pension and other postretirement benefits expense	40	233 %	12	1,100 %	1
Restructuring program charges	214	NM	—	NM	—
Arbitration decision expense	—	NM	—	NM	275
Other expense - net	434	(20)%	542	87 %	290
Total corporate expense	$ 1,191	6 %	$ 1,120	(7)%	$ 1,206

Total corporate expense was $1,191 in 2020 compared to Total corporate expense of $1,120 in 2019. The increase in Total corporate expense was primarily due to the multi-year restructuring program discussed in Note 16, partially offset by lower Other expense - net. The decrease in Other expense - net is primarily due to a gain on sale of a business discussed in Note 2, partially offset by higher acquisition and divestiture charges. Total corporate expense was $1,120 in 2019 compared to Total Corporate expense of $1,206 in 2018. The decrease in Total corporate expense was primarily due to the 2018 arbitration decision discussed in Note 10, partially offset by higher acquisition integration and divestiture charges.

LIQUIDITY, CAPITAL RESOURCES AND CHANGES IN FINANCIAL CONDITION

Financial Condition and Liquidity

Eaton's objective is to finance its business through operating cash flow and an appropriate mix of equity and long-term and short-term debt. By diversifying its debt maturity structure, Eaton reduces liquidity risk. The Company maintains access to the commercial paper markets through a $2,000 commercial paper program. The Company maintains long-term revolving credit facilities totaling $2,000, consisting of a $750 five-year revolving credit facility that will expire November 17, 2022, a $500 four-year revolving credit facility that will expire November 7, 2023, and a $750 five-year revolving credit facility that will expire November 7, 2024. The revolving credit facilities are used to support commercial paper borrowings and are fully and unconditionally guaranteed by Eaton and certain of its direct and indirect subsidiaries on an unsubordinated, unsecured basis. There were no borrowings outstanding under Eaton's revolving credit facilities at December 31, 2020 or 2019. The Company had available lines of credit of $1,010 from various banks primarily for the issuance of letters of credit, of which there was $268 outstanding at December 31, 2020. Over the course of a year, cash, short-term investments and short-term debt may fluctuate in order to manage global liquidity. While the COVID-19 pandemic temporarily challenged commercial paper markets in mid-March 2020, those markets have since recovered such that Eaton continues to be able to access them on the same basis as in prior periods. Further, although the COVID-19 pandemic negatively impacted 2020 results and we expect it may also have an unfavorable impact on 2021 results, our businesses continue to generate substantial cash. In addition, Eaton completed the $1.4 billion sale of our Lighting Business on March 2, 2020 and expects to complete the sale of our Hydraulics Business for $3.3 billion in cash by the end of the first quarter or early second quarter of 2021. Accordingly, Eaton believes it has the operating flexibility, cash flow, cash and short-term investment balances, and access to capital markets in excess of the liquidity necessary to meet future operating needs of the business as well as scheduled payments of long-term debt.

For additional information on financing transactions and debt, see Note 8.

Eaton's credit facilities and indentures governing certain long-term debt contain various covenants, the violation of which would limit or preclude the use of the credit facilities for future borrowings, or might accelerate the maturity of the related outstanding borrowings covered by the indentures. At Eaton's present credit rating level, the most restrictive financial covenant provides that the ratio of secured debt (or lease payments due under a sale and leaseback transaction) to adjusted consolidated net worth (or consolidated net tangible assets, in each case as defined in the relevant credit agreement or indenture) may not exceed 10%. Eaton's actual ratios are substantially below the required threshold. In addition, Eaton is in compliance with each of its debt covenants for all periods presented.

Sources and Uses of Cash

Operating Cash Flow

Net cash provided by operating activities was $2,944 in 2020, a decrease of $507 compared to $3,451 in 2019. The decrease in net cash provided by operating activities in 2020 was driven by lower net income, partially offset by lower working capital balances compared to 2019.

Net cash provided by operating activities was $3,451 in 2019, an increase of $793 compared to $2,658 in 2018. The increase in net cash provided by operating activities in 2019 was driven by lower working capital balances compared to 2018, and the absence of a $297 payment made during 2018 for the arbitration decision discussed in Note 10.

Investing Cash Flow

Net cash provided by investing activities was $397 in 2020, an increase of $2,263 in the source of cash compared to net cash used of $1,866 in 2019. The increase in the source of cash was primarily driven by proceeds from the sale of the Lighting business and lower cash paid for business acquisitions discussed in Note 2, partially offset by net purchases of short-term investments of $441 in 2020 compared to net purchases of $70 in 2019. Capital expenditures were $389 in 2020 compared to $587 in 2019. Eaton expects approximately $500 in capital expenditures in 2021.

Net cash used in investing activities was $1,866 in 2019, an increase in the use of cash of $1,468 compared to $398 in 2018. The increase in the use of cash was primarily driven by cash paid for business acquisitions discussed in Note 2 and by net purchases of short-term investments of $70 in 2019 compared to net sales of $355 in 2018, partially offset by $54 of net proceeds in 2019 compared to net payments of $110 in 2018 from the settlement of currency exchange contracts not designated as hedges. Capital expenditures were $587 in 2019 compared to $565 in 2018.

Financing Cash Flow

Net cash used in financing activities was $3,258 in 2020, an increase in the use of cash of $1,764 compared to $1,494 in 2019. The increase in the use of cash was primarily due to lower proceeds from borrowings of $1 in 2020 compared to $1,232 in 2019 and higher share repurchases of $1,608 in 2020 compared to $1,029 in 2019.

Net cash used in financing activities was $1,494 in 2019, a decrease in the use of cash of $1,087 compared to $2,581 in 2018. The decrease in the use of cash was primarily due to higher proceeds from borrowings of $1,232 in 2019 compared to $410 in 2018 and lower share repurchases of $1,029 in 2019 compared to $1,271 in 2018.

Guaranteed Debt

Issuers, Guarantors and Guarantor Structure

Eaton Corporation has issued senior notes pursuant to indentures dated April 1, 1994 (the 1994 Indenture), November 20, 2012 (the 2012 Indenture) and September 15, 2017 (the 2017 Indenture). The senior notes of Eaton Corporation are registered under the Securities Act of 1933, as amended (the Registered Senior Notes). Eaton Corporation is also the issuer of two outstanding series of privately placed debt securities (the PPNs), and Eaton Capital Unlimited Company, another subsidiary of Eaton, is the issuer of three outstanding series of debt securities sold in offshore transactions under Regulation S promulgated under the Securities Act (the Eurobonds). The PPNs, the Eurobonds and the Registered Senior Notes (together, the Senior Notes) comprise substantially all of Eaton's long-term indebtedness.

Substantially all of the Senior Notes, together with the credit facilities described above under Financial Condition and Liquidity (the Credit Facilities), are guaranteed by Eaton and 18 of its subsidiaries. Accordingly, they rank equally with each other. However, because these obligations are not secured, they would be effectively subordinated to any existing or future secured indebtedness of Eaton and its subsidiaries. As of December 31, 2020, Eaton has no material, long-term secured debt. The guaranteed Registered Senior Notes are also structurally subordinated to the liabilities of Eaton's subsidiaries that are not guarantors. Except as described below under Future Guarantors, Eaton is not obligated to cause its subsidiaries to guarantee the Registered Senior Notes.

The table set forth in Exhibit 22 filed with this Form 10-K details the primary obligors and guarantors with respect to the guaranteed Registered Senior Notes.

Terms of Guarantees of Registered Securities

Payment of principal and interest on the Registered Senior Notes is guaranteed, on an unsecured, unsubordinated basis by the subsidiaries of Eaton set forth in the table referenced in Exhibit 22. Each guarantee is full and unconditional, and joint and several. Each guarantor's guarantee is an unsecured obligation that ranks equally with all its other unsecured and unsubordinated indebtedness. The obligations of each guarantor under its guarantee of the Registered Senior Notes is subject to a customary savings clause or similar provision designed to prevent such guarantee from constituting a fraudulent conveyance or otherwise legally impermissible or voidable obligation.

Generally, each guarantee of the Registered Senior Notes by a guarantor other than Eaton provides that it will be automatically and unconditionally released and discharged upon:

(a) the consummation of any transaction permitted under the applicable indenture resulting in such guarantor ceasing to be a subsidiary, such as a sale to a third party;
(b) such guarantee (so long as the guarantor is not obligated under any other U.S. debt obligations), becoming prohibited by any applicable law, rule or regulation or by any contractual obligation;
(c) such guarantee resulting in material adverse tax consequences to Eaton or any of its subsidiaries (so long as the applicable guarantor is not obligated under any other U.S. debt obligation); or
(d) such guarantor becoming a controlled foreign corporation within the meaning Section 957(a) of the Internal Revenue Code (a CFC), or an entity the material assets of which is limited to equity interests of a CFC.

Notwithstanding the foregoing, each guarantee by a direct or indirect parent of Eaton Corporation (other than Eaton) provides that it will be released only under the circumstances described in subparagraphs (b) and (c) above.

The guarantee of Eaton does not contain any release provisions.

Future Guarantors

The 2012 and 2017 Indentures generally provide that, with certain limited exceptions, any subsidiary of Eaton must become a guarantor if it becomes obligated as borrower or guarantor under any series of debt securities or a syndicated credit facility. Further, any entity that becomes a direct or indirect parent entity of Eaton Corporation and holds any material assets, with certain limited exceptions, or owes any material liabilities must become a guarantor.

The 1994 Indenture does not contain provisions with respect to future guarantors.

Summarized Financial Information of Guarantors and Issuers

	December 31, 2020
Current assets	$ 4,031
Noncurrent assets	11,642
Current liabilities	2,916
Noncurrent liabilities	9,049
Amounts due to subsidiaries that are non-issuers and non-guarantors - net	15,938

	2020
Net sales	$ 10,191
Sales to subsidiaries that are non-issuers and non-guarantors	833
Cost of products sold	8,402
Expense from subsidiaries that are non-issuers and non-guarantors - net	459
Net loss	(484)

The financial information presented is that of Eaton Corporation and the Guarantors, which includes Eaton Corporation plc, on a combined basis and the financial information of non-issuer and non-guarantor subsidiaries has been excluded. Intercompany balances and transactions between Eaton Corporation and Guarantors have been eliminated, and amounts due from, amounts due to, and transactions with non-issuer and non-guarantor subsidiaries have been presented separately.

Credit Ratings

Eaton's debt has been assigned the following credit ratings:

Credit Rating Agency (long- /short-term rating)	Rating	Outlook
Standard & Poor's	A-/A-2	Stable outlook
Moody's	Baa1/P-2	Stable outlook
Fitch	BBB+/F1	Negative outlook

Defined Benefits Plans

Pension Plans

During 2020, the fair value of plan assets in the Company’s employee pension plans increased $264 to $5,600 at December 31, 2020. The increase in plan assets was primarily due to higher than expected return on plan assets and favorable currency translation. At December 31, 2020, the net unfunded position of $1,557 in pension liabilities consisted of $491 in the U.S. qualified pension plan, $994 in plans that have no minimum funding requirements, and $167 in all other plans that require minimum funding, partially offset by $95 in plans that are overfunded.

Funding requirements are a major consideration in making contributions to Eaton’s pension plans. With respect to the Company’s pension plans worldwide, the Company intends to contribute annually not less than the minimum required by applicable law and regulations. In 2020, $122 was contributed to the pension plans. The Company anticipates making $337 of contributions to certain pension plans during 2021. The funded status of the Company’s pension plans at the end of 2021, and future contributions, will depend primarily on the actual return on assets during the year and the discount rate used to calculate certain benefits at the end of the year.

Off-Balance Sheet Arrangements

Eaton does not have off-balance sheet arrangements with unconsolidated entities or other persons. The Company made an accounting policy election to not recognize lease assets or liabilities for leases with a term of 12 months or less.

CRITICAL ACCOUNTING POLICIES

The preparation of financial statements in conformity with generally accepted accounting principles (GAAP) in the United States requires management to make certain estimates and assumptions that may involve the exercise of significant judgment. For any estimate or assumption used, there may be other reasonable estimates or assumptions that could have been used. However, based on facts and circumstances inherent in developing estimates and assumptions, management believes it is unlikely that applying other such estimates and assumptions would have caused materially different amounts to have been reported. Actual results may differ from these estimates.

Revenue Recognition

Sales are recognized when control of promised goods or services are transferred to customers in an amount that reflects the consideration the Company expects to be entitled to in exchange for those goods or services. Control is transferred when the customer has the ability to direct the use of and obtain benefits from the goods or services. The majority of the Company’s sales agreements contain performance obligations satisfied at a point in time when control is transferred to the customer. Sales recognized over time are generally accounted for using an input measure to determine progress completed at the end of the period. Sales for service contracts generally are recognized as the services are provided. For agreements with multiple performance obligations, judgment is required to determine whether performance obligations specified in these agreements are distinct and should be accounted for as separate revenue transactions for recognition purposes. In these types of agreements, we generally allocate sales price to each distinct obligation based on the price of each item sold in separate transactions.

Due to the nature of the work required to be performed for obligations recognized over time, Eaton estimates total costs by contract. The estimate of total costs are subject to judgment. Estimated amounts are included in the recognized sales price to the extent it is not probable that a significant reversal of cumulative sales will occur. Additionally, contracts can be modified to account for changes in contract specifications, requirements or sale price. The effect of a contract modification on the sales price or adjustments to the measure of completion under the input method are recognized as adjustments to revenue on a cumulative catch-up basis.

Eaton records reductions to sales for returns, and customer and distributor incentives, primarily comprised of rebates, at the time of the initial sale. Rebates are estimated based on sales terms, historical experience, trend analysis, and projected market conditions in the various markets served. The rebate programs offered vary across businesses due to the numerous markets Eaton serves, but the most common incentives relate to amounts paid or credited to customers for achieving defined volume levels. Returns are estimated at the time of the sale primarily based on historical experience and recorded gross on the Consolidated Balance Sheet. See Note 3 for additional information.

Impairment of Goodwill and Other Long-Lived Assets

Goodwill

Goodwill is evaluated annually for impairment as of July 1 using either a quantitative or qualitative analysis. Goodwill is tested for impairment at the reporting unit level, and is based on the net assets for each reporting unit, including goodwill and intangible assets. The Company’s reporting units are equivalent to the reportable operating segments, except for the Aerospace segment which has two reporting units. Goodwill is assigned to each reporting unit, as this represents the lowest level that constitutes a business and is the level at which management regularly reviews the operating results. The Company performs a quantitative analysis using a discounted cash flow model and other valuation techniques, but may elect to perform a qualitative analysis.

Additionally, goodwill is evaluated for impairment whenever an event occurs or circumstances change that would indicate that it is more likely than not that the fair value of a reporting unit is less than its carrying amount. Events or circumstances that may result in an impairment review include changes in macroeconomic conditions, industry and market considerations, cost factors, overall financial performance, other relevant entity-specific events, specific events affecting the reporting unit or sustained decrease in share price.

The annual goodwill impairment test was performed using a qualitative analysis in 2020 and 2019, except for the eMobility segment in 2020 and the Hydraulics segment in 2019 which used a quantitative analysis. A qualitative analysis is performed by assessing certain trends and factors, including projected market outlook and growth rates, forecasted and actual sales and operating profit margins, discount rates, industry data, and other relevant qualitative factors. These trends and factors are compared to, and based on, the assumptions used in the most recent quantitative analysis performed for each reporting unit. The results of the qualitative analyses did not indicate a need to perform quantitative analysis.

Goodwill impairment testing was also performed using quantitative analyses in 2020 for the Electrical Americas, Electrical Global, Hydraulics and Aerospace reporting units due to a reorganization of the Company’s businesses discussed in Note 1 and Note 6, and in 2020 and 2019 as a result of the Hydraulics and Lighting businesses being classified as held for sale as discussed in Note 2. The Company used the relative fair value method to reallocate goodwill.

Quantitative analyses were performed by estimating the fair value for each reporting unit using a discounted cash flow model. The model includes estimates of future cash flows, future growth rates, terminal value amounts, and the applicable weighted-average cost of capital used to discount those estimated cash flows. The future cash flows were based on the Company's long-term operating plan and a terminal value was used to estimate the reporting unit's cash flows beyond the period covered by the operating plan. The weighted-average cost of capital is an estimate of the overall after-tax rate of return required by equity and debt market holders of a business enterprise. These analyses require the exercise of judgments, including judgments about appropriate discount rates, perpetual growth rates, revenue growth, and margin assumptions. Sensitivity analyses were performed around certain of these assumptions in order to assess the reasonableness of the assumptions and the resulting estimated fair values.

Based on these analyses performed in 2020 and 2019, the fair value of Eaton's reporting units continue to substantially exceed their respective carrying amounts and thus, no impairment exists.

Indefinite Life Intangible Assets

Indefinite life intangible assets consist of certain trademarks. They are evaluated annually for impairment as of July 1 using either a quantitative or qualitative analysis to determine whether their fair values exceed their respective carrying amounts. Indefinite life intangible asset impairment testing for 2020 and 2019 was performed using a quantitative analysis. Determining the fair value of these assets requires significant judgment and the Company uses a royalty relief methodology similar to that employed when the associated assets were acquired, but using updated estimates of future sales, cash flows and profitability.

Additionally, indefinite life intangible assets are evaluated for impairment whenever an event occurs or circumstances change that would indicate that it is more likely than not that the asset is impaired. Events or circumstances that may result in an impairment review include changes in industry and market considerations, cost factors, financial performance, and other relevant entity-specific events that could affect inputs used to determine the respective fair values of the indefinite-lived intangible assets.

For 2020 and 2019, the fair value of indefinite lived intangible assets exceeded the respective carrying value.

Other Long-Lived Assets

Other long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate the carrying amount may not be recoverable. Events or circumstances that may result in an impairment review include operations reporting losses, a significant adverse change in the use of an asset, the planned disposal or sale of the asset, a significant adverse change in the business climate or legal factors related to the asset, or a significant decrease in the estimated market value of an asset. Upon indications of impairment, assets and liabilities are grouped at the lowest level for which identifiable cash flows are largely independent of the cash flows of other assets and liabilities. The asset group would be considered impaired when the estimated future net undiscounted cash flows generated by the asset group are less than its carrying value. In instances where the carrying amount of the asset group exceeded the undiscounted cash flows, the fair value of the asset group would be determined and an impairment loss would be recognized based on the amount by which the carrying value of the asset group exceeds its fair value. Determining asset groups and underlying cash flows requires the use of significant judgment.

For additional information about goodwill and other intangible assets see Note 6.

Acquisitions of Businesses

The acquisition of a business is accounted for using the acquisition method of accounting which requires assets and liabilities to be recognized at their fair values on the acquisition date. The initial fair value of assets acquired and liabilities assumed may be revised based on the final determination of fair value during the measurement period of 12 months from the acquisition date. The Company generally determines the fair value of intangible assets acquired using third-party valuations that are prepared using discounted cash flow models that rely on the Company's estimates. These estimates require judgement of future revenue growth rates, future margins, and the applicable weighted-average cost of capital used to discount those estimated cash flows. For additional information about the acquisitions of businesses see Note 2.

Divestitures of Businesses

The Company records assets and liabilities of a business to be sold as held for sale in the Consolidated Balance Sheet when all the required criteria are met. The held for sale assets and liabilities are initially measured at the lesser of their carrying value or fair value less cost to sell, with any resulting loss being immediately recognized. In each subsequent reporting period until the business is sold, the Company continues to estimate the fair value less cost to sell of the business and recognizes any additional losses, or any gains to the extent losses were previously recorded on the held for sale assets and liabilities.

The Company used the relative fair value method to allocate goodwill to both the Lighting and Hydraulics businesses. The fair values of the Lighting business and Hydraulics business were estimated based on a combination of the prices paid to Eaton by Signify N.V. and Danfoss A/S, respectively, and a discounted cash flow model. The model includes estimates of future cash flows, future growth rates, terminal value amounts, and the applicable weighted-average cost of capital used to discount those estimated cash flows. The weighted-average cost of capital is an estimate of the overall after-tax rate of return required by equity and debt market holders of a business enterprise. These analyses require the exercise of judgments, including judgments about appropriate discount rates, perpetual growth rates, revenue growth, and margin assumptions. For additional information about the divestitures of businesses see Note 2.

Recoverability of Deferred Income Tax Assets

Eaton is subject to the income tax laws in the jurisdictions in which it operates. In order to determine the income tax provision for financial statement purposes, Eaton must make significant estimates and judgments about its business operations in these jurisdictions. These estimates and judgments are also used in determining the deferred income tax assets and liabilities that have been recognized for differences between the financial statement and income tax basis of assets and liabilities, and income tax loss carryforwards and income tax credit carryforwards.

Management evaluates the realizability of deferred income tax assets for each jurisdiction in which it operates. If the Company experiences cumulative pre-tax income in a particular jurisdiction in a three-year period including the current and prior two years, management normally concludes that the deferred income tax assets will more likely than not be realizable and no valuation allowance is recognized, unless known or planned operating developments, or changes in tax laws, would lead management to conclude otherwise. However, if the Company experiences cumulative pre-tax losses in a particular jurisdiction in a three-year period including the current and prior two years, management then considers a series of factors in the determination of whether the deferred income tax assets can be realized. These factors include historical operating results, known or planned operating developments, the period of time over which certain temporary differences will reverse, consideration of the utilization of certain deferred income tax liabilities, tax law carryback capability in a particular country, prudent and feasible tax planning strategies, changes in tax laws, and estimates of future earnings and taxable income using the same assumptions as those used for the Company's goodwill and other impairment testing. After evaluation of these factors, if the deferred income tax assets are expected to be realized within the tax carryforward period allowed for that specific country, management would conclude that no valuation allowance would be required. To the extent that the deferred income tax assets exceed the amount that is expected to be realized within the tax carryforward period for a particular jurisdiction, management would establish a valuation allowance. For additional information about income taxes see Note 11.

Unrecognized Income Tax Benefits

Eaton recognizes an income tax benefit from an uncertain tax position only if it is more likely than not that the benefit would be sustained upon examination by taxing authorities, based on the technical merits of the position. The Company evaluates and adjusts the amount of unrecognized income tax benefits based on changes in law, facts and circumstances. Eaton also estimates, where reasonably possible, the increase or decrease in the amount of unrecognized income tax benefits in the next 12 months.

The evaluation and determination of the amount of unrecognized income tax benefits related to uncertain tax positions is complex and involves both the exercise of judgement and the utilization of certain estimates and assumptions. Each tax position carries unique facts and circumstances that must be evaluated in light of current tax laws, regulations, and judicial decisions. Additionally, the ultimate resolution of the majority of Eaton's unrecognized income tax benefits is dependent upon uncontrollable factors such as the prospect of retroactive regulations; new case law; and the willingness of the income tax authority to settle the issue, including the timing thereof.

Pension and Other Postretirement Benefits Plans

The measurement of liabilities related to pension plans and other postretirement benefits plans is based on assumptions related to future events including interest rates, return on plan assets, rate of compensation increases, and health care cost trend rates. Actual plan asset performance will either reduce or increase losses included in accumulated other comprehensive loss, which ultimately affects net income.

The discount rate for United States plans was determined by discounting the expected future benefit payments using a theoretical zero-coupon spot yield curve derived from a universe of high-quality bonds as of the measurement date and solving for the single rate that generated the same benefit obligation. Only corporate bonds with a rating of Aa by either Moody's or Standard & Poor's were included. Callable bonds that are not make-whole bonds and certain other non-comparable bonds were eliminated. Finally, a subset of bonds was selected by grouping the universe of bonds by duration and retaining 50% of the bonds that had the highest yields.

The discount rates for non-United States plans were determined by region and are based on high quality long-term corporate and government bonds. Consideration has been given to the duration of the liabilities in each plan when selecting the bonds to be used in determining the discount rate.

To estimate the service and interest cost components of net periodic benefit cost for the vast majority of its defined benefits pension and other postretirement benefits plans, the Company used a spot rate approach by applying the specific spot rates along the yield curve used to measure the benefit obligation at the beginning of the period to the relevant projected cash flows.

Key assumptions used to calculate pension and other postretirement benefits expense are adjusted at each year-end. A 1-percentage point change in the assumed rate of return on pension plan assets is estimated to have approximately a $50 effect on pension expense. Likewise, a 1-percentage point change in the discount rate is estimated to have approximately a $70 effect on pension expense. A 1-percentage point change in the assumed rate of return on other postretirement benefits assets is estimated to have less than $1 effect on other postretirement benefits expense. A 1-percentage point change in the discount rate is estimated to have approximately a $1 effect on expense for other postretirement benefits plans.

Additional information related to changes in key assumptions used to recognize expense for other postretirement benefits plans is found in Note 9.

MARKET RISK DISCLOSURE

On a regular basis, Eaton monitors third-party depository institutions that hold its cash and short-term investments, primarily for safety of principal and secondarily for maximizing yield on those funds. The Company diversifies its cash and short-term investments among counterparties to minimize exposure to any one of these entities. Eaton also monitors the creditworthiness of its customers and suppliers to mitigate any adverse impact.

Eaton uses derivative instruments to manage exposure to volatility in raw material costs, currency, and interest rates on certain debt instruments. Derivative financial instruments used by the Company are straightforward and non-leveraged. The counterparties to these instruments are financial institutions with strong credit ratings. Eaton maintains control over the size of positions entered into with any one counterparty and regularly monitors the credit rating of these institutions. See Note 15 for additional information about hedges and derivative financial instruments.

Eaton’s ability to access the commercial paper market, and the related cost of these borrowings, is based on the strength of its credit rating and overall market conditions. While the COVID-19 pandemic temporarily challenged commercial paper markets in mid-March 2020, those markets have since recovered such that Eaton continues to be able to access them on the same basis as in prior periods. At December 31, 2020, Eaton had $2,000 of long-term revolving credit facilities with banks in support of its commercial paper program. It has no borrowings outstanding under these credit facilities.

Interest rate risk can be measured by calculating the short-term earnings impact that would result from adverse changes in interest rates. This exposure results from short-term debt, which includes commercial paper at a floating interest rate, long-term debt that has been swapped to floating rates, and money market investments that have not been swapped to fixed rates. Based upon the balances of investments and floating rate debt at year end 2020, a 100 basis point increase in short-term interest rates would have increased the Company’s net, pre-tax interest expense by $14.

Eaton also measures interest rate risk by estimating the net amount by which the fair value of the Company’s financial liabilities would change as a result of movements in interest rates. Based on Eaton’s best estimate for a hypothetical, 100 basis point increase in interest rates at December 31, 2020, the market value of the Company’s debt and interest rate swap portfolio, in aggregate, would increase by $502.

The Company is exposed to fluctuations in commodity prices due to volatility in raw material costs and contractual agreements with suppliers. To partially mitigate this exposure, Eaton enters into commodity contracts for certain raw material purchases with the objective of minimizing changes in inventory cost due to market price fluctuations. These commodity contracts are designated for hedge accounting and are generally less than one year in duration. Based on Eaton’s best estimate for a hypothetical 10% fluctuation in commodity prices the gain or loss would be $2. The sensitivity analysis of the effects of changes in commodity prices assumes the notional value to remain constant for the next 12 months. Any change in the value of the contracts would be offset by an inverse change in the value of the underlying hedged transactions.

The Company is exposed to currency risk associated with translating its functional currency financial statements into its reporting currency, which is the U.S. dollar. As a result, the Company is exposed to movements in the exchange rates of various currencies against the U.S. dollar. Eaton also monitors exposure to transactions denominated in currencies other than the functional currency of each country in which the Company operates, and regularly enters into forward contracts to mitigate that exposure. In the aggregate, Eaton’s portfolio of forward contracts related to such transactions was not material to its Consolidated Financial Statements.

CONTRACTUAL OBLIGATIONS

A summary of contractual obligations as of December 31, 2020 follows:

	2021	2022 to 2023	2024 to 2025	Thereafter	Total
Long-term debt, including current portion[1]	$ 1,037	$ 2,000	$ 1,500	$ 3,374	$ 7,911
Interest expense related to long-term debt	238	397	314	1,483	2,432
Reduction of interest expense from interest rate swap agreements related to long-term debt	(46)	(47)	(12)	(33)	(138)
Operating leases	129	181	84	91	485
Finance leases	10	14	7	11	42
Purchase obligations	830	158	77	197	1,262
Other obligations	369	9	10	21	409
Held for sale obligations	38	37	7	17	99
Total	$ 2,605	$ 2,749	$ 1,987	$ 5,161	$ 12,502

[1] Long-term debt excludes deferred gains and losses on derivatives related to debt, adjustments to fair market value, premiums and discounts on long-term debentures, debt issuance costs, and finance leases.

Interest expense related to long-term debt is based on the applicable interest rate related to the debt instrument, whether fixed or floating. The reduction of interest expense due to interest rate swap agreements related to long-term debt is based on the difference in the fixed interest rate the Company receives from the swap, compared to the floating interest rate the Company pays on the swap. Purchase obligations are entered into with various vendors in the normal course of business. These amounts include commitments for purchases of raw materials, outstanding non-cancelable purchase orders, releases under blanket purchase orders, and commitments under ongoing service arrangements. Other obligations principally include $337 of anticipated contributions to pension plans in 2021, $25 of other postretirement benefits payments expected to be paid in 2021, and $44 of deferred compensation earned under various plans for which the participants have elected to receive disbursement at a later date. The table above does not include all other future expected pension and other postretirement benefits payments. Information related to the amounts of these future payments is described in Note 9. The table above also excludes the liability for unrecognized income tax benefits, since the Company cannot predict with reasonable certainty the timing of cash settlements with the respective taxing authorities. At December 31, 2020, the gross liability for unrecognized income tax benefits totaled $1,036 and interest and penalties were $110.

FORWARD-LOOKING STATEMENTS

This Annual Report to Shareholders contains forward-looking statements concerning litigation and regulatory developments, expected pension or other post-retirement benefits payments and rates of return, the pending sale of our Hydraulics business, the pending acquisitions of Tripp Lite, Cobham Mission Systems, and a 50% stake in HuanYu High Tech, expected backlog recognition, expected restructuring charges, and expected future liquidity. These statements may discuss goals, intentions and expectations as to future trends, plans, events, results of operations or financial condition, or state other information relating to Eaton, based on current beliefs of management as well as assumptions made by, and information currently available to, management. Forward-looking statements generally will be accompanied by words such as “anticipate,” “believe,” “could,” “estimate,” “expect,” “forecast,” “guidance,” “intend,” “may,” “possible,” “potential,” “predict,” “project” or other similar words, phrases or expressions. These statements should be used with caution and are subject to various risks and uncertainties, many of which are outside Eaton’s control. The following factors could cause actual results to differ materially from those in the forward-looking statements: the course of the COVID-19 pandemic and government responses thereto; unanticipated changes in the markets for the Company’s business segments; unanticipated downturns in business relationships with customers or their purchases from us; the availability of credit to customers and suppliers; competitive pressures on sales and pricing; unanticipated changes in the cost of material and other production costs, or unexpected costs that cannot be recouped in product pricing; the introduction of competing technologies; unexpected technical or marketing difficulties; unexpected claims, charges, litigation or dispute resolutions; strikes or other labor unrest; the impact of acquisitions and divestitures; unanticipated difficulties integrating acquisitions; new laws and governmental regulations; interest rate changes; tax rate changes or exposure to additional income tax liability; stock market and currency fluctuations; war, natural disasters, civil or political unrest or terrorism; and unanticipated deterioration of economic and financial conditions in the United States and around the world. Eaton does not assume any obligation to update these forward-looking statements.

QUARTERLY DATA (unaudited)

(In millions except for per share data)	Quarter ended in 2020 Dec. 31	Sept. 30	June 30	Mar. 31	Quarter ended in 2019 Dec. 31	Sept. 30	June 30	Mar. 31
Net sales	$ 4,687	$ 4,526	$ 3,856	$ 4,789	$ 5,238	$ 5,314	$ 5,533	$ 5,305
Gross profit	1,509	1,475	979	1,487	1,682	1,802	1,836	1,732
Percent of net sales	32.2 %	32.6 %	25.4 %	31.1 %	32.1 %	33.9 %	33.2 %	32.6 %
Income before income taxes	553	525	47	621	532	718	738	603
Net income	476	447	54	438	453	602	636	522
Less net (income) loss for noncontrolling interests	(1)	(1)	(3)	—	(1)	(1)	—	—
Net income attributable to Eaton ordinary shareholders	$ 475	$ 446	$ 51	$ 438	$ 452	$ 601	$ 636	$ 522
Net income per share attributable to Eaton ordinary shareholders								
Diluted	$ 1.18	$ 1.11	$ 0.13	$ 1.07	$ 1.09	$ 1.44	$ 1.50	$ 1.23
Basic	1.19	1.11	0.13	1.07	1.09	1.44	1.51	1.23
Cash dividends declared per ordinary share	$ 0.73	$ 0.73	$ 0.73	$ 0.73	$ 0.71	$ 0.71	$ 0.71	$ 0.71

Earnings per share for the four quarters in a year may not equal full year earnings per share.

Acquisition and divestiture charges, and restructuring program charges included in Income before income taxes are as follows:

	Quarter ended in 2020 Dec. 31	Sept. 30	June 30	Mar. 31	Quarter ended in 2019 Dec. 31	Sept. 30	June 30	Mar. 31
Acquisition integration and divestiture charges, and gain on the sale of the Lighting business	$ 25	$ 28	$ 103	$ (89)	$ 133	$ 39	$ 14	$ 12
Restructuring program charges	17	10	187	—	—	—	—	—

FIVE-YEAR CONSOLIDATED FINANCIAL SUMMARY (unaudited)

(In millions except for per share data)	2020	2019	2018	2017	2016
Net sales	$17,858	$21,390	$21,609	$20,404	$19,747
Income before income taxes	1,746	2,591	2,424	3,368	2,118
Net income	1,415	2,213	2,146	2,986	1,919
Less net income for noncontrolling interests	(5)	(2)	(1)	(1)	(3)
Net income attributable to Eaton ordinary shareholders	$ 1,410	$ 2,211	$ 2,145	$ 2,985	$ 1,916
Net income per share attributable to Eaton ordinary shareholders					
Diluted	$ 3.49	$ 5.25	$ 4.91	$ 6.68	$ 4.20
Basic	3.51	5.28	4.93	6.71	4.21
Weighted-average number of ordinary shares outstanding					
Diluted	404.0	420.8	436.9	447.0	456.5
Basic	402.2	419.0	434.3	444.5	455.0
Cash dividends declared per ordinary share	$ 2.92	$ 2.84	$ 2.64	$ 2.40	$ 2.28
Total assets [1]	$31,824	$32,805	$31,092	$32,623	$30,476
Long-term debt	7,010	7,819	6,768	7,167	6,711
Total debt	8,058	8,322	7,521	7,751	8,277
Eaton shareholders' equity	14,930	16,082	16,107	17,253	14,954
Eaton shareholders' equity per ordinary share	$ 37.50	$ 38.91	$ 38.02	$ 39.22	$ 33.28
Ordinary shares outstanding	398.1	413.3	423.6	439.9	449.4

[1] Total assets in 2020 and 2019 reflect the adoption of Accounting Standard Update 2016-02, Leases, and prior periods were not restated.

Eaton Corporation plc
2020 Annual Report on Form 10-K
Item 15(b)
Exhibit 31.1
Certification

I, Craig Arnold, certify that:

1. I have reviewed this annual report on Form 10-K of Eaton Corporation plc;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
   a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
   b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
   c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
   d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent functions):
   a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
   b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 24, 2021

/s/ Craig Arnold

Craig Arnold
Principal Executive Officer

Eaton Corporation plc
2020 Annual Report on Form 10-K
Item 15(b)
Exhibit 31.2
Certification

I, Richard H. Fearon, certify that:

1. I have reviewed this annual report on Form 10-K of Eaton Corporation plc;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant’s other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
   a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
   b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
   c) Evaluated the effectiveness of the registrant’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
   d) Disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and
5. The registrant’s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant’s auditors and the audit committee of registrant’s board of directors (or persons performing the equivalent functions):
   a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant’s ability to record, process, summarize and report financial information; and
   b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant’s internal control over financial reporting.

Date: February 24, 2021

/s/ Richard H. Fearon
Richard H. Fearon
Principal Financial Officer

Eaton Corporation plc
2020 Annual Report on Form 10-K
Item 15(b)
Exhibit 32.1
Certification

This written statement is submitted in accordance with Section 906 of the Sarbanes-Oxley Act of 2002. It accompanies Eaton Corporation plc's Annual Report on Form 10-K for the year ended December 31, 2020 ("10-K Report").

I hereby certify that, based on my knowledge, the Report on Form 10-K fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C 78m), and information contained in the 10-K Report fairly presents, in all material respects, the financial condition and results of operations of Eaton Corporation plc and its consolidated subsidiaries.

Date: February 24, 2021

/s/ Craig Arnold
Craig Arnold
Principal Executive Officer

Eaton Corporation plc
2020 Annual Report on Form 10-K
Item 15(b)
Exhibit 32.2
Certification

This written statement is submitted in accordance with Section 906 of the Sarbanes-Oxley Act of 2002. It accompanies Eaton Corporation plc's Annual Report on Form 10-K for the year ended December 31, 2020 ("10-K Report").

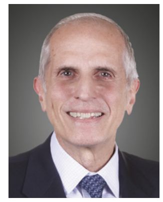
I hereby certify that, based on my knowledge, the Report on Form 10-K fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C 78m), and information contained in the 10-K Report fairly presents, in all material respects, the financial condition and results of operations of Eaton Corporation plc and its consolidated subsidiaries.

Date: February 24, 2021	/s/ Richard H. Fearon
	Richard H. Fearon
	Principal Financial Officer

Eaton directors As of March 1, 2021

Craig Arnold [5*]
Chairman and Chief Executive Officer

Christopher M. Connor [2, 4, 5]
Retired Chairman and Chief Executive Officer, The Sherwin-Williams Company, Cleveland, Ohio, a global manufacturer of paint, architectural coatings, industrial finishes and associated supplies



Michael J. Critelli [2, 3]
Retired Chairman and Chief Executive Officer, Pitney Bowes Inc., Stamford, Connecticut, a global mailstream solutions company

Richard H. Fearon
Vice Chairman and Chief Financial and Planning Officer, Eaton Corporation

Olivier Leonetti [1, 4]
Executive Vice President and Chief Financial Officer, Johnson Controls International plc, Cork, Ireland, a global leader in building technology and connected solutions for fire, HVAC and security equipment for buildings

Deborah L. McCoy [1, 4]
Independent Consultant. Former Senior Vice President, Flight Operations, Continental Airlines Inc., Houston, Texas, a commercial airline

Silvio Napoli [2, 4]
Executive Chairman of the Board of Directors, Schindler Holding Ltd., Hergiswil, Switzerland, a global provider of elevators, escalators and related services

Gregory R. Page [2*, 3, 5]
Retired Chairman and Chief Executive Officer, Cargill Incorporated, Minneapolis, Minnesota, an international marketer, processor and distributor of agricultural, food, financial and industrial products and services

Sandra Pianalto [1, 3*, 5]
Retired President and Chief Executive Officer, Federal Reserve Bank of Cleveland, Cleveland, Ohio

Lori J. Ryerkerk [2, 3]
Chairman, Chief Executive Officer and President, Celanese Corporation, Irving, Texas, a global chemical and specialty materials company

Gerald B. Smith [1*, 3, 5]
Chairman and Chief Executive Officer, Smith, Graham & Company, Houston, Texas, an investment advisory firm

Dorothy C. Thompson [1, 4*, 5]
Retired Chief Executive, Drax Group plc, London, England, a power generation company

1 Audit Committee
2 Compensation and Organization Committee
3 Finance Committee
4 Governance Committee
5 Executive Committee
* Denotes Committee Chair

> Over the course of the year, Eaton demonstrated we are a company that leads by its values and will continue to do so, no matter what challenges lie ahead.
>
> – Craig Arnold, Chairman and CEO

Eaton global leadership team As of March 1, 2021

Craig Arnold
Chairman and Chief Executive Officer

Richard H. Fearon
Vice Chairman and Chief Financial and Planning Officer

Heath B. Monesmith
President and Chief Operating Officer, Industrial Sector

Uday Yadav
President and Chief Operating Officer, Electrical Sector

Brian S. Brickhouse
President, Americas Region, Electrical Sector

Nandakumar Cheruvatath
President, Aerospace Group

Timothy N. Darkes
President, Europe, Middle East and Africa Region, Corporate and Electrical Sector

João V. Faria
President, Vehicle Group

Scott Hearn
President, Global Crouse-Hinds, B-Line and Oil and Gas Organization, Electrical Sector

Howard Liu
President, Asia-Pacific Region, Electrical Sector and China Corporate

Paulo Ruiz Sternadt
President, Hydraulics Group

April Miller Boise
Executive Vice President and General Counsel

Rogerio Branco
Executive Vice President, Supply Chain Management

Mary Kim Elkins
Senior Vice President, Taxes

Yan Jin
Senior Vice President, Investor Relations

Harold V. Jones
Executive Vice President, Eaton Business System and Sustainability

Raja Ramana Macha
Executive Vice President and Chief Technology Officer

Ernest W. Marshall Jr.
Executive Vice President and Chief Human Resources Officer

John J. Matejka
Senior Vice President, Internal Audit

Kirsten M. Park
Senior Vice President, Treasury

Eaton global leadership team

Katrina R. Redmond
Senior Vice President and Chief Information Officer

Joe Rodgers
Senior Vice President, Ethics and Compliance

Harpreet Saluja
Senior Vice President, Corporate Development and Planning

Ken D. Semelsberger
Senior Vice President and Controller

Taras G. Szmagala Jr.
Senior Vice President, Public and Community Affairs and Corporate Communications

Aravind Yarlagadda
Executive Vice President and Chief Digital Officer

2020 recognitions

100 Best Corporate Citizens
3BL Media

Carbon Clean 200
Clean 200

CIO 100 Award for excellence in augmented reality
CIO

Top 100 Global Innovators
Derwent

World's Most Ethical Companies
Ethisphere Magazine

America's Best Employers by State
Forbes

America's Best Employers for Women
Forbes

World's Most Admired Companies
Fortune

FTSE4Good Index Series
FTSE Russell

Best Place to Work for LGBTQ Equality
Human Rights Campaign

All-America Executive Team
Institutional Investor Magazine

2021 Rankings of America's Most JUST Companies
JUST Capital

Military Friendly® Silver Employer
Military Friendly

Top 50 Employers in STEM
Workforce Diversity Magazine

Top 10 Employers
Woman Engineer Magazine

THERE IS NO BETTER TIME THAN NOW

to be an intelligent power management company.

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