

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 fiscal year ended September 30, 2022

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the transition period from _____ to _____
Commission file number 1-278

EMERSON ELECTRIC CO.

(Exact name of registrant as specified in its charter)

Missouri

(State or other jurisdiction of
incorporation or organization)

8000 W. Florissant Ave.

P.O. Box 4100

St. Louis, Missouri

(Address of principal executive offices)

43-0259330

(I.R.S. Employer
Identification No.)



63136

(Zip Code)

Registrant's telephone number, including area code: (314) 553-2000

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock of \$0.50 par value per share	EMR	New York Stock Exchange NYSE Chicago
0.375% Notes due 2024	EMR 24	New York Stock Exchange
1.250% Notes due 2025	EMR 25A	New York Stock Exchange
2.000% Notes due 2029	EMR 29	New York Stock Exchange

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

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

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

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

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

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

Large accelerated filer ☒
Non-accelerated filer ☐

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 issues 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 ☒

Aggregate market value of the voting stock held by nonaffiliates of the registrant as of close of business on March 31, 2022: \$58.1 billion.

Common stock outstanding at October 31, 2022: 591.4 million shares.

Documents Incorporated by Reference

1. Portions of Emerson Electric Co. Notice of 2023 Annual Meeting of Shareholders and Proxy Statement incorporated by reference into Part III hereof.
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PART I

ITEM 1 - BUSINESS

Emerson ("the Company") is a global leader that designs and manufactures products and delivers services that bring technology and engineering together to provide innovative solutions for customers in a wide range of industrial, commercial and consumer markets around the world. Our purpose is to drive innovation that makes the world healthier, safer, smarter and more sustainable. Sales by geographic destination in 2022 were: the Americas, 56 percent; Asia, Middle East & Africa, 28 percent (China, 12 percent); and Europe, 16 percent.

Portfolio management is an integral component of Emerson's growth and value creation strategy. Over the past 18 months, Emerson has taken significant actions to accelerate the transformation of its portfolio through the completion of strategic acquisitions and divestitures of non-core businesses. These actions were undertaken to create a higher growth and cohesive industrial technology portfolio as a global automation leader serving a diversified set of end markets with differentiated capabilities in intelligent devices and software. The Company's recent portfolio actions include the following transactions.

- On October 31, 2022, the Company announced an agreement to sell a majority stake in its Climate Technologies business (which constitutes the Climate Technologies segment, excluding Therm-O-Disc which was divested earlier in fiscal 2022) to private equity funds managed by Blackstone ("Blackstone") in a transaction valued at \$14.0 billion. Emerson will receive upfront, pre-tax cash proceeds of approximately \$9.5 billion and a note of \$2.25 billion at close, while retaining a 45 percent non-controlling common equity ownership interest in a new standalone joint venture between Emerson and Blackstone. The Climate Technologies business, which includes the Copeland compressor business and the entire portfolio of products and services across all residential and commercial HVAC and refrigeration end-markets, had fiscal 2022 net sales of approximately \$5.0 billion. The transaction is expected to close in the first half of calendar year 2023, subject to regulatory approvals and customary closing conditions. Please refer to our Current Report on Form 8-K, dated October 31, 2022, for additional information.
- On October 31, 2022, the Company completed the divestiture of its InSinkErator business, which manufactures food waste disposers, to Whirlpool Corporation for \$3.0 billion. This business had fiscal 2022 net sales of \$630 million and is reported in the Tools & Home Products segment.
- On May 16, 2022, the Company completed the combination of two of its stand-alone industrial software businesses, Open Systems International, Inc. and the Geological Simulation Software business (collectively, the "Emerson Industrial Software Business") with Aspen Technology, Inc. ("Heritage AspenTech") to create "New AspenTech", a diversified, high-performance industrial software leader with greater scale, capabilities and technologies (hereinafter referred to as "AspenTech"). The Company contributed the Emerson Industrial Software Business and \$6.0 billion in cash to Heritage AspenTech stockholders and upon closing of the transaction owned 55 percent of the outstanding shares of AspenTech common stock (on a fully diluted basis). On a pro forma basis, AspenTech had fiscal 2022 net sales of \$1.1 billion.
- On July 27, 2022, AspenTech entered into an agreement to acquire Micromine, a global leader in design and operational solutions for the mining industry, for AU \$900 (approximately \$623 USD based on exchange rates when the transaction was announced). The transaction is expected to close by the end of calendar 2022, subject to various regulatory approvals.
- On May 31, 2022, the Company completed the divestiture of its Therm-O-Disc sensing and protection technologies business, which was reported in the Climate Technologies segment, to an affiliate of One Rock Capital Partners, LLC.

Further information regarding acquisition and divestiture activity is set forth in Note 4.

For fiscal year 2022, the Company reported four segments: **Automation Solutions**; **AspenTech**; and **Climate Technologies** and **Tools & Home Products**, which together comprise the **Commercial & Residential Solutions** business. A summary of the Company's businesses is described below.

- Automation Solutions - enables process, hybrid and discrete manufacturers to maximize production, protect personnel and the environment, and optimize their energy efficiency and operating costs through a broad

offering of products and integrated solutions, including measurement and analytical instrumentation, industrial valves and equipment, and process control software and systems.

- AspenTech - provides asset optimization software that enables industrial manufacturers to design, operate, and maintain their operations for maximum performance, creating value through improved operational efficiency and productivity, reduced downtime and safety risks, and minimizing energy consumption and emissions.
- Commercial & Residential Solutions - provides products and solutions that promote energy efficiency and sustainability, enhance household and commercial comfort, and protect food quality and sustainability through heating, air conditioning and refrigeration technology, as well as a broad range of tools that promote safety and productivity.

The Company sells products and solutions that support customers in a variety of end markets. Overall, sales by end market were as follows: Commercial, 19 percent; residential, 16 percent; energy, 15 percent; chemical, 10 percent; power & renewables, 9 percent; general industries, 9 percent; discrete, 8 percent; hybrid, 6 percent; other, 8 percent.

Emerson was incorporated in Missouri in 1890 and has evolved through internal growth and strategic acquisitions. Management has a well-established set of operating mechanisms to manage its business performance and set strategy. The Company also has processes undertaken by management with oversight from the Board of Directors to specifically focus on risks in areas such as cybersecurity, compliance, legal, environmental, financial and reputational, among others. The Company periodically updates, assesses, and monitors its risk exposures, provides timely updates to the Board, and takes actions to mitigate these risks.

All Note references in this document refer to Notes to Consolidated Financial Statements set forth in Item 8 of this Annual Report on Form 10-K, which notes are hereby incorporated by reference. See also Item 1A - "Risk Factors" and Item 7 - "Management's Discussion and Analysis of Financial Condition and Results of Operations."

AUTOMATION SOLUTIONS

The Automation Solutions segment offers a broad array of products, integrated solutions, software and services which enable process, hybrid and discrete manufacturers to maximize production, protect personnel and the environment, reduce project costs, and optimize their energy efficiency and operating costs. Markets served include energy, chemical, power & renewables, life sciences, food and beverage, automotive, pulp and paper, metals and mining, and municipal water supplies. The segment's major product offerings are Measurement & Analytical Instrumentation, Valves, Actuators & Regulators, Industrial Solutions and Systems & Software, which are further described below.

Across these product offerings, Automation Solutions offers the Plantweb™ Digital Ecosystem, a comprehensive Industrial Internet of Things (IIoT) architecture that provides remote monitoring by combining intelligent field sensors, communication gateways and controllers, software, and complementary partner technologies. This IIoT architecture delivers measurable business performance improvements to customers by providing insights into production performance, energy consumption, reliability of specific equipment or process units, and safety. Together with the broad offering of products and integrated solutions, Automation Solutions also provides a portfolio of services and lifecycle service centers which offer consulting, engineering, systems development, project management, training, maintenance, and troubleshooting expertise to aid in process optimization. Sales by geographic destination in 2022 for Automation Solutions were: the Americas, 47 percent; Asia, Middle East & Africa, 35 percent (China, 15 percent); and Europe, 18 percent.

Measurement & Analytical Instrumentation

Measurement instrumentation measures the physical properties of liquids or gases in a process stream, such as pressure, temperature, level, rate and amount of flow, and communicates this information to a process control system or other software applications. Measurement technologies provided by the Company include Coriolis direct mass flow, magnetic flow, vortex flow, ultrasonic flow, differential pressure, ultra-low flow fluid measurement, corrosion measurement, acoustic measurement, temperature sensors, radar-based tank gauging and magnetic level gauging. The Company's measurement products are often used in custody transfer applications, such as the transfer of gasoline from a storage tank to a tanker truck, where precise metering of the amount of fluid transferred

helps ensure accurate asset management. Complementary products include onshore and subsea multi-phase meters, wet gas meters, downhole gauges and corrosion/erosion measuring instruments.

Analytical instrumentation analyzes the chemical composition of process fluids and emissions to enhance quality and efficiency, as well as environmental compliance. The Company's analytical technologies include process gas chromatographs, in-situ oxygen analyzers, infrared gas and process fluid analyzers, combustion analyzers and systems, and analyzers that measure pH, conductivity and water quality. The Company provides sensors to detect combustible and toxic gases, and flames. These devices support the safety of both people and process plant assets.

Measurement and analytical instrumentation technologies are also available with highly secure and reliable wireless communication capability, allowing customers to monitor processes or equipment that were previously not measurable (remote, moving/rotating) or not economical to measure due to the high cost and difficulty of running wires in industrial process plants.

Valves, Actuators & Regulators

The primary role of an industrial valve is to control, isolate, or regulate the flow of liquids or gases to achieve safe operation along with reliability and optimized performance.

Control, isolation and pressure relief valves respond to commands from a control system to continuously and precisely modulate the flow of process fluids and gases. Engineered on/off valves are typically used to achieve tight shutoff, even in high-pressure and high-temperature processes. The Company designs, engineers and manufactures ball, gate, globe, check, sliding stem, rotary, high performance butterfly, triple offset, and severe services valves for critical applications. The Company also designs and manufactures sophisticated smart actuation and control technologies that continuously monitor valve health and remotely control valve positions to foster proactive and predictive maintenance as well as decrease the risk of unplanned shutdowns.

The Company provides pressure management products, including pressure relief, vacuum relief, and gauge valves designed to control fugitive emissions. The Company also supplies a line of industrial and residential regulators, whose function is to reduce the pressure of fluids and gases moving from high-pressure supply lines into lower pressure systems, and also manufactures tank and terminal safety equipment, including hatches, vent pressure and vacuum relief valves, and flame arrestors for storage tanks in the oil and gas, petrochemical, refining and other process industries.

Industrial Solutions

Industrial Solutions include fluid control and pneumatic mechanisms, electrical distribution equipment, materials joining solutions and precision cleaning products which are used in a variety of manufacturing operations to provide integrated solutions to customers. Pneumatic products transform air or gas into energy and power for use in manufacturing operations such as food processing and packaging, life sciences and petrochemical processing. Products include solenoid and pneumatic valves, valve position indicators, pneumatic cylinders and actuators, air preparation equipment, and pressure, vacuum, temperature switches and automobile assembly. Electrical distribution consists of a broad line of components for current- and noncurrent-carrying electrical distribution devices, including conduit and cable fittings, plugs and other receptacles, industrial lighting, enclosures and controls. Electrical distribution products are used in hazardous, industrial and commercial environments, such as oil and gas drilling and production sites, petrochemical plants and commercial buildings. Plastic and metal joining technologies and equipment are supplied to a diversified manufacturing customer base, including automotive, medical devices, business and consumer electronics, and textile manufacturing. The Company also provides precision cleaning and liquid processing solutions to industrial and commercial manufacturers. Products include ultrasonic joining and cleaning equipment; linear and orbital vibration welding equipment; systems for hot plate, spin and laser welding; and aqueous, semi-aqueous and vapor cleaning systems.

Systems & Software

The Company provides process control systems and software that control plant processes by collecting and analyzing information from measurement devices in the plant and using that information to adjust valves, pumps, motors, drives and other control hardware for maximum product quality and process efficiency and safety. Software capabilities also include life sciences operations management, upstream oil and gas reservoir simulation and

production optimization modeling, pipeline and terminal management, operations management simulation, and training systems. The Company's process control systems can be extended wirelessly to support a mobile workforce with handheld tools/communicators, provide site-wide location tracking of people and assets, and enable video monitoring and communication with wireless field devices, thereby increasing the information available to operators.

Distribution

The principal worldwide distribution channel for Automation Solutions is a direct sales force, while a network of independent sales representatives, and to a lesser extent independent distributors purchasing products for resale, are also utilized. Approximately half of the sales in the United States are made through a direct sales force with the remainder primarily through independent sales representatives and distributors. In Europe and Asia, sales are primarily made through a direct sales force with the remainder split evenly between independent sales representatives and distributors.

Brands

Service/trademarks and trade names within (but not exclusive to) Automation Solutions include Emerson Automation Solutions, Appleton, ASCO, Aventics, Bettis, Branson, DeltaV, Fisher, Keystone, KTM, Micro Motion, Monarch, Ovation, Plantweb, Rosemount and Vanessa.

ASPENTECH

AspenTech is a global leader in asset optimization software that enables industrial manufacturers to design, operate, and maintain their operations for maximum performance. AspenTech combines decades of modeling, simulation, and optimization capabilities with industrial operations expertise and applies advanced analytics to improve the profitability and sustainability of production assets. The purpose-built software drives value for customers by improving operational efficiency and maximizing productivity, reducing unplanned downtime and safety risks, and minimizing energy consumption and emissions. Sales by geographic destination in 2022 for AspenTech were: the Americas, 55 percent; Asia, Middle East & Africa, 21 percent (China, 3 percent); and Europe, 24 percent.

Heritage AspenTech

Heritage AspenTech combines decades of modeling and operations expertise with big data, artificial intelligence, and advanced analytics. Heritage AspenTech's unique asset lifecycle approach and market-leading solutions help customers achieve new levels of efficiency, accelerate innovation and reduce emissions and waste, without compromising safety.

Heritage AspenTech develops software applications to design and optimize industrial operations across three principal business areas: engineering, manufacturing and supply chain, and asset performance management. Customers use the solutions to help advance sustainability technology pathways in improving resource efficiencies, such as energy, water or feedstock; supporting energy transition and decarbonization initiatives, including integrating renewable and alternative energy sources, such as biofuels; innovating new approaches for the hydrogen economy and carbon capture; and, enabling recycling efficiencies for waste reduction throughout operations with advanced simulation and scale-up solutions.

OSI Business (Digital Grid Management)

The OSI business offers operational technology (OT) solutions that enable electric, gas, and water utilities and asset operators to manage and optimize the digital grid, incorporating all types of generation, industrial cogeneration, transmission, distribution, and microgrids.

The OSI business' energy management solution (EMS) monitors, controls, and optimizes the increasingly interconnected transmission networks and generation fleets to manage grid stability and ensure security and regulatory compliance. Its advanced distribution management solution (ADMS), distributed energy resource management solution (DERMS) and Outage Management offerings provide system resiliency, efficiency, and safety by monitoring, controlling and modeling the distribution network as utilities seek to increase reliability, predict and react to increasingly dynamic supply and demand patterns, resolve outages faster and in a more automated manner, and manage field service digitally. The Company acquired this business on October 1, 2020. See Note 4.

SSE Business Subsurface Science & Engineering

The SSE business provides geoscience and modeling software for optimization across subsurface engineering and operations. SSE software empowers decision makers to reduce uncertainty, improve confidence, minimize risk, and support responsible asset management. Used extensively by the global energy industry, SSE solutions also have applications that extend into geothermal energy and carbon capture and storage. The SSE business provides end-to-end workflows from seismic analysis and interpretation to reservoir and production simulation and from asset appraisal to operational planning and execution, to optimize production and utilization and minimize energy use, water use, and fugitive emissions. SSE software is also employed to screen and assess oil and saline aquifer reservoirs for CO2 sequestration and to monitor CO2 storage.

Acquisitions

As discussed above, AspenTech entered into an agreement in fiscal 2022 to acquire Micromine, a global leader in design and operational solutions for the mining industry, and the transaction is expected to close by the end of calendar 2022, subject to various regulatory approvals.

Distribution

The principal worldwide distribution channel for AspenTech is a direct sales force.

COMMERCIAL & RESIDENTIAL SOLUTIONS

The Commercial & Residential Solutions business consists of the Climate Technologies and Tools & Home Products segments, and provides products and solutions that promote energy efficiency and sustainability, enhance household and commercial comfort, and protect food quality and sustainability through heating, air conditioning and refrigeration technology, as well as a broad range of tools and appliance solutions. Sales by geographic destination in 2022 for Commercial & Residential Solutions were: the Americas, 71 percent; Asia, Middle East & Africa, 17 percent (China, 7 percent); and Europe, 12 percent.

CLIMATE TECHNOLOGIES

As discussed above, the Company completed the divestiture of its Therm-O-Disc sensing and protection technologies business on May 31, 2022 and on October 31, 2022, announced an agreement to sell a majority stake in its remaining Climate Technologies business to private equity funds managed by Blackstone, while retaining a 45 percent non-controlling common equity ownership interest in a new standalone joint venture between Emerson and Blackstone. The transaction with Blackstone is expected to close in the first half of calendar year 2023, subject to regulatory approvals and customary closing conditions.

The Climate Technologies segment, as reported for fiscal 2022, provides products and services for many areas of the climate control industry, including residential heating and cooling, commercial air conditioning, commercial and industrial refrigeration, and cold chain management. The Company's technologies enable homeowners and businesses to better manage their heating, air conditioning and refrigeration systems for improved control and comfort, and lower energy costs. Climate Technologies also provides services that digitally control and remotely monitor refrigeration units in grocery stores and other food distribution outlets to enhance food freshness and safety, as well as cargo and transportation monitoring solutions. Sales by geographic destination in 2022 for Climate Technologies were: the Americas, 67 percent; Asia, Middle East & Africa, 22 percent (China, 9 percent); and Europe, 11 percent.

Residential and Commercial Heating and Air Conditioning

The Company provides a full range of heating and air conditioning products that help reduce operational and energy costs and create comfortable environments in all types of buildings. These products include reciprocating and scroll compressors, including ultra-efficient residential scroll compressors with two stages of cooling capacity, as well as variable speed scroll compressors; system protector and flow control devices; standard, programmable and Wi-Fi thermostats; monitoring equipment and electronic controls for gas and electric heating systems; gas valves for furnaces and water heaters; and ignition systems for furnaces.

Commercial and Industrial Refrigeration

Commercial and industrial refrigeration technologies are incorporated into equipment to refrigerate food and beverages in supermarkets, convenience stores, food service operations, refrigerated trucks and refrigerated marine transport containers. Climate Technologies refrigeration products are also used in a wide variety of industrial applications, including medical applications, food processing and cold storage. Products include reciprocating, scroll and screw compressors; precision flow controls; system diagnostics and controls that provide precise temperature management; and environmental control systems. Transport and cargo monitoring solutions are also offered, which extend throughout the cold chain to ensure quality and safety as food travels from growers to processing and distribution facilities, and finally to retail points of sale.

Services and Solutions

Services and solutions provides air conditioning, refrigeration and lighting control technologies that enable global customers to optimize the performance of facilities, including large-scale retailers, supermarkets, convenience stores and food service operations. The Company's expertise allows customers to reduce energy and maintenance costs, thereby improving overall facility efficiency and uptime. In addition to industry-leading controls, services include facility design and product management, site commissioning, facility monitoring and energy modeling.

Distribution

Climate Technologies' sales, primarily to original equipment manufacturers and end users, are made predominantly through worldwide direct sales forces. Remaining sales are primarily through independent distributor networks throughout the world. Approximately one-third of this segment's sales are made to a small number of original equipment manufacturers.

Brands

Service/trademarks and trade names within (but not exclusive to) the Climate Technologies segment include Emerson Commercial & Residential Solutions, Emerson Climate Technologies, Copeland, CoreSense, Dixell, Lumity, ProAct, Sensi, Vilter and White-Rodgers.

TOOLS & HOME PRODUCTS

The Company's Tools & Home Products segment offers tools for professionals and homeowners that promote safety and productivity. Sales by geographic destination in 2022 for this segment were: the Americas, 80 percent; Asia, Middle East & Africa, 5 percent; and Europe, 15 percent.

As discussed above, on October 31, 2022, the Company completed the divestiture of its InSinkErator business, which manufactures food waste disposers, to Whirlpool Corporation.

Professional Tools

Pipe-working tools are used by plumbing and mechanical professionals to install and repair piping systems. Products include pipe wrenches, pipe cutters, pipe threading and roll grooving equipment, mechanical crimping tube joining systems, drain cleaners, tubing tools, and diagnostic systems, including closed-circuit television pipe inspection and locating equipment. Electrical tools are used by industry professionals for numerous tasks related to the installation of wire and cable, including bending, termination and hole-making. Other professional tools include water jetters, wet-dry vacuums, commercial vacuums and bolt cutters. The Company also offers do-it-yourself tools, available at retail home improvement outlets, which include drain cleaning equipment, pipe and tube working tools, and wet-dry vacuums.

Distribution

The principal worldwide distribution channels for Tools & Home Products are distributors and direct sales forces. Professional tools are sold worldwide almost exclusively through distributors.

Brands

Service/trademarks and trade names within (but not exclusive to) the Tools & Home Products segment include Emerson, Emerson Professional Tools, Greenlee, Klauke, ProTeam and RIDGID.

RAW MATERIALS

The Company's major requirements for basic raw materials include steel, copper, cast iron, electronics, rare earth metals, aluminum and brass; and to a lesser extent, plastics and petroleum-based chemicals. The Company seeks to have many sources of supply for each of its major requirements in order to avoid significant dependence on any one or a few suppliers. However, the supply of materials or other items could be disrupted by natural disasters or other events. In fiscal 2022, the Company continued to navigate supply chain disruptions and experienced higher freight costs. Electronic component availability was challenging and lead times stabilized at elevated levels. Despite these challenging conditions, the raw materials and various purchased components needed for the Company's products have generally been available in sufficient quantities. See Item 7 - "Management's Discussion and Analysis of Financial Condition and Results of Operations."

PATENTS, TRADEMARKS AND LICENSES

The Company maintains an intellectual property portfolio it has developed or acquired over a number of years, including patents, trademarks and licenses. The Company also continues to develop or acquire new intellectual property. New patent applications are continuously filed to protect the Company's ongoing research and development activities and the Company periodically reviews the continued utility of patent assets. The Company's trademark registrations may be renewed and their duration is dependent upon national laws and trademark use. While this proprietary intellectual property portfolio is important to the Company in the aggregate, management does not regard any of its segments as being dependent on any single patent, trademark registration or license.

BACKLOG

The Company's estimated consolidated order backlog was \$8.1 billion and \$6.5 billion at September 30, 2022 and 2021, respectively. Approximately 80 percent of the Company's consolidated backlog is expected to be recognized as revenue over the next 12 months, with the remainder substantially over the subsequent two years thereafter. Backlog by business at September 30, 2022 and 2021 follows (dollars in millions):

	2021	2022
Automation Solutions	\$ 5,098	5,807
AspenTech	328	1,042
Commercial & Residential Solutions	1,107	1,204
Total Backlog	\$ 6,533	8,053

The increase in backlog for the AspenTech segment in fiscal 2022 is related to the Heritage AspenTech acquisition.

COMPETITION

The Company's businesses operate in highly competitive markets. The Company competes based on product performance, quality, branding, service and/or price across the industries and markets served. A significant element of the Company's competitive strategy is to deliver solutions to our customers by manufacturing high-quality products at the best relevant global cost. Although no single company competes directly with Emerson in all of the Company's product lines, various companies compete in one or more product lines with the number of competitors varying by product line. Some competitors have substantially greater sales, assets and financial resources than Emerson and the Company also competes with many smaller companies. Management believes Emerson has a market leadership position in many of its product lines.

REGULATIONS

The Company's operations, products and services are subject to various government regulations, including environmental regulations. Our manufacturing locations generate waste, of which treatment, storage, transportation and disposal are subject to U.S. federal, state, foreign and/or local laws and regulations relating to protection of the

environment. The Company continually works to minimize the environmental impact of its operations through safe technologies, facility design and operating procedures. Compliance with government regulations, including environmental regulations, has not had, and based on current information and the applicable laws and regulations currently in effect, is not expected to have a material effect on the Company's capital expenditures (including expenditures for environmental control facilities), earnings or competitive position. However, laws and regulations may be changed, accelerated or adopted that impose significant operational restrictions and compliance requirements upon the Company and which could negatively impact our operating results. See Item 1A - "Risk Factors."

HUMAN CAPITAL RESOURCES

Emerson is dedicated to modernizing our workplace culture so our company can meet the needs and expectations of today's workers and attract talent that will help us thrive. We believe the Company's success depends on its ability to attract, develop and retain key personnel, and in 2021, we hired our first Chief People Officer, Elizabeth Adefioye, to help ensure the Company remains focused on this goal. The skills, experience and industry knowledge of key employees significantly benefit our operations and performance. The Company's Board of Directors and management oversee various employee initiatives.

The Company supports and develops its employees through global training and development programs that build and strengthen employees' leadership and professional skills. Leadership development programs include intensive learning programs for new leaders as well as more established leaders. The Company also partners with educational institutions and nonprofit organizations to help prepare current and future workers with the knowledge and skills they need to succeed. To assess and improve employee retention and engagement, the Company surveys employees with the assistance of third-party consultants, and takes actions to address areas of employee concern. Over 26,000 employees participated in our most recent surveys and overall gave high scores in our three focus areas: employee engagement, processes and procedures related to COVID-19 and diversity.

Employee health and safety in the workplace is also one of the Company's core values. The Corporate Safety Council oversees our safety efforts, supported by health and safety committees and leaders that operate at the local site level. Hazards in the workplace are actively identified and management tracks incidents so remedial actions can be taken to improve workplace safety. In fiscal 2022, the Company reduced its total recordable rate of injuries to 0.28, and its lost or restricted workday case rate was 0.17 (both measured as the number of incidents per 100 employees). The Company also continued to take appropriate actions throughout 2022 in response to the COVID-19 pandemic and to protect our workforce.

We have identified other human capital priorities, including, among other things, providing competitive wages and benefits and promoting an inclusive work environment. The Company is committed to efforts to elevate the representation of women and U.S. minorities and foster an inclusive work environment that supports our large global workforce and helps us innovate for our customers. Employee Resource Groups have been created to support our diverse workforce and have grown to nearly 12,000 members. We also have taken actions to enhance diversity, including setting diversity targets for interview slates and recruiting at venues representing women, minorities, U.S. military veterans, and LGBTQ+ talent. In 2021, the Company introduced diversity goals at the leadership level and in 2022, added ESG targets, including diversity targets, as a component in the determination of annual bonuses for leadership. Overall, women represent 31 percent of our U.S. workforce and on a global basis, 21 percent of leadership positions are held by women. In the U.S., minorities represent 30 percent of our workforce and 17 percent of our leadership positions.

Employee levels are managed to align with the pace of business and management believes it has sufficient human capital to operate its business successfully. The Company and its subsidiaries had approximately 85,500 employees at September 30, 2022. Management believes that the Company's employee relations are favorable.

A small portion of the Company's U.S. employees are unionized, while outside the U.S., we have employees in certain countries, particularly in Europe, that are represented by an employee representative organization, such as a union, works council or employee association.

ENVIRONMENTAL SUSTAINABILITY

Emerson's global purpose is to drive innovation that makes the world healthier, safer, smarter and more sustainable. Our environmental sustainability strategy is focused on driving progress within our facilities and helping our

customers achieve their ESG objectives. In 2021, we appointed Mike Train as Chief Sustainability Officer. This role, part of our Office of the Chief Executive, reflects our focus on sustainability across our company. Under his leadership, Emerson has made significant strides, and we are strengthening our leadership position as our customers and suppliers work to deliver their environmental targets.

In 2022, we set an ambitious target to achieve net zero greenhouse gas (GHG) emissions across our value chain by 2045 compared to a 2021 baseline. To set us on the right pathway, we will target net zero operations and a 25 percent reduction of our value chain emissions by 2030, also compared to a 2021 baseline. The Company also added ESG targets, including GHG reduction targets, as a component in the determination of annual bonuses for leadership in 2022.

Our environmental sustainability strategy is summarized by our “Greening Of, Greening By, Greening With” framework. **Greening Of Emerson** demonstrates our efforts to improve our internal environmental sustainability performance, including reducing our GHG emissions and energy and water consumption. **Greening By Emerson** is our approach to delivering technology, solutions and expertise (including through our software offerings) that support and enable our customers’ decarbonization and environmental sustainability efforts. **Greening With Emerson** reflects how we foster collaboration among stakeholders by participating in environmental sustainability industry forums, partnering to develop innovative solutions, and engaging with governments globally to support sustainability-related policies and regulations.

Emerson’s environmental sustainability initiatives and strategy are discussed further in our 2021 Environmental, Social and Governance Report, which can be found on our website at www.Emerson.com; this report is not incorporated by reference and should not be considered part of this Form 10-K.

INTERNET ACCESS

Emerson’s reports on Forms 10-K, 10-Q, 8-K and all amendments to those reports, as well as proxy statements, are available without charge through the Company’s website on the internet as soon as reasonably practicable after they are electronically filed with, or furnished to, the U.S. Securities and Exchange Commission (SEC). They may be accessed as follows: www.Emerson.com, Investors, SEC Filings. Information on the Company’s website does not constitute part of this Form 10-K.

The information set forth under Item 1A - “Risk Factors” is hereby incorporated by reference.

ITEM 1A - RISK FACTORS

Investing in our securities involves risks. You should carefully consider, among other matters, the factors set forth below and the other information in this report. The Company’s risk factors set forth below are not the only risks facing the Company. Additional risks and uncertainties not currently known to management or that management currently deems immaterial also may materially, adversely affect the Company’s business, financial condition or operating results. We may amend or supplement the risk factors set forth below from time to time by other reports we file with the SEC.

Business and Operational Risks

We Operate in Businesses That Are Subject to Competitive Pressures That Could Affect Prices or Demand for Our Products

Our businesses operate in markets that are highly competitive and potentially volatile, and we compete on the basis of product performance, quality, service and/or price across the industries and markets served. Our businesses are largely dependent on the current and future business environment, including capital and consumer spending. A significant element of our competitive strategy is to deliver solutions to our customers by manufacturing high-quality products at the best relevant global cost. Various companies compete with us in one or more product lines and the number of competitors varies by product line. Some of our competitors have substantially greater sales, assets and financial resources than our Company and we also compete with many smaller companies. Competitive pressures could adversely affect prices or customer demand for our products, impacting our sales or profit margins, and/or resulting in a loss of market share.

Our 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 We Will Continue to Successfully Introduce New Products and Services

The success of new and improved products and services depends on their initial and continued acceptance by our customers. Our businesses are affected by varying degrees of technological change and corresponding shifts in customer demand, which result in unpredictable product transitions, shortened life cycles and increased importance of being first to market with new products and services. We may experience difficulties or delays in the research, development, production and/or marketing of new products and services which may negatively impact our operating results and prevent us from recouping or realizing a return on the investments required to continue to bring new products and services to market.

We must anticipate and respond to market and technological changes driven by broader trends such as decarbonization and electrification efforts in response to climate change. Market growth from the use of cleaner energy sources, as well as emissions management, energy efficiency, lower greenhouse gas refrigerant usage, and decarbonization efforts are likely to depend in part on technologies not yet deployed or widely adopted today. We may not adequately innovate or position our businesses for the adoption of technologies such as battery storage solutions, hydrogen use cases in industry, mobility, and power generation, enhanced electrical grid demand management, carbon capture and sequestration or advanced nuclear power.

These trends and the relative competitiveness of our product and service offerings will continue to be impacted by uncertain factors such as the pace of technological developments and related cost considerations, the levels of economic growth in different markets around the world and the adoption of climate change-related policies such as carbon taxes, greenhouse gas emission reductions, incentives or mandates for particular types of energy, or policies that impact the availability of financing for certain types of projects.

If We Are Unable to Defend or Protect Our Intellectual Property Rights, the Company's Competitive Position Could Be Adversely Affected

The Company's intellectual property rights are important to its business and include numerous patents, trademarks, copyrights, trade secrets and other confidential information. This intellectual property may be subject to challenge, infringement, invalidation or circumvention by third parties. Despite extensive security measures, our intellectual property may be subject to misappropriation through unauthorized access of our information technology systems, employee theft, or other acts of industrial espionage. Should the Company be unable to adequately defend or protect its intellectual property, it may suffer competitive harm.

We Engage in Acquisitions and Divestitures, Which Are Subject to Domestic and Foreign Regulatory Requirements, and May Encounter Difficulties in Integrating and Separating These Businesses and Therefore We May Not Realize the Anticipated Benefits

We regularly seek growth through strategic acquisitions as well as evaluate our portfolio for potential divestitures. These activities require favorable environments to execute these transactions, and we may encounter difficulties in obtaining the necessary regulatory approvals in both domestic and foreign jurisdictions. In 2022 and in past years, we have made various acquisitions, including our majority stake in Aspen Technology, Inc., and entered into joint venture arrangements intended to complement or expand our business, and may continue to do so in the future. The success of these transactions will depend on our ability to integrate assets and personnel acquired in these transactions and to cooperate with our strategic partners. We may encounter difficulties in integrating acquisitions with our operations as well as separating divested businesses, and in managing strategic investments. Furthermore, we may not realize the degree, or timing, of benefits we anticipate when we first enter into a transaction. Any of the foregoing could adversely affect our business and results of operations.

Our Planned Sale of a Majority Stake in the Climate Technologies Business May Not Be Completed Within the Currently Contemplated Time Frame, With the Expected Terms or Costs, and May Not Achieve the Intended Benefits

We make no assurance regarding the terms, timing, costs or benefits anticipated from the planned sale of a majority stake in the Climate Technologies Business. Unforeseen developments, including possible delays in obtaining various tax, regulatory and other approvals, could delay the proposed transaction, or cause it to occur on terms and conditions that are less favorable, or at a higher cost, than expected.

Further, we may not realize some or all of the anticipated strategic, financial or other benefits of the planned sale. Moreover, after the transaction is completed, the Company will be smaller and less diversified, with a narrower business focus, including a focus on software, innovation and disruptive technologies, and may encounter more volatility and be more vulnerable to changing market conditions, which could adversely affect our business. We also may not be able to redeploy the net proceeds from our divestitures on the timing or with the benefits anticipated.

We Use a Variety of Raw Materials and Components in Our Businesses, and Significant Shortages or Price Increases Could Increase Our Operating Costs and Adversely Impact the Competitive Positions of Our Products

Our major requirements for raw materials include steel, copper, cast iron, electronics, rare earth metals, aluminum, brass and, to a lesser extent, plastics and petroleum-based chemicals. The Company seeks multiple sources of supply for each of its major requirements in order to avoid significant dependence on any one or a few suppliers. However, the supply of materials or other items could be disrupted by natural disasters, a health epidemic or pandemic, or other events. Significant shortages or price increases could impact the prices our affected businesses charge, their operating costs and the competitive position of their products and services, which could adversely affect our results of operations. While we monitor market prices of the commodities we require and attempt to mitigate price exposure through hedging activities, this risk could adversely affect our operating results.

Our Operations Depend on Production Facilities Throughout the World, a Majority of Which Are Located Outside the United States and Subject to Increased Risks of Disrupted Production, Causing Delays in Shipments and Loss of Customers and Revenue

We manage businesses with manufacturing facilities worldwide, a majority of which are located outside the United States, and also source certain materials globally. Emerging market sales represent over one-third of total sales and serving a global customer base requires that we place more materials sourcing and production in emerging markets to capitalize on market opportunities and maintain a best-cost position. Our and our suppliers' non-U.S. production facilities and operations could be disrupted by weather and natural disaster (including the potential effects of climate change), labor strife, war (including the Russia-Ukraine conflict), political unrest, terrorist activity or public health concerns such as an epidemic or pandemic, particularly in emerging countries that are not well-equipped to handle such occurrences.

Our manufacturing facilities abroad are dependent on the stability of governments and business conditions and may be more susceptible to changes in laws, policies and regulations in host countries, as well as economic and political upheaval, than our domestic facilities. These facilities face increased risks of nationalization as well as operational disruptions which could cause delays in shipments of products and the loss of sales and customers, and insurance proceeds may not adequately compensate us.

Access to Funding Through the Capital Markets is Essential to the Execution of Our Business Plan, and if We Are Unable to Maintain Such Access We Could Experience a Material Adverse Effect on Our Business and Financial Results

Our ability to invest in our businesses, make strategic acquisitions and refinance maturing debt obligations requires access to the capital markets and sufficient bank credit lines to support short-term borrowings. Volatility in the capital markets may increase costs associated with issuing commercial paper or other debt instruments, or affect the Company's ability to access those markets. If we are unable to continue to access the capital markets, we could experience a material adverse effect on our business and financial results. Additionally, if our customers, suppliers or financial institutions are unable to access the capital markets to meet their commitments to the Company, our business could be adversely impacted.

Our Business Success Depends on the Ability to Attract, Develop and Retain Key Personnel

Our success depends in part on the efforts and abilities of our management and key employees. Their skills, experience and industry knowledge significantly benefit our operations and performance. The failure to attract, develop and retain highly qualified personnel could adversely affect our ability to succeed in our human capital goals and priorities as well as negatively impact our business and operating results.

Security and/or Data Privacy Breaches, or Disruptions of Our Information Technology Systems Could Adversely Affect Our Business

The Company 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. 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; telecommunications or system failures; terrorist attacks; natural disasters; employee error or malfeasance; server or cloud provider breaches; and computer viruses or cyberattacks. Cybersecurity threats and incidents can range from uncoordinated individual attempts to gain unauthorized access to information technology networks and systems to more sophisticated and targeted measures, known as advanced persistent threats, directed at the Company, its products, its customers and/or its third-party service providers. Despite the implementation of cybersecurity measures (including access controls, data encryption, vulnerability assessments, continuous monitoring, and maintenance of backup and protective systems), the Company's information technology systems may still be vulnerable to cybersecurity threats and other electronic security breaches. It is possible for such vulnerabilities to remain undetected for an extended period. In addition, it is possible a security breach could result in theft of trade secrets or other intellectual property or disclosure of confidential customer, supplier or employee information. Should the Company be unable to prevent security breaches or other damage to our information technology systems, disruptions could have an adverse effect on our operations, as well as expose the Company to litigation, liability or penalties under privacy laws, increased cybersecurity protection costs, reputational damage and product failure. In addition, we must comply with increasingly complex and rigorous regulatory standards enacted to protect business and personal data in the U.S. and elsewhere. Compliance with privacy and localization laws and regulations increases operational complexity. Failure to comply with these regulatory standards could subject us to fines and penalties, as well as legal and reputational risks, including proceedings against the Company by governmental entities or others.

Our Products and Services are Highly Sophisticated and Specialized, and a Major Product Failure or Similar Event Caused by Defects, Cybersecurity Incidents or Other Failures, Could Adversely Affect Our Business, Reputation, Financial Position and Results of Operations

We produce highly sophisticated products and provide specialized services that incorporate or use complex or leading-edge technology, including both hardware and software. Many of our products and services, including measurement and analytical instrumentation, industrial valves and equipment, and process control systems, are integrated and used in complex process, hybrid and discrete manufacturing environments. As a result, the impact of a catastrophic product failure or similar event could be significant. While we have built operational processes to ensure that our product design, manufacture, performance and servicing meet rigorous quality standards, there can be no assurance that we or our customers or other third parties will not experience operational process or product failures and other problems, including through manufacturing or design defects, process or other failures of contractors or third-party suppliers, cybersecurity incidents or other intentional acts, that could result in potential product, safety, regulatory or environmental risks. Cybersecurity incidents aimed at the software embedded in our products could lead to third-party claims resulting from damages caused by our product failures, and this risk is enhanced by the increasingly connected nature of our products. The potential consequences of a material cybersecurity incident include financial loss, reputational damage, litigation with third parties, diminution in the value of our investment in research, development and engineering, and increased cybersecurity protection and remediation costs due to the increasing sophistication and proliferation of threats, which in turn could adversely affect our competitiveness and results of operations.

Industry and General Economic Risks

The Coronavirus (COVID-19) Outbreak Has Adversely Impacted our Business and Could in the Future Have a Material Adverse Impact on our Business, Results of Operation, Financial Condition and Liquidity, the Nature and Extent of Which is Highly Uncertain

The global outbreak of the coronavirus (COVID-19) has significantly increased economic, demand and operational uncertainty. We have global operations, customers and suppliers, including in countries most impacted by COVID-19. Authorities around the world have taken a variety of measures to slow the spread of COVID-19, including travel bans or restrictions, increased border controls or closures, quarantines, shelter-in-place orders and business shutdowns (particularly in China where shutdowns continue) and such authorities may impose additional restrictions. We have also taken actions to protect our employees and to mitigate the spread of COVID-19. Evolving

government plans around the world create uncertainty that may impact our employees and result in labor shortages and unforeseen costs, which could negatively affect our results. These actions have and may continue to impact our employees, customers and suppliers, and future developments could cause further disruptions to Emerson due to the interconnected nature of our business relationships.

The impact of COVID-19 on the global economy and our customers, as well as volatility in commodity markets (including oil prices) could result in further disruptions to our manufacturing operations, including higher rates of employee absenteeism, and supply chain, which could continue to negatively impact our ability to meet customer demand. Additionally, the potential deterioration and volatility of credit and financial markets could limit our ability to obtain external financing. The extent to which COVID-19 will impact our business, results of operations, financial condition or liquidity is highly uncertain and will depend on future developments, including the spread and duration of the virus and any variants, potential actions taken by governmental authorities, and how quickly economic conditions stabilize and recover.

Our Substantial Sales Both in the U.S. and Abroad Subject Us to Economic Risk as Our Results of Operations May Be Adversely Affected by Changes in Government Regulations and Policies and Currency Fluctuations

We sell, manufacture, engineer and purchase products globally, with significant sales in both mature and emerging markets. We expect sales in non-U.S. markets to continue to represent a significant portion of our total sales. Our U.S. and international operations subject the Company to changes in government regulations and policies in a large number of jurisdictions around the world, including those related to trade, investments, taxation, exchange controls and repatriation of earnings. Changes in laws or policies governing the terms of foreign trade, trade restrictions or barriers, tariffs or taxes, trade protection measures, and retaliatory countermeasures, including on imports from countries where we manufacture products, could adversely impact our business and financial results. In addition, changes in the relative values of currencies occur from time to time and have affected our operating results and could do so in the future. While we monitor our exchange rate exposures and attempt to mitigate this exposure through hedging activities, this risk could adversely affect our operating results.

Recessions, Adverse Market Conditions or Downturns in End Markets We Serve May Negatively Affect Our Operations

In the past, our operations have been exposed to significant volatility due to changes in general economic conditions or consumer preferences, recessions or adverse conditions in the end markets we serve. In the future, similar changes could adversely impact overall sales, operating results (including potential impairment charges for goodwill or other long-lived assets) and cash flows. Moreover, during economic downturns we may undertake more extensive restructuring actions, including workforce reductions, global facility consolidations, centralization of certain business support activities, and other cost reduction initiatives, and incur higher costs. As these plans and actions can be complex, the anticipated operational improvements, efficiencies and other benefits might be delayed or not realized.

Legal and Regulatory Risks

Changes in Tax Rates, Laws or Regulations and the Resolution of Tax Disputes Could Adversely Impact Our Financial Results

As a global company, we are subject to taxation in the U.S. and numerous non-U.S. jurisdictions. Significant judgment is required to determine our consolidated income tax provision and related liabilities. The Company's effective tax rate, cash flows and operating results could be affected by changes in the mix of earnings in countries with different statutory tax rates, as well as by changes in the local tax laws and regulations, or the interpretations thereof. In addition, the Company's tax returns are subject to regular review and audit by U.S. and non-U.S. tax authorities. While we believe our tax provisions are appropriate, the final outcome of tax audits or disputes could result in adjustments to the Company's tax liabilities, which could adversely affect our financial results.

Our Reputation, Ability To Do Business and Results of Operations Could Be Impaired By Improper Conduct By Any of Our Employees, Agents or Business Partners

We are subject to regulation under a wide variety of U.S. federal and state and non-U.S. laws, regulations and policies, including laws related to anti-corruption, anti-bribery, export and import compliance, anti-trust and money laundering, due to our global operations. In particular, the U.S. Foreign Corrupt Practices Act, the U.K. Bribery Act

and similar anti-bribery laws in other jurisdictions generally prohibit companies and their intermediaries from making improper payments to government officials for the purpose of obtaining or retaining business, and we operate in many parts of the world that have experienced government corruption to some degree. We cannot provide assurance our internal controls will always protect us from the improper conduct of our employees, agents and business partners. Any such violation of law or improper actions could subject us to civil or criminal investigations in the U.S. and other jurisdictions, could lead to substantial civil or criminal, monetary and non-monetary penalties and related shareholder lawsuits, could lead to increased costs of compliance and could damage our reputation, our business and results of operations.

We Are Subject to Litigation and Environmental Regulations That Could Adversely Impact Our Operating Results

We are, and may in the future be, a party to a number of legal proceedings and claims, including those involving intellectual property, product liability (including asbestos) and environmental matters, several of which claim, or may in the future claim, significant damages. Given the inherent uncertainty of litigation, we can offer no assurance that existing litigation or a future adverse development will not have a material adverse impact. We also are subject to various laws and regulations relating to environmental protection and the discharge of materials into the environment, and we could incur substantial costs as a result of the noncompliance with or liability for cleanup or other costs or damages under environmental laws. In addition, increased public awareness and concern regarding global climate change may result in more international, federal, and/or state or other stakeholder requirements or expectations that could result in more restrictive or expansive standards, such as stricter limits on greenhouse gas emissions or more prescriptive reporting of environmental, social, and governance metrics. There continues to be a lack of consistent climate change legislation and standards, which creates economic and regulatory uncertainty. While the Company has adopted certain voluntary targets, environmental laws, regulations or standards may be changed, accelerated or adopted and impose significant operational restrictions and compliance requirements upon the Company, its products or customers, which could negatively impact the Company's business, capital expenditures, results of operations, financial condition and competitive position.

Increasing Interest and Expectations with Respect to Environmental, Social, and Governance (ESG) Matters by Our Various Stakeholders Could Adversely Affect Our Business and Operating Results

In response to growing customer, investor, employee, governmental, and other stakeholder interest in our ESG practices, we have increased reporting of our ESG programs and performance and have established and announced our aspirational purpose, causes, values, and related commitments, goals or targets, including those regarding sustainability, greenhouse gas emissions, our net zero ambition, and diversity, equity and inclusion. Our ability to achieve such goals and aspirations is subject to numerous risks and uncertainties, many of which rely on the collective efforts of others or may be outside of our control. Such risks include, among others, the availability and adoption of new or additional technologies that reduce carbon or eliminate energy sources on a commercially reasonable basis, competing and evolving economic, policy and regulatory factors, the ability of suppliers and others to meet our sustainability, diversity and other goals, the availability of qualified candidates in our labor markets and our ability to recruit and retain diverse talent, and customer engagement in our goals. There may be times where actual outcomes vary from those aimed for or expected and sometimes challenges may delay or block progress. As a result, we cannot offer assurances that the results reflected or implied by any such statements will be realized or achieved. Moreover, standards and expectations for ESG matters continue to evolve and may be subject to varying interpretations, which may result in significant revisions to our goals or progress. In addition, certain of our product offerings may become less attractive as standards evolve. A failure or perceived failure to meet our aspirational purpose, causes, values, and related commitments, goals or targets within the timelines we announce, or at all, or a failure or perceived failure to meet evolving stakeholders expectations and standards, could damage our reputation, adversely affect employee retention or engagement or support from our various stakeholders and could subject us to government enforcement actions or penalties and private litigation. Such outcomes could negatively impact the Company's business, capital expenditures, results of operations, financial condition and competitive position.

ITEM 1B - UNRESOLVED STAFF COMMENTS

None.

ITEM 2 - PROPERTIES

At September 30, 2022, the Company had approximately 160 manufacturing locations worldwide, of which approximately 50 were located in the United States and 110 were located outside the United States, primarily in Europe and Asia, and to a lesser extent in Canada and Latin America. Manufacturing locations by business are: Automation Solutions, 120 and Commercial & Residential Solutions, 40, including 30 in the Climate Technologies segment and 10 in the Tools & Home Products segment. The majority of the locations are owned, with the remainder occupied under lease. The Company considers its facilities suitable and adequate for the purposes for which they are used. The Company also maintains a smaller number of administrative, sales, research and development, and distribution facilities.

ITEM 3 - LEGAL PROCEEDINGS

The Company and its subsidiaries are party to various legal proceedings, some of which claim substantial amounts of damages. It is not possible to predict the outcome of these matters, but historically the Company has been largely successful in both prosecuting and defending claims and lawsuits.

Given the uncertainties of litigation, a remote possibility exists that litigation could have a material adverse impact on the Company; however, the Company believes a material adverse impact of any pending litigation is unlikely.

Information regarding legal proceedings is set forth in Note 13.

ITEM 4 - MINE SAFETY DISCLOSURES

Not applicable.

INFORMATION ABOUT OUR EXECUTIVE OFFICERS

The following sets forth certain information as of November 14, 2022, with respect to the Company's executive officers. The Fiscal Year column indicates the first year the executive served as an officer of the Company. These officers have been elected or appointed to terms which expire February 7, 2023:

<u>Name</u>	<u>Position</u>	<u>Age</u>	<u>Fiscal Year</u>
S. L. Karsanbhai	President and Chief Executive Officer	53	2002
F. J. Dellaquila	Senior Executive Vice President and Chief Financial Officer	65	1991
R. R. Krishnan	Executive Vice President and Chief Operating Officer	51	2005
M. J. Bulanda	Executive President - Automation Solutions	56	2002
J. P. Froedge	Executive President - Commercial & Residential Solutions	47	2013
S. Y. Bosco	Senior Vice President, Secretary and General Counsel	64	2005
K. Button Bell	Senior Vice President and Chief Marketing Officer	64	1999
L. A. Flavin	Senior Vice President and Chief Compliance Officer	57	2001
M. H. Train	Senior Vice President and Chief Sustainability Officer	60	1994
E. M. Adefioye	Senior Vice President and Chief People Officer	54	2021
M. J. Baughman	Vice President, Controller and Chief Accounting Officer	57	2018

There are no family relationships among any of the executive officers and directors.

Lal Karsanbhai has been Chief Executive Officer since February 2021 and President since March 2021. Prior to his current position, Mr. Karsanbhai was Executive President - Automation Solutions from October 2018 through January 2021, President - Measurement & Analytical from 2016 through September 2018, and President Emerson Network Power Europe, Middle East and Africa from 2014 through 2016.

Frank J. Dellaquila was appointed Senior Executive Vice President in November 2016, Executive Vice President in November 2012 and Senior Vice President and Chief Financial Officer in February 2010.

Ram R. Krishnan was appointed Executive Vice President and Chief Operating Officer in February 2021. Prior to his current position, Mr. Krishnan was President Final Control from November 2017 to February 2021, Chief Operating Officer Final Control from January 2017 to November 2017, and President Flow Solutions from 2016 through January 2017.

Mark J. Bulanda was appointed Executive President - Automation Solutions in February 2021. Prior to his current position, Mr. Bulanda was Senior Vice President from November 2016 through February 2021, Vice President - Acquisition Planning and Development from May 2016 through November 2016 and Executive Vice President - Emerson Industrial Automation from 2012 through May 2016.

James P. Froedge was appointed Executive President - Commercial & Residential Solutions in August 2020. Prior to his current position, Mr. Froedge was President - Automation Solutions Asia Pacific from 2018 through August 2020, President - Process Systems and Solutions from 2016 through 2018, Vice President - Acquisition Planning and Development from 2013 through 2016 and in Acquisition Planning from 2012 through 2013.

Sara Y. Bosco was appointed to the position of Senior Vice President, Secretary and General Counsel in May 2016. Prior to her current position, Ms. Bosco was President, Emerson Asia-Pacific from 2008 through May 2016.

Katherine Button Bell was appointed Senior Vice President in November 2016 and Vice President and Chief Marketing Officer in 1999.

Lisa A. Flavin was appointed Senior Vice President and Chief Compliance Officer in March 2021. Prior to her current position, Ms. Flavin was Vice President and Chief Compliance Officer from February 2019 through March 2021 and Vice President, Audit and Chief Compliance Officer from February 2015 through February 2019.

Michael H. Train was appointed Senior Vice President and Chief Sustainability Officer in March 2021. Prior to that, Mr. Train was President from October 2018 to March 2021 and Executive President - Automation Solutions from October 2016 through October 2018, Executive Vice President - Automation Solutions from May 2016 through October 2016 and President of Global Sales for Emerson Process Management from 2010 through May 2016.

Elizabeth M. Adefoye was appointed Senior Vice President in February 2022 and Chief People Officer in August 2021. Prior to that, beginning in 2018, Ms. Adefoye was Senior Vice President and Chief Human Resources Officer of Ingredion Incorporated, a global ingredients solutions provider, and Vice President Human Resources, North America and Global Specialties of Ingredion, from September 2016 through March 2018, and Vice President Human Resources Americas of Janssen Pharmaceutical, a subsidiary of Johnson & Johnson, from June 2015 to September 2016.

Michael J. Baughman was appointed Chief Accounting Officer in February 2018, and Vice President and Controller in October 2017. Prior to that Mr. Baughman was Vice President, Finance, Global Operations, Quality, and Research and Development of Baxter International Inc., a global healthcare products company, from 2015 through September 2017, and Vice President, Finance, Medical Products of Baxter from 2013 to 2015.

PART II

ITEM 5 - MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Information regarding the market for the Company's common stock and dividend payments is set forth in Note 20 and is hereby incorporated by reference. There were approximately 15,900 stockholders of record at September 30, 2022.

Period	Total Number of Shares Purchased (000s)	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs (000s)	Maximum Number of Shares that May Yet Be Purchased Under the Plans or Programs (000s)
July 2022	884	\$79.33	884	54,540
August 2022	—	—	—	54,540
September 2022	—	—	—	54,540
Total	884	\$79.33	884	54,540

In November 2015, the Board of Directors authorized the purchase of up to 70 million shares, and during fiscal 2022, the remaining shares available under this authorization were purchased. In March 2020, the Board of Directors authorized the purchase of an additional 60 million shares and a total of approximately 55 million shares remain available.

ITEM 6 [RESERVED]

ITEM 7 - MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Safe Harbor Statement

This Annual Report on Form 10-K contains various forward-looking statements and includes assumptions concerning Emerson's operations, future results and prospects. These forward-looking statements are based on current expectations and are subject to risks and uncertainties. Emerson undertakes no obligation to update any such statements to reflect later developments. In connection with the "safe harbor" provisions of the Private Securities Litigation Reform Act of 1995, Emerson provides the cautionary statements set forth under Item 1A - "Risk Factors," which are hereby incorporated by reference and identify important economic, political and technological factors, among others, changes in which could cause the actual results or events to differ materially from those set forth in or implied by the forward-looking statements and related assumptions.

Non-GAAP Financial Measures

To supplement the Company's financial information presented in accordance with U.S. generally accepted accounting principles (U.S. GAAP), management periodically uses certain "non-GAAP financial measures," as such term is defined in Regulation G under SEC rules, to clarify and enhance understanding of past performance and prospects for the future. Generally, a non-GAAP financial measure is a numerical measure of a company's operating performance, financial position or cash flows that excludes or includes amounts that are included in or excluded from the most directly comparable measure calculated and presented in accordance with U.S. GAAP. For example, non-GAAP measures may exclude the impact of certain items such as acquisitions or divestitures, amortization of intangibles, restructuring costs, discrete taxes, changes in reporting segments, gains, losses and impairments, or items outside of management's control, such as foreign currency exchange rate fluctuations. Management believes that the following non-GAAP financial measures provide investors and analysts useful insight into the Company's financial position and operating performance. Any non-GAAP measure provided should be viewed in addition to, and not as an alternative to, the most directly comparable measure determined in accordance with U.S. GAAP, as identified in *italics* below. Further, the calculation of these non-GAAP financial measures may differ from the calculation of similarly titled financial measures presented by other companies and therefore may not be comparable among companies.

Underlying sales, which exclude the impact of acquisitions, divestitures and fluctuations in foreign currency exchange rates during the periods presented, are provided to facilitate relevant period-to-period comparisons of sales growth by excluding those items that impact overall comparability (U.S. GAAP measure: *net sales*).

Operating profit (defined as net sales less cost of sales and selling, general and administrative expenses) and operating profit margin (defined as operating profit divided by net sales) are indicative of short-term operational performance and ongoing profitability. Management closely monitors operating profit and operating profit margin of each business to evaluate past performance and actions required to improve profitability. EBIT (defined as earnings

before deductions for interest expense, net and income taxes) and total segment EBIT, and EBIT margin (defined as EBIT divided by net sales) and total segment EBIT margin, are financial measures that exclude the impact of financing on the capital structure and income taxes. Adjusted EBITA and adjusted segment EBITA (defined as earnings excluding interest expense, net, income taxes, intangibles amortization expense, restructuring expense, first year purchase accounting related items and transaction fees, and certain gains, losses or impairments) and adjusted EBITA margin and adjusted segment EBITA margin (defined as adjusted EBITA divided by net sales) are measures used by management to evaluate the Company's operational performance, as they exclude the impact of acquisition-related investments and non-operational items. EBITDA (defined as EBIT excluding depreciation and amortization) and EBITDA margin (defined as EBITDA divided by net sales) are also used as measures of the Company's current operating performance, as they exclude the impact of capital and acquisition-related investments. All of these are commonly used financial measures utilized by management to evaluate performance (U.S. GAAP measures: *pretax earnings or pretax profit margin, segment earnings or segment margin*).

Earnings, earnings per share, return on common stockholders' equity and return on total capital excluding certain gains and losses, impairments, restructuring costs, impacts of acquisitions or divestitures, amortization of intangibles, discrete taxes, or other items provide additional insight into the underlying, ongoing operating performance of the Company and facilitate period-to-period comparisons by excluding the earnings impact of these items. Management believes that presenting earnings, earnings per share, return on common stockholders' equity and return on total capital excluding these items is more representative of the Company's operational performance and may be more useful for investors (U.S. GAAP measures: *earnings, earnings per share, return on common stockholders' equity, return on total capital*).

Free cash flow (operating cash flow less capital expenditures) and free cash flow as a percent of net sales are indicators of the Company's cash generating capabilities, and dividends as a percent of free cash flow is an indicator of the Company's ability to support its dividend, after considering investments in capital assets which are necessary to maintain and enhance existing operations. The determination of operating cash flow adds back noncash depreciation expense to earnings and thereby does not reflect a charge for necessary capital expenditures. Management believes that free cash flow, free cash flow as a percent of net sales and dividends as a percent of free cash flow are useful to both management and investors as measures of the Company's ability to generate cash and support its dividend (U.S. GAAP measures: *operating cash flow, operating cash flow as a percent of net sales, dividends as a percent of operating cash flow*).

FINANCIAL REVIEW

Report of Management

The Company's management is responsible for the integrity and accuracy of the financial statements. Management believes that the financial statements for each of the years in the three-year period ended September 30, 2022 have been prepared in conformity with U.S. generally accepted accounting principles appropriate in the circumstances. In preparing the financial statements, management makes informed judgments and estimates where necessary to reflect the expected effects of events and transactions that have not been completed. The Company's disclosure controls and procedures ensure that material information required to be disclosed is recorded, processed, summarized and communicated to management and reported within the required time periods.

In meeting its responsibility for the reliability of the financial statements, management relies on a system of internal accounting controls. This system is designed to provide reasonable assurance that assets are safeguarded and transactions are executed in accordance with management's authorization and recorded properly to permit the preparation of financial statements in accordance with U.S. generally accepted accounting principles. Although the design of this system recognizes that errors or irregularities may occur, management believes that the Company's internal accounting controls provide reasonable assurance that errors or irregularities that could be material to the financial statements are prevented or would be detected within a timely period.

The Audit Committee of the Board of Directors, which is composed solely of independent directors, is responsible for overseeing the Company's financial reporting process. The Audit Committee meets with management and the Company's internal auditors periodically to review the work of each and to monitor the discharge by each of its responsibilities. The Audit Committee also meets periodically with the independent auditors, who have free access to the Audit Committee and the Board of Directors, to discuss the quality and acceptability of the Company's financial reporting and internal controls, as well as nonaudit-related services.

The independent auditors are engaged to express an opinion on the Company's consolidated financial statements and on the Company's internal control over financial reporting. Their opinions are based on procedures that they believe to be sufficient to provide reasonable assurance that the financial statements contain no material errors and that the Company's internal controls are effective.

Management's Report on Internal Control Over Financial Reporting

The Company's management is responsible for establishing and maintaining adequate internal control over financial reporting for the Company. With the participation of the Chief Executive Officer and the Chief Financial Officer, management conducted an evaluation of the effectiveness of internal control over financial reporting based on the framework and the criteria established in *Internal Control - Integrated Framework* (2013), issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on this evaluation, management has concluded that internal control over financial reporting was effective as of September 30, 2022.

The Company acquired a controlling interest in Aspen Technology, Inc. during fiscal 2022, and management has excluded this business from its assessment of internal control over financial reporting as of September 30, 2022. Total assets and revenues of this business excluded from the assessment represented approximately 36 percent and 2 percent, respectively, of the Company's related consolidated financial statement amounts as of and for the year ended September 30, 2022.

The Company's auditor, KPMG LLP, an independent registered public accounting firm, has issued an audit report on the effectiveness of the Company's internal control over financial reporting.

/s/ S. L. Karsanbhai
S. L. Karsanbhai
*President
and Chief Executive Officer*

/s/ Frank J. Dellaquila
Frank J. Dellaquila
*Senior Executive Vice President
and Chief Financial Officer*

Results of Operations

Years ended September 30

(Dollars in Item 7 are in millions, except per share amounts or where noted)

	2020	2021	2022	21 vs. 20	22 vs. 21
Net sales	\$ 16,785	18,236	19,629	9 %	8 %
Gross profit	\$ 7,009	7,563	8,188	8 %	8 %
<i>Percent of sales</i>	41.8 %	41.5 %	41.7 %	(0.3) pts	0.2 pts
SG&A	\$ 3,986	4,179	4,248		
<i>Percent of sales</i>	23.8 %	22.9 %	21.6 %	(0.9) pts	(1.3) pts
Gain on subordinated interest	\$ —	—	(453)		
Gain on sale of business	\$ —	—	(486)		
Other deductions, net	\$ 532	318	601		
<i>Amortization of intangibles</i>	\$ 239	300	357		
<i>Restructuring costs</i>	\$ 284	150	86		
Interest expense, net	\$ 156	154	193		
Earnings before income taxes	\$ 2,335	2,912	4,085	25 %	40 %
<i>Percent of sales</i>	13.9 %	16.0 %	20.8 %	2.1 pts	4.8 pts
Net earnings common stockholders	\$ 1,965	2,303	3,231	17 %	40 %
<i>Percent of sales</i>	11.7 %	12.6 %	16.5 %	0.9 pts	3.9 pts
Diluted EPS	\$ 3.24	3.82	5.41	18 %	42 %
Return on common stockholders' equity	23.6 %	25.2 %	31.9 %	1.6 pts	6.7 pts
Return on total capital	16.8 %	18.1 %	20.4 %	1.3 pts	2.3 pts

OVERVIEW

Overall, sales for 2022 were \$19.6 billion, up 8 percent compared with the prior year, reflecting strong growth across both platforms and favorable results across all geographies despite headwinds due to the impact of lockdowns in China and supply chain and logistics constraints.

Net earnings common stockholders were \$3,231 in 2022, up 40 percent compared with prior year earnings of \$2,303, and diluted earnings per share were \$5.41, up 42 percent versus \$3.82 per share in 2021. Adjusted diluted earnings per share were \$5.25 compared with \$4.51 in the prior year, reflecting strong operating results and a \$0.12 benefit related to the AspenTech acquisition.

The Company generated operating cash flow of \$2.9 billion in 2022, a decrease of \$653, or 18 percent, reflecting higher working capital due to increased sales and continued supply chain constraints.

The table below presents the Company's diluted earnings per share on an adjusted basis to facilitate period-to-period comparisons and provide additional insight into the underlying, ongoing operating performance of the Company. Adjusted diluted earnings per share excludes intangibles amortization expense, restructuring expense, first year purchase accounting related items and transaction and AspenTech pre-closing costs, and certain gains, losses or impairments.

	2020	2021	2022
Diluted earnings per share	\$ 3.24	3.82	5.41
Restructuring and related costs	0.42	0.24	0.15
Amortization of intangibles	0.32	0.41	0.48
Gain on subordinated interest	—	—	(0.60)
Gain on sale of business	—	—	(0.72)
Russia business exit	—	—	0.32
Acquisition/divestiture costs and pre-acquisition interest on AspenTech debt	—	—	0.19
AspenTech Micromine purchase price hedge	—	—	0.04
OSI first year acquisition accounting charges and fees	—	0.07	—
Investment-related gains	—	(0.03)	(0.02)
Discrete tax benefits	(0.20)	—	—
Adjusted diluted earnings per share	\$ 3.78	4.51	5.25

The table below summarizes the changes in adjusted diluted earnings per share. The items identified below are discussed throughout MD&A, see further discussion above and in the Business Segments and Financial Position sections below.

	2021	2022
Adjusted diluted earnings per share - prior year	\$ 3.78	4.51
Operations	0.68	0.56
AspenTech acquisition	—	0.12
Stock compensation	(0.16)	0.13
Pensions	0.05	0.04
Gains on sales of investments - prior year	—	(0.07)
Gains on sales of investments - current year	0.07	—
Gains on sales of capital assets - current year	—	0.02
Foreign currency	0.09	(0.03)
Higher effective tax rate	(0.02)	(0.05)
Share repurchases/other	0.02	0.02
Adjusted diluted earnings per share - current year	\$ 4.51	5.25

NET SALES

Net sales for 2022 were \$19.6 billion, an increase of \$1.4 billion, or 8 percent compared with 2021. Sales increased \$466 in Automation Solutions, \$337 in AspenTech and \$580 in Commercial & Residential Solutions. Underlying sales, which exclude foreign currency translation, acquisitions and divestitures, increased 9 percent on 4 percent higher volume and 5 percent higher price. The AspenTech acquisition added 2 percent, foreign currency translation deducted 2 percent and the Therm-O-Disc divestiture deducted 1 percent. Underlying sales increased 14 percent in the U.S. and 6 percent internationally.

Net sales for 2021 were \$18.2 billion, an increase of \$1.5 billion, or 9 percent compared with 2020. Sales increased \$266 in Automation Solutions, \$188 in AspenTech and \$1,010 in Commercial & Residential Solutions. Underlying sales, which exclude foreign currency translation, acquisitions and divestitures, increased 5 percent on higher volume and slightly higher price. The Open Systems International Inc. ("OSI") acquisition added 1 percent and foreign currency translation added 3 percent. Underlying sales increased 5 percent in the U.S. and 5 percent internationally.

INTERNATIONAL SALES

Emerson is a global business with international sales representing 54 percent of total sales in 2022, including U.S. exports. The Company generally expects faster economic growth in emerging markets in Asia, Latin America, Eastern Europe and Middle East/Africa.

International destination sales, including U.S. exports, increased 2 percent, to \$10.6 billion in 2022, reflecting the impact of the Heritage AspenTech acquisition and an increase in the Commercial & Residential Solutions business. U.S. exports of \$1.5 billion were up 33 percent compared with 2021, including an increase of approximately \$200 due to the Heritage AspenTech acquisition. Underlying international destination sales were up 6 percent, as foreign currency translation had a 5 percent unfavorable impact on the comparison, the AspenTech acquisition added 2 percent and the Therm-O-Disc divestiture subtracted 1 percent. Underlying sales increased 2 percent in Europe, 5 percent in Asia, Middle East & Africa (China up 7 percent), 19 percent in Latin America and 15 percent in Canada. Origin sales by international subsidiaries, including shipments to the U.S., totaled \$9.2 billion in 2022, down 1 percent compared with 2021.

International destination sales, including U.S. exports, increased 10 percent, to \$10.3 billion in 2021, reflecting increases in both the Automation Solutions and Commercial & Residential Solutions businesses. U.S. exports of \$1.1 billion were up 12 percent compared with 2020. Underlying international destination sales were up 5 percent, as foreign currency translation had a 4 percent favorable impact on the comparison and the OSI acquisition added 1 percent. Underlying sales increased 5 percent in Europe, 5 percent in Asia, Middle East & Africa (China up 15 percent), 9 percent in Latin America and 1 percent in Canada. Origin sales by international subsidiaries, including shipments to the U.S., totaled \$9.3 billion in 2021, up 9 percent compared with 2020.

ACQUISITIONS AND DIVESTITURES

Portfolio management is an integral component of Emerson's growth and value creation strategy. Over the past 18 months, Emerson has taken significant actions to accelerate the transformation of its portfolio through the completion of strategic acquisitions and divestitures of non-core businesses. These actions were undertaken to create a higher growth and cohesive industrial technology portfolio as a global automation leader serving a diversified set of end markets with differentiated capabilities in intelligent devices and software. The Company's recent portfolio actions include the following transactions.

On October 31, 2022, the Company announced an agreement to sell a majority stake in its Climate Technologies business (which constitutes the Climate Technologies segment, excluding Therm-O-Disc which was divested earlier in fiscal 2022) to private equity funds managed by Blackstone ("Blackstone") in a transaction valued at \$14.0 billion. Emerson will receive upfront, pre-tax cash proceeds of approximately \$9.5 billion and a note of \$2.25 billion at close (which will accrue 5 percent interest payable in kind by capitalizing interest), while retaining a 45 percent non-controlling common equity ownership interest in a new standalone joint venture between Emerson and Blackstone. The Climate Technologies business, which includes the Copeland compressor business and the entire portfolio of products and services across all residential and commercial HVAC and refrigeration end-markets, had fiscal 2022 net sales of approximately \$5.0 billion and pretax earnings of \$1.0 billion. The transaction is expected to close in the first half of calendar year 2023, subject to regulatory approvals and customary closing conditions. The Company expects to recognize a pretax gain of approximately \$10 billion (approximately \$8 billion after-tax) in fiscal 2023 upon the completion of the transaction.

On October 31, 2022, the Company completed the divestiture of its InSinkErator business, which manufactures food waste disposers, to Whirlpool Corporation for \$3.0 billion. This business had net sales of \$630 and pretax earnings of \$152 in fiscal 2022 and is reported in the Tools & Home Products segment. The assets and liabilities of InSinkErator were classified as held-for-sale as of September 30, 2022 and are included in other current assets, other assets, accrued expenses and other liabilities in the consolidated balance sheet. The Company expects to recognize a pretax gain of approximately \$2.8 billion (approximately \$2.1 billion after-tax) in the first quarter of fiscal 2023.

On May 16, 2022, the Company completed the transactions contemplated by its definitive agreement with Aspen Technology, Inc. ("Heritage AspenTech") to contribute two of Emerson's stand-alone industrial software businesses, Open Systems International, Inc. and the Geological Simulation Software business (collectively, the "Emerson Industrial Software Business"), along with approximately \$6.0 billion in cash to Heritage AspenTech stockholders, to create "New AspenTech", a diversified, high-performance industrial software leader with greater scale, capabilities and technologies (hereinafter referred to as "AspenTech"). Upon closing of the transaction, Emerson beneficially owned 55 percent of the outstanding shares of AspenTech common stock (on a fully diluted basis) and former Heritage AspenTech stockholders owned the remaining outstanding shares of AspenTech common stock. AspenTech and its subsidiaries now operate under Heritage AspenTech's previous name "Aspen Technology, Inc." and AspenTech common stock is traded on NASDAQ under Heritage AspenTech's previous stock ticker symbol "AZPN." On a pro forma basis, AspenTech had fiscal 2022 net sales of \$1.1 billion.

On July 27, 2022, AspenTech entered into an agreement to acquire Micromine, a global leader in design and operational solutions for the mining industry, for AU \$900 (approximately \$623 USD based on exchange rates when the transaction was announced). The transaction is expected to close by the end of calendar 2022, subject to various regulatory approvals.

On May 31, 2022 the Company completed the divestiture of its Therm-O-Disc sensing and protection technologies business, which was reported in the Climate Technologies segment, to an affiliate of One Rock Capital Partners, LLC. The Company recognized a pretax gain of \$486 (\$429 after-tax, \$0.72 per share).

On May 4, 2022, Emerson announced its intention to exit business operations in Russia and divest Metran, its Russia-based manufacturing subsidiary, and on September 27, 2022, announced an agreement to sell the business to the local management group. Emerson's historical net sales in Russia were principally in the Automation Solutions segment and in total, represented approximately 1.5 percent of consolidated annual sales. The Company recognized a pretax loss of \$181 (\$190 after-tax, in total \$0.32 per share) related to its exit of business operations in Russia. This charge, which included a loss of \$36 in operations and \$145 reported in Other deductions (\$10 of which is reported in restructuring costs), is primarily non-cash. The transaction will be subject to regulatory and government approvals, and other customary closing conditions. Emerson will work closely with the local Russia management group to help ensure a smooth transition for employees through the sale process.

In 2022, the Company acquired three other businesses, two in the Automation Solutions segment and one in the AspenTech segment, for \$130, net of cash acquired. The three businesses had combined annual sales of approximately \$40.

On October 1, 2020, the Company completed the acquisition of Open Systems International, Inc. (OSI), a leading operations technology software provider in the global power industry, for approximately \$1.6 billion, net of cash acquired. This business had net sales of \$191 in fiscal 2021 and is now reported in the AspenTech segment.

In 2020, the Company acquired three businesses, two in the Automation Solutions segment and one in the Climate Technologies segment, for \$126, net of cash acquired. These three businesses had combined annual sales of approximately \$50.

See Note 4 and Item 1A - "Risk Factors" for further information on acquisitions and divestitures.

COST OF SALES

Cost of sales for 2022 were \$11,441, an increase of \$768 compared with \$10,673 in 2021, primarily due to higher sales volume and higher materials costs. Gross profit was \$8,188 in 2022 compared to \$7,563 in 2021, while gross margin increased 0.2 percentage points to 41.7 percent. The Heritage AspenTech acquisition benefited gross margin 0.7 percentage points, while price less net material inflation was favorable but had a dilutive impact on margins. Higher freight and other inflation also negatively impacted margins, partially offset by favorable mix.

Cost of sales for 2021 were \$10,673, an increase of \$897 compared with \$9,776 in 2020, primarily due to higher sales volume in Commercial & Residential Solutions, foreign currency translation, and the OSI acquisition which added \$112 including intangibles amortization of \$39. Gross profit was \$7,563 in 2021 compared to \$7,009 in 2020, while gross margin decreased 0.3 percentage points to 41.5 percent, as leverage on higher sales volume was offset by unfavorable price-cost in Commercial & Residential Solutions primarily driven by higher steel prices, intangibles amortization from the OSI acquisition which deducted 0.2 percentage points, and unfavorable mix.

SELLING, GENERAL AND ADMINISTRATIVE EXPENSES

SG&A expenses of \$4,248 in 2022 increased \$69 compared with 2021, reflecting the impact of higher sales and higher wage and other inflation. SG&A as a percent of sales decreased 1.3 percentage points to 21.6 percent, reflecting leverage on higher sales and lower stock compensation expense of \$80 due to a lower share price in the current year (0.5 percentage points).

SG&A expenses of \$4,179 in 2021 increased \$193 compared with 2020 on higher stock compensation expense, as well as increased sales volume. SG&A as a percent of sales decreased 0.9 percentage points to 22.9 percent, reflecting increased savings of approximately \$240 from the Company's restructuring and cost reset actions, partially offset by higher stock compensation expense of \$144 (0.6 percentage points) due to a higher share price in 2021.

INVESTMENT AND DIVESTITURE GAINS

As previously disclosed, the Company sold its network power systems business (rebranded as Vertiv, now a publicly traded company, symbol VRT) in 2017 and retained a subordinated interest contingent upon the equity holders first receiving a threshold cash return on their initial investment. In the first quarter of fiscal 2022, the equity holders' cumulative cash return exceeded the threshold and as a result, the Company received a distribution of \$438 in November 2021 (in total, a pretax gain of \$453 was recognized in the first quarter). Based on the terms of the agreement and the current calculation, the Company could receive additional distributions of approximately \$75 which are expected to be received over the next two-to-three years. However, the distributions are contingent on the timing and price at which Vertiv shares are sold by the equity holders and therefore, there can be no assurance as to the amount or timing of the remaining distributions to the Company.

On May 31, 2022, the Company completed the sale of its Therm-O-Disc sensing and protection technologies business to an affiliate of One Rock Capital Partners, LLC. The Company recognized a pretax gain of \$486 (\$429 after-tax, \$0.72 per share). See Note 4.

OTHER DEDUCTIONS, NET

Other deductions, net were \$601 in 2022, an increase of \$283 compared with 2021, reflecting a charge of \$145 related to the Company exiting its business in Russia (\$10 of which is reported in restructuring costs), acquisition/divestiture costs of \$110, higher intangibles amortization of \$57, primarily related to the Heritage AspenTech acquisition, and a mark-to-market loss of \$50 related to foreign currency forward contracts entered into by AspenTech to mitigate the impact of foreign currency exchange associated with the Micromine purchase price. These items were partially offset by lower restructuring costs of \$64, gains from the sales of capital assets of \$15, and a \$14 gain from the acquisition of full ownership of an equity investment. The prior year also had several investment-related gains which are described below. See Notes 5 and 6.

Other deductions, net were \$318 in 2021, a decrease of \$214 compared with 2020, reflecting lower restructuring costs of \$134, investment-related gains, including gains of \$21 from an investment sale and \$17 from the acquisition of full ownership of an equity investment, and a gain of \$31 from the sale of an equity investment, a favorable impact from pensions, and favorable foreign currency transactions of \$17. These items were partially offset by higher intangibles amortization of \$61, primarily related to the OSI acquisition.

INTEREST EXPENSE, NET

Interest expense, net was \$193, \$154 and \$156 in 2022, 2021 and 2020, respectively. The increase in 2022 reflects the issuance of \$3 billion of long-term debt in December 2021 to support the AspenTech transaction, partially offset by \$500 of notes that matured in the first quarter of fiscal 2022.

EARNINGS BEFORE INCOME TAXES

Pretax earnings of \$4,085 increased \$1,173 in 2022, up 40 percent compared with 2021 reflecting the impact of the Vertiv and Therm-O-Disc gains discussed above. Earnings increased \$401 in Automation Solutions, \$19 in AspenTech and \$76 in Commercial & Residential Solutions. Costs reported at Corporate increased \$223, largely due to the Russia business exit loss and acquisition/divestiture costs, offset by lower stock compensation expense of \$80. See the Business Segments discussion that follows and Note 18.

Pretax earnings of \$2,912 increased \$577 in 2021, up 25 percent compared with 2020. Earnings increased \$416 in Automation Solutions, \$9 in AspenTech and \$246 in Commercial & Residential Solutions. Costs reported at Corporate increased \$96, reflecting higher stock compensation expense of \$114 and first year acquisition accounting charges and fees related to the OSI acquisition of \$50, partially offset by the investment-related gains discussed above and lower unallocated pension and postretirement costs which decreased by \$41.

INCOME TAXES

Income taxes were \$855, \$585 and \$345 for 2022, 2021 and 2020, respectively, resulting in effective tax rates of 21 percent, 20 percent and 15 percent in 2022, 2021 and 2020, respectively.

The tax rates for 2022, 2021 and 2020 include benefits from restructuring subsidiaries of \$11, \$13 and \$103, respectively. The impact on the 2022 tax rate from the gain on divestiture of the Therm-O-Disc business and the Russia business exit in 2022 essentially offset. The lower rate in 2020 included the impact of a research and development tax credit study. See Note 14.

NET EARNINGS AND EARNINGS PER SHARE

Net earnings attributable to common stockholders in 2022 were \$3,231, up 40 percent compared with 2021, and diluted earnings per share were \$5.41, up 42 percent compared with \$3.82 in 2021. Results reflected strong operating results and included a pretax gain of \$453 (\$358 after-tax, \$0.60 per share) related to the Company's subordinated interest in Vertiv and a pretax gain of \$486 (\$429 after-tax, \$0.72 per share) related to the Therm-O-Disc divestiture. See the analysis of adjusted earnings per share in the Overview section for further details.

Net earnings attributable to common stockholders in 2021 were \$2,303, up 17 percent compared with 2020, and diluted earnings per share were \$3.82, up 18 percent compared with \$3.24 in 2020 due to improved operating results reflecting significant savings from the Company's restructuring and cost reset actions and leverage on higher sales volume in Commercial & Residential Solutions.

The table below, which shows results on an adjusted EBITA basis, is intended to supplement the Company's discussion of its results of operations herein. The Company defines adjusted EBITA as earnings excluding interest expense, net, income taxes, intangibles amortization expense, restructuring expense, first year purchase accounting related items and transaction fees, and certain gains, losses or impairments. Adjusted EBITA and adjusted EBITA margin are measures used by management and may be useful for investors to evaluate the Company's operational performance.

Twelve Months Ended September 30	2021	2022	Change
Earnings before income taxes	\$ 2,912	4,085	40 %
Percent of sales	16.0 %	20.8 %	4.8 pts
Interest expense, net	154	193	
Restructuring and related costs	188	119	
Amortization of intangibles	327	451	
Gain on subordinated interest	—	(453)	
Gain on sale of Therm-O-Disc	—	(486)	
Russia business exit	—	181	
Acquisition/divestiture costs	—	110	
AspenTech Micromine purchase price hedge	—	50	
Investment-related gains	(17)	(14)	
OSI first year acquisition accounting charges	50	—	
Adjusted EBITA	\$ 3,614	4,236	17 %
Percent of sales	19.8 %	21.6 %	1.8 pts

RETURNS ON EQUITY AND TOTAL CAPITAL

Return on common stockholders' equity (net earnings attributable to common stockholders divided by average common stockholders' equity) was 31.9 percent in 2022 compared with 25.2 percent in 2021 and 23.6 percent in 2020. Return on total capital (computed as net earnings attributable to common stockholders excluding after-tax net interest expense, divided by average common stockholders' equity plus short- and long-term debt less cash and short-term investments) was 20.4 percent in 2022 compared with 18.1 percent in 2021 and 16.8 percent in 2020. The higher returns in 2022 included the impact of the Vertiv subordinated interest after-tax gain of \$358, the after-tax gain on the Therm-O-Disc divestiture of \$429, after-tax acquisition/divestiture costs of \$93, and the Russia business exit after-tax loss of \$190. Excluding these items, return on common stockholders' equity and return on total capital were 26.9 percent and 17.4 percent, respectively.

Business Segments

Following is an analysis of segment results for 2022 compared with 2021, and 2021 compared with 2020. The Company defines segment earnings as earnings before interest and income taxes.

AUTOMATION SOLUTIONS

	2020	2021	2022	21 vs. 20	22 vs. 21
Sales	\$ 11,026	11,292	11,758	2 %	4 %
Earnings	\$ 1,539	1,955	2,356	27 %	20 %
Margin	14.0 %	17.3 %	20.0 %	3.3 pts	2.7 pts
Restructuring and related costs	\$ 238	146	89		
Amortization of intangibles	\$ 184	186	167		
Adjusted EBITA	\$ 1,961	2,287	2,612	17 %	14 %
Adjusted EBITA Margin	17.8 %	20.3 %	22.2 %	2.5 pts	1.9 pts
<u>Sales by Major Product Offering</u>					
Measurement & Analytical Instrumentation	\$ 3,108	3,071	3,206	(1)%	4 %
Valves, Actuators & Regulators	3,589	3,483	3,604	(3)%	3 %
Industrial Solutions	2,012	2,266	2,403	13 %	6 %
Systems & Software	2,317	2,472	2,545	6 %	3 %
Total	\$ 11,026	11,292	11,758	2 %	4 %

2022 vs. 2021 - Automation Solutions sales were \$11.8 billion in 2022, an increase of \$466, or 4 percent. Underlying sales increased 7 percent on 5 percent higher volume and 2 percent higher price, reflecting strength in process end markets and sustained demand in discrete and hybrid end markets, despite supply chain and logistics constraints which unfavorably impacted sales. Foreign currency translation had a 3 percent unfavorable impact. Sales for Measurement & Analytical Instrumentation increased \$135 or 4 percent. Sales were strong in China and North America, while sales were down moderately in Europe due to supply chain constraints. Valves, Actuators & Regulators increased \$121, or 3 percent, reflecting strong demand in the Americas and China, partially offset by softness in the rest of Asia, Middle East & Africa. Industrial Solutions sales increased \$137, or 6 percent, reflecting strong demand across all geographies. Systems & Software increased \$73, or 3 percent, reflecting strength in process end markets in North America and China, partially offset by weakness in Europe, while power end markets were strong in North America and Europe. Underlying sales increased 14 percent in the Americas (U.S. up 13 percent), while Europe, which was negatively impacted by 5 percentage points due to the business exit from Russia, decreased 1 percent, and Asia, Middle East & Africa was up 5 percent (China up 11 percent). Earnings of \$2,356 increased \$401 from the prior year, and margin increased 2.7 percentage points to 20.0 percent, reflecting leverage on higher volume, favorable mix, lower restructuring expenses which benefited margins 0.4 percentage points, savings from cost reduction actions and favorable price less net material inflation, partially offset by higher freight and other inflation.

2021 vs. 2020 - Automation Solutions sales were \$11.3 billion in 2021, an increase of \$266, or 2 percent. Underlying sales were flat as higher prices offset slightly lower volume. Discrete and hybrid markets exhibited strength throughout the year while longer cycle process automation markets began to recover in the second half of the year, including a sharp recovery in core North American automation markets. Foreign currency translation had a 2 percent favorable impact. Sales for Measurement & Analytical Instrumentation decreased \$37, or 1 percent, as process industries were weak in the first half of the year, but have improved sequentially as markets continue to recover from the impacts of COVID-19. Valves, Actuators & Regulators decreased \$106, or 3 percent, reflecting slower demand in most end markets, particularly in North America and Europe, partially offset by modest growth in Asia. Industrial Solutions sales increased \$254, or 13 percent, on strong growth in Europe and robust growth in China, while North American discrete end markets were up moderately. Systems & Software increased \$155, or 6 percent. Process end markets were strong in Europe and had moderate growth in Asia while North America was flat. Power generation end markets were solid in North America and strong in Europe, partially offset by softness in Asia. Underlying sales decreased 2 percent in the Americas (U.S. down 3 percent), increased 1 percent in Europe and 2 percent in Asia, Middle East & Africa (China up 14 percent). Earnings of \$1,955 increased \$416 from the prior year, and margin increased 3.3 percentage points to 17.3 percent, as significant savings from cost reduction actions

and favorable price-cost more than offset higher performance-based compensation expense. Lower restructuring expense benefited margins 0.9 percentage points.

ASPENTECH

	2020	2021	2022	21 vs. 20	22 vs. 21
Sales	\$ 131	319	656	145 %	106 %
Earnings (loss)	\$ (16)	(7)	12	56 %	269 %
Margin	(12.8)%	(2.3)%	1.9 %	10.5 pts	4.2 pts
Restructuring and related costs	\$ 6	2	—		
Amortization of intangibles	\$ 23	89	237		
Adjusted EBITA	\$ 13	84	249	535 %	198 %
Adjusted EBITA Margin	10.1 %	26.2 %	38.0 %	16.1 pts	11.8 pts

As a result of the Heritage AspenTech acquisition, the Company identified one additional segment in fiscal 2022. The new segment reflects the combined results of Heritage AspenTech and the Emerson Industrial Software Business. The results for this new segment include the historical results of the Emerson Industrial Software Business (which was previously reported in the Automation Solutions segment), while results related to the Heritage AspenTech business include only periods subsequent to the close of the transaction on May 16, 2022. See Note 4 for further details.

2022 vs. 2021 - AspenTech sales were \$656 in 2022, an increase of \$337, or 106 percent due to the acquisition of Heritage AspenTech. Earnings were \$12, an increase of \$19, and margin improved to 1.9 percent, reflecting the impact of the Heritage AspenTech acquisition. Results for fiscal 2022 included intangibles amortization of \$148 related to the Heritage AspenTech acquisition (\$51 of which was reported in Cost of sales).

2021 vs. 2020 - AspenTech sales were \$319 in 2021, an increase of \$188, or 145 percent due to the Open Systems International, Inc. ("OSI") acquisition. The segment had a loss \$7, an improvement of \$9 compared to 2020, and margin improved to (2.3) percent, reflecting the impact of the OSI acquisition. Results for fiscal 2021 included intangibles amortization of \$66 related to the OSI acquisition.

COMMERCIAL & RESIDENTIAL SOLUTIONS

	2020	2021	2022	21 vs. 20	22 vs. 21
Sales:					
Climate Technologies	\$ 3,980	4,748	5,200	19 %	10 %
Tools & Home Products	1,663	1,905	2,033	15 %	7 %
Total	\$ 5,643	6,653	7,233	18 %	9 %
Earnings:					
Climate Technologies	\$ 801	965	1,038	20 %	8 %
Tools & Home Products	317	399	402	26 %	1 %
Total	\$ 1,118	1,364	1,440	22 %	6 %
Margin	19.8 %	20.5 %	19.9 %	0.7 pts	(0.6) pts
Restructuring and related costs	\$ 52	26	24		
Amortization of intangibles	\$ 49	52	47		
Adjusted EBITA	\$ 1,219	1,442	1,511	18 %	5 %
Adjusted EBITA Margin	21.6 %	21.6 %	20.9 %	- pts	(0.7) pts

2022 vs. 2021 - Commercial & Residential Solutions sales were \$7.2 billion in 2022, an increase of \$580, or 9 percent. Foreign currency translation had a 2 percent unfavorable impact and divestitures deducted 2 percent. Underlying sales increased 13 percent on 3 percent higher volume and 10 percent higher price. Climate Technologies sales were \$5.2 billion in 2022, an increase of \$452, or 10 percent. Air conditioning, heating and refrigeration sales were strong, reflecting global demand across all end markets. Tools & Home Products sales were \$2.0 billion in 2022, up \$128 or 7 percent compared to the prior year. Sales of professional tools and food waste disposers were strong, while wet/dry vacuums decreased moderately due to difficult comparisons. Overall, underlying sales increased 15 percent in the Americas (U.S. up 14 percent) and 11 percent in Europe, while Asia, Middle East & Africa increased 5 percent (China down 7 percent). Earnings were \$1,440, an increase of \$76, and margin was down 0.6 percentage points, as price less net material inflation was favorable but had a slightly dilutive impact on margins and higher freight and other inflation also negatively impacted margins, partially offset by leverage on higher sales and savings from cost reduction actions.

2021 vs. 2020 - Commercial & Residential Solutions sales were \$6.7 billion in 2021, an increase of \$1,010, or 18 percent. Underlying sales increased 16 percent on strong global demand, as nearly all businesses achieved double-digit growth each quarter, while foreign currency translation added 2 percent. Climate Technologies sales were \$4.7 billion in 2021, an increase of \$768, or 19 percent. Air conditioning and heating sales were up mid-teens, reflecting strong demand for residential-oriented products and solutions in North America and robust growth in Europe and China. Cold chain sales were up over 20 percent, driven by favorable global market conditions and strength in food retail and aftermarket. Tools & Home Products sales were \$1.9 billion in 2021, up \$242 or 15 percent compared to the prior year. Sales of wet/dry vacuums were robust in part due to competitor outages, while sales were strong for global professional tools and solid for food waste disposers. Overall, underlying sales increased 16 percent in the Americas (U.S. up 15 percent) and 17 percent in Europe, while Asia, Middle East & Africa increased 17 percent (China up 17 percent). Earnings were \$1,364, an increase of \$246, and margin was up 0.7 percentage points, reflecting leverage on higher volume and savings from cost reduction actions, partially offset by unfavorable price-cost primarily due to steel price increases which negatively impacted the second half of the fiscal year.

Financial Position, Liquidity and Capital Resources

Emerson maintains a conservative financial structure to provide the strength and flexibility necessary to achieve our strategic objectives and has been successful in efficiently deploying cash where needed worldwide to fund operations, complete acquisitions and sustain long-term growth.

Emerson is in a strong financial position, with total assets of \$36 billion and stockholders' equity of \$10 billion, and has the resources available for reinvestment in existing businesses, strategic acquisitions and managing its capital structure on a short- and long-term basis.

The Company continues to generate substantial operating cash flow with over \$2.9 billion in each of the last three years. Cash flows have been and are expected to be sufficient for at least the next 12 months to meet the Company's operating requirements, including those related to salaries and wages, working capital, capital expenditures, and other liquidity requirements associated with operations. The Company also has certain contractual obligations, primarily long-term debt and operating leases (see Notes 7, 10 and 11). The Company has been able to readily meet all its funding requirements and currently believes that sufficient funds will be available to meet its needs for the foreseeable future through operating cash flow, existing resources, short- and long-term debt capacity, or its \$3.5 billion revolving backup credit facility under which it has not incurred any borrowings.

CASH FLOW

	2020	2021	2022
Operating Cash Flow	\$ 3,083	3,575	2,922
<i>Percent of sales</i>	18.4 %	19.6 %	14.9 %
Capital Expenditures	\$ 538	581	531
<i>Percent of sales</i>	3.2 %	3.2 %	2.7 %
Free Cash Flow (Operating Cash Flow less Capital Expenditures)	\$ 2,545	2,994	2,391
<i>Percent of sales</i>	15.2 %	16.4 %	12.2 %
Operating Working Capital	\$ 866	704	1,040
<i>Percent of sales</i>	5.2 %	3.9 %	5.3 %

Operating cash flow for 2022 was \$2.9 billion, a \$653, or 18 percent decrease compared with 2021, reflecting higher working capital due to increased sales and ongoing supply chain constraints. Operating cash flow of \$3.6 billion in 2021 increased 16 percent compared to \$3.1 billion in 2020, due to higher earnings. At September 30, 2022, operating working capital as a percent of sales was 5.3 percent compared with 3.9 percent in 2021 and 5.2 percent in 2020. The increase for 2022 compared to the prior year is due to higher inventory levels to support sales growth and reflecting ongoing supply chain constraints. In addition, the Heritage AspenTech acquisition increased operating working capital by approximately \$250. As of September 30, 2022, Emerson's cash and equivalents totaled \$1.8 billion, which included approximately \$380 attributable to AspenTech. The cash held by AspenTech is intended to be used for its own purposes and is not a readily available source of liquidity for other Emerson general business purposes or to return to Emerson shareholders. Contributions to pension plans were \$43 in 2022, \$41 in 2021 and \$66 in 2020.

Capital expenditures were \$531, \$581 and \$538 in 2022, 2021 and 2020, respectively. Free cash flow (operating cash flow less capital expenditures) was \$2.4 billion in 2022, down 20 percent. Free cash flow was \$3.0 billion in 2021, compared with \$2.5 billion in 2020. The Company is targeting capital spending from continuing operations of approximately \$350 in 2023. Net cash paid in connection with acquisitions was \$5,702, \$1,611 and \$126 in 2022, 2021 and 2020, respectively.

The Company's agreement to sell a majority stake in its Climate Technologies business will impact its cash flows in future periods after the transaction is completed. In 2022, this business had operating cash flow of approximately \$875, capital expenditures of approximately \$200, and free cash flow of approximately \$675. The Company expects its remaining businesses will continue to generate significant cash flows that will be available to support the return of cash to shareholders and to reinvest for future growth.

On March 27, 2020, the CARES Act was enacted in response to the COVID-19 pandemic, and among other things, provided tax relief to businesses. Tax provisions of the CARES Act included the deferral of certain payroll taxes, relief for retaining employees, and other provisions. The Company deferred \$73 of certain payroll taxes through the end of calendar year 2020, of which approximately \$37 was paid in December 2021 with the remaining amount due in December 2022.

Dividends were \$1,223 (\$2.06 per share) in 2022, compared with \$1,210 (\$2.02 per share) in 2021 and \$1,209 (\$2.00 per share) in 2020. In October 2022, the Board of Directors voted to increase the quarterly cash dividend 1 percent, to an annualized rate of \$2.08 per share.

Purchases of Emerson common stock totaled \$500, \$500 and \$942 in 2022, 2021 and 2020, respectively, at average per share prices of \$87.64, \$94.65 and \$57.41.

In November 2015, the Board of Directors authorized the purchase of up to 70 million shares, and during fiscal 2022, the remaining shares available under this authorization were purchased. In March 2020, the Board of Directors authorized the purchase of an additional 60 million shares and a total of approximately 55 million shares remain available. The Company purchased 5.7 million shares in 2022, 5.3 million shares in 2021 and 16.4 million shares in 2020 under the authorizations.

LEVERAGE/CAPITALIZATION

	2020	2021	2022
Total Assets	\$ 22,882	24,715	35,672
Long-term Debt	\$ 6,326	5,793	8,259
Common Stockholders' Equity	\$ 8,405	9,883	10,364
Total Debt-to-Total Capital Ratio	47.1 %	40.3 %	50.0 %
Net Debt-to-Net Capital Ratio	33.2 %	30.4 %	45.3 %
Operating Cash Flow-to-Debt Ratio	41.2 %	53.6 %	28.2 %
Interest Coverage Ratio	14.4X	18.6X	18.9X

Total debt, which includes long-term debt, current maturities of long-term debt, commercial paper and other short-term borrowings, was \$10,374, \$6,665 and \$7,486 as of September 30, 2022, 2021 and 2020, respectively. The increased debt was due to the issuance of \$3 billion of long-term debt and increased commercial paper borrowings of approximately \$1.3 billion compared to September 30, 2021. The Company used the net proceeds from the sale of the notes and the increased commercial paper borrowings to fund the majority of its contribution of approximately \$6.0 billion to existing stockholders of Heritage AspenTech as part of the transaction. Long-term debt was issued in December 2021 as follows: \$1 billion of 2.0% notes due December 2028, \$1 billion of 2.2% notes due December 2031, and \$1 billion of 2.8% notes due December 2051. Additionally, the Company repaid \$500 of 2.625% notes that matured. See Note 4 and Note 11.

In fiscal 2021, the Company repaid \$300 of 4.25% notes that matured and in fiscal 2020 repaid \$500 of 4.875% notes that matured. Additionally, in fiscal 2020, the Company issued \$500 of 1.8% notes due October 2027, \$500 of 1.95% notes due October 2030 and \$500 of 2.75% notes due October 2050, and in September 2020, the Company issued \$750 of 0.875% notes due October 2026. The net proceeds from the sale of the notes were used to reduce commercial paper borrowings and for general corporate purposes. A portion of the proceeds from the notes issued in September 2020 were also used to fund the acquisition of OSI, which closed on October 1, 2020.

The total debt-to-total capital ratio and net debt-to-net capital ratio (less cash and short-term investments) increased in 2022 due to the increased borrowings to support the AspenTech transaction discussed above, while it decreased in 2021 due to lower long-term debt and higher equity compared to the prior year. The interest coverage ratio is computed as earnings before income taxes plus interest expense, divided by interest expense. The increase in 2022 reflects higher pretax earnings in the current year, which included the Vertiv subordinated interest gain of \$453, the gain on the Therm-O-Disc divestiture of \$486, and the Russia business exit loss of \$181. Excluding these items, the interest coverage ratio was 15.6, reflecting higher interest expense due to the increased long-term debt and commercial paper borrowings to fund the Heritage AspenTech acquisition. The increase in 2021 reflects higher earnings and slightly lower interest expense.

In May 2018, the Company entered into a \$3.5 billion five-year revolving backup credit facility with various banks, which replaced the April 2014 \$3.5 billion facility. The credit facility is maintained to support general corporate purposes, including commercial paper borrowings. The Company has not incurred any borrowings under this or previous facilities. The credit facility contains no financial covenants and is not subject to termination based on a change of credit rating or material adverse changes. The facility is unsecured and may be accessed under various interest rate alternatives at the Company's option. Fees to maintain the facility are immaterial. The Company expects to be able to renew its revolving backup credit facility in fiscal 2023 on substantially the same terms as the current facility. The Company also maintains a universal shelf registration statement on file with the SEC under which it can issue debt securities, preferred stock, common stock, warrants, share purchase contracts or share purchase units without a predetermined limit. Securities can be sold in one or more separate offerings with the size, price and terms to be determined at the time of sale.

Emerson's financial structure provides the flexibility necessary to achieve its strategic objectives. The Company has been successful in efficiently deploying cash where needed worldwide to fund operations, complete acquisitions and sustain long-term growth. At September 30, 2022, the majority of the Company's cash was held outside of the U.S. (primarily in Europe and Asia). The Company routinely repatriates a portion of its non-U.S. cash from earnings each

year, or otherwise when it can be accomplished tax efficiently, and provides for withholding taxes and any applicable U.S. income taxes as appropriate.

FINANCIAL INSTRUMENTS

The Company is exposed to market risk related to changes in interest rates, foreign currency exchange rates and commodity prices, and selectively uses derivative financial instruments, including forwards, swaps and purchased options to manage these risks. The Company does not hold derivatives for trading or speculative purposes. The value of derivatives and other financial instruments is subject to change as a result of market movements in rates and prices. Sensitivity analysis is one technique used to forecast the impact of these movements. Based on a hypothetical 10 percent increase in interest rates, a 10 percent decrease in commodity prices or a 10 percent weakening in the U.S. dollar across all currencies, the potential losses in future earnings, fair value or cash flows are not material. Sensitivity analysis has limitations; for example, a weaker U.S. dollar would benefit future earnings through favorable translation of non-U.S. operating results, and lower commodity prices would benefit future earnings through lower cost of sales. See Notes 1, and 9 through 11.

Critical Accounting Policies

Preparation of the Company's financial statements requires management to make judgments, assumptions and estimates regarding uncertainties that could affect reported revenue, expenses, assets, liabilities and equity. Note 1 describes the significant accounting policies used in preparation of the consolidated financial statements. The most significant areas where management judgments and estimates impact the primary financial statements are described below. Actual results in these areas could differ materially from management's estimates under different assumptions or conditions.

REVENUE RECOGNITION

The Company evaluates its contracts with customers to identify the promised goods or services and recognizes revenue for the identified performance obligations at the amount the Company expects to be entitled to in exchange for those goods or services. A performance obligation is a promise in a contract to transfer a distinct good or service to a customer. Revenue is recognized when, or as, performance obligations are satisfied and control has transferred to the customer, typically when products are shipped or delivered, title and risk of loss pass to the customer, and the Company has a present right to payment. The majority of the Company's revenues relate to a broad offering of manufactured products which are recognized at the point in time when control transfers, generally in accordance with shipping terms. A portion of the Company's revenues relate to the sale of software and post-contract customer support, parts and labor for repairs, and engineering services.

In some circumstances, contracts include multiple performance obligations, where revenue is recognized separately for each good or service, as well as contracts where revenue is recognized over time as control transfers to the customer. Tangible products represent a large majority of the delivered items in contracts with multiple performance obligations or where revenue is recognized over time, while a smaller portion is attributable to installation, service and maintenance. In sales arrangements that involve multiple performance obligations, revenue is allocated based on the relative standalone selling price for each performance obligation. Observable selling prices from actual transactions are used whenever possible. In other instances, the Company determines the standalone selling price based on third-party pricing or management's best estimate. For revenues recognized over time, the Company typically uses an input method to determine progress and recognize revenue, based on costs incurred. The Company believes costs incurred closely correspond with its performance under the contract and the transfer of control to the customer.

VALUATION OF ASSETS AND LIABILITIES ACQUIRED IN A BUSINESS COMBINATION

Assets and liabilities acquired in business combinations, including intangible assets, are accounted for using the acquisition method and recorded at their respective fair values. In fiscal 2022, the Company completed the acquisition of Aspen Technology, Inc. and engaged an independent third-party valuation specialist to assist in the determination of the fair value of intangible assets. This included the use of certain assumptions and estimates, including the projected revenue for the customer relationship and developed technology intangible asset and the obsolescence rate for the developed technology intangible asset. Although we believe the assumptions and estimates to be reasonable and appropriate, they require judgement and are based on experience and historical information obtained from Aspen Technology, Inc.

LONG-LIVED ASSETS

Long-lived assets, which include property, plant and equipment, goodwill and identifiable intangible assets, are reviewed for impairment whenever events or changes in business circumstances indicate impairment may exist. If the Company determines that the carrying value of a long-lived asset may not be recoverable, a permanent impairment charge is recorded for the amount by which the carrying value of the long-lived asset exceeds its estimated fair value. Reporting units are also reviewed for possible goodwill impairment at least annually, in the fourth quarter. If an initial assessment indicates it is more likely than not an impairment may exist, it is evaluated by comparing the reporting unit's estimated fair value to its carrying value. Fair value is generally estimated using an income approach that discounts estimated future cash flows using discount rates judged by management to be commensurate with the applicable risk. Estimates of future sales, operating results, cash flows and discount rates are subject to changes in the economic environment, including such factors as the general level of market interest rates, expected equity market returns and the volatility of markets served, particularly when recessionary economic circumstances continue for an extended period of time.

RETIREMENT PLANS

The Company maintains a prudent long-term investment strategy consistent with the duration of pension obligations. The determination of defined benefit plan expense and liabilities is dependent on various assumptions, including the expected annual rate of return on plan assets, the discount rate and the rate of annual compensation increases. In accordance with U.S. generally accepted accounting principles, actual results that differ from the Company's assumptions are accumulated as deferred actuarial gains or losses and amortized to expense in future periods. The Company's principal U.S. defined benefit plan is closed to employees hired after January 1, 2016 while shorter-tenured employees ceased accruing benefits effective October 1, 2016.

As of September 30, 2022, the U.S. pension plans were overfunded by \$513 in total (approximately 16 percent in excess of the projected benefit obligation), including unfunded plans totaling \$162. The non-U.S. plans were underfunded by \$57, including unfunded plans totaling \$236. The Company contributed a total of \$43 to defined benefit plans in 2022 and expects to contribute approximately \$40 in 2023. At year-end 2022, the discount rate for U.S. plans was 5.64 percent, and was 2.92 percent in 2021. The assumed investment return on plan assets was 6.00 percent in 2022, 6.50 percent in 2021 and 6.75 percent in 2020, and will be 6.00 percent for 2023. While management believes its assumptions used are appropriate, actual experience may differ. A 0.25 percentage point decrease in the U.S. and non-U.S. discount rates would have increased the total projected benefit obligation at September 30, 2022 by \$100 and increased fiscal 2023 pension expense by \$15. A 0.25 percentage point decrease in the expected return on plan assets would increase fiscal 2023 pension expense by \$15. See Note 12.

CONTINGENT LIABILITIES

The Company is a party to a number of pending legal proceedings and claims, including those involving general and product liability (including asbestos) and other matters, several of which claim substantial amounts of damages. The Company accrues for such liabilities when it is probable that future costs (including legal fees and expenses) will be incurred and such costs can be reasonably estimated. Accruals are based on developments to date; management's estimates of the outcomes of these matters; and the Company's experience in contesting, litigating and settling similar matters. The Company engages an outside expert to develop an actuarial estimate of its expected costs to resolve all pending and future asbestos claims, including defense costs, as well as its related insurance receivables. The reserve for asbestos litigation, which is recorded on an undiscounted basis, is based on projected claims through 2065.

Although it is not possible to predict the ultimate outcome of these matters, the Company historically has been largely successful in defending itself against claims and suits that have been brought against it, and will continue to defend itself vigorously in all such matters. While the Company believes a material adverse impact is unlikely, given the inherent uncertainty of litigation, a remote possibility exists that a future development could have a material adverse impact on the Company. See Note 13.

INCOME TAXES

Income tax expense and tax assets and liabilities reflect management's assessment of taxes paid or expected to be paid (received) on items included in the financial statements. Deferred tax assets and liabilities arise from temporary differences between the consolidated financial statement carrying amounts of existing assets and liabilities and their respective tax bases, and consideration of operating loss and tax credit carryforwards. Deferred income taxes are measured using enacted tax rates in effect for the year in which the temporary differences are expected to be recovered or settled. The impact on deferred tax assets and liabilities of a change in tax rates is recognized in the period that includes the enactment date. Valuation allowances are provided to reduce deferred tax assets to the

amount that will more likely than not be realized. This requires management to make judgments and estimates regarding the amount and timing of the reversal of taxable temporary differences, expected future taxable income, and the impact of tax planning strategies.

Uncertainty exists regarding tax positions taken in previously filed tax returns which remain subject to examination, along with positions expected to be taken in future returns. The Company provides for unrecognized tax benefits, based on the technical merits, when it is more likely than not that an uncertain tax position will not be sustained upon examination. Adjustments are made to the uncertain tax positions when facts and circumstances change, such as the closing of a tax audit; changes in applicable tax laws, including tax case rulings and legislative guidance; or expiration of the applicable statute of limitations.

Cash repatriated to the U.S. is generally not subject to U.S. federal income taxes. No provision is made for withholding taxes and any applicable U.S. income taxes on the undistributed earnings of non-U.S. subsidiaries where these earnings are considered indefinitely invested or otherwise retained for continuing international operations. Determination of the amount of taxes that might be paid on these undistributed earnings if eventually remitted is not practicable. See Notes 1 and 14.

Other Items

LEGAL MATTERS

At September 30, 2022, there were no known contingent liabilities (including guarantees, pending litigation, taxes and other claims) that management believes will be material in relation to the Company's financial statements, nor were there any material commitments outside the normal course of business.

NEW ACCOUNTING PRONOUNCEMENTS

Effective October 1, 2021, the Company adopted three accounting standard updates which had an immaterial or no impact on the Company's financial statements for the year ended September 30, 2022. These included:

- Updates to Accounting Standards Codification ("ASC") 805, *Business Combinations*, which clarify the accounting for contract assets and liabilities assumed in a business combination. In general, this will result in contract liabilities being recognized at their historical amounts under ASC 606, rather than at fair value in accordance with the general requirements of ASC 805.
- Updates to ASC 740, *Income Taxes*, which require the recognition of a franchise tax that is partially based on income as an income-based tax with any incremental amount as a non-income based tax. These updates also make certain changes to intra-period tax allocation principles and interim tax calculations.
- Updates to ASC 321, *Equity Securities*, ASC 323 *Investments - Equity Method and Joint Ventures*, and ASC 815, *Derivatives and Hedging*, which clarify how to account for the transition into and out of the equity method of accounting when evaluating observable transactions.

In fiscal 2021, the Company adopted two accounting standard updates and one new accounting standard, and in fiscal 2020 adopted updates to ASC 815, all of which had an immaterial impact on the Company's financial statements. These included:

- Updates to ASC 350, *Intangibles - Goodwill and Other*, which eliminate the requirement to measure impairment based on the implied fair value of goodwill compared to the carrying amount of a reporting unit's goodwill. Instead, goodwill impairment will be measured as the excess of a reporting unit's carrying amount over its estimated fair value.
- Updates to ASC 350, *Intangibles - Goodwill and Other*, which align the requirements for capitalizing implementation costs incurred in a software hosting arrangement with the requirements for costs incurred to develop or obtain internal-use software.
- Adoption of ASC 326, *Financial Instruments - Credit Losses*, which amends the impairment model by requiring entities to use a forward-looking approach to estimate lifetime expected credit losses on certain types of financial instruments, including trade receivables.

- Updates to ASC 815, *Derivatives and Hedging*, which permit hedging certain contractually specified risk components. The updates also eliminate the requirement to separately measure and report hedge ineffectiveness and simplify hedge documentation and effectiveness assessment requirements.

FISCAL 2023 OUTLOOK

Following the announcement of its Climate Technologies divestiture, Emerson will report financial results for Climate Technologies, InSinkErator and Therm-O-Disc as discontinued operations for all periods presented, beginning in 2023. The earnings from discontinued operations for 2023 are expected to be \$10 billion to \$11 billion, or \$17 to \$19 per share, including the net gains on 2023 divestitures.

Emerson expects order strength and backlog to support fiscal 2023 sales growth. For the full year, consolidated net sales from continuing operations are expected to be up 7 to 9 percent, with underlying sales up 6.5 to 8.5 percent excluding a 3.5 percent unfavorable impact from foreign currency translation and a 4 percent favorable impact from acquisitions net of divestitures.

Earnings per share from continuing operations are expected to be \$3.51 to \$3.66 (which excludes any potential impact from the 45 percent common equity ownership in Climate Technologies' income or loss post-close), while adjusted earnings per share are expected to be \$4.00 to \$4.15, excluding a \$0.13 per share impact from restructuring actions, a \$0.61 per share impact from amortization of intangibles, \$0.10 per share from interest income on the Climate Technologies note receivable, and \$0.15 per share of interest income on undeployed proceeds from the Climate Technologies and InSinkErator divestitures.

The Company's fiscal 2023 results from continuing operations after the Climate Technologies divestiture (assumed to close March 31, 2023 for purposes of the guidance above) will include interest income from the \$2.25 billion note receivable from Climate Technologies and reflect the 45 percent common equity ownership in the income, or loss, of Climate Technologies. Emerson will not control Climate Technologies post-closing and is therefore unable to estimate the amount of its 45 percent share of Climate Technologies' post-close results. The Company will exclude the interest income from the note receivable from Climate Technologies and its 45 percent share of Climate Technologies' operations in its calculation of fiscal 2023 adjusted earnings per share. Also excluded from adjusted earnings per share is the interest income on any undeployed net proceeds. The effect of Emerson's 45 percent share of Climate Technologies is expected to be immaterial to post-closing cash flows. The fiscal 2023 outlook assumes approximately \$1.2 billion of dividend payments and approximately \$2 billion to be returned to shareholders through share repurchases.

ITEM 7A - QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

The information from this Annual Report on Form 10-K set forth in Item 7 under "Financial Instruments" is hereby incorporated by reference.

ITEM 8 - FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

See the Company's consolidated financial statements and accompanying notes and the report thereon of KPMG LLP (PCAOB ID 185) that follow.

Consolidated Statements of Earnings
EMERSON ELECTRIC CO. & SUBSIDIARIES

Years ended September 30
(Dollars and shares in millions, except per share amounts)

	2020	2021	2022
Net sales	\$ 16,785	18,236	19,629
Cost of sales	9,776	10,673	11,441
Selling, general and administrative expenses	3,986	4,179	4,248
Gain on subordinated interest	—	—	(453)
Gain on sale of business	—	—	(486)
Other deductions, net	532	318	601
Interest expense, net of interest income of: 2020, \$19; 2021, \$12; 2022, \$35	156	154	193
Earnings before income taxes	2,335	2,912	4,085
Income taxes	345	585	855
Net earnings	1,990	2,327	3,230
Less: Noncontrolling interests in earnings of subsidiaries	25	24	(1)
Net earnings common stockholders	\$ 1,965	2,303	3,231
Earnings per share:			
Basic	\$ 3.26	3.85	5.44
Diluted	\$ 3.24	3.82	5.41
Weighted average outstanding shares:			
Basic	602.9	598.1	592.9
Diluted	606.6	601.8	596.3

See accompanying Notes to Consolidated Financial Statements.

Consolidated Statements of Comprehensive Income
EMERSON ELECTRIC CO. & SUBSIDIARIES

Years ended September 30
(Dollars in millions)

	2020	2021	2022
Net earnings	\$ 1,990	2,327	3,230
Other comprehensive income (loss), net of tax:			
Foreign currency translation	85	81	(644)
Pension and postretirement	64	605	37
Cash flow hedges	(2)	18	(14)
Total other comprehensive income (loss)	147	704	(621)
Comprehensive income	2,137	3,031	2,609
Less: Noncontrolling interests in comprehensive income of subsidiaries	27	23	(9)
Comprehensive income common stockholders	\$ 2,110	3,008	2,618

See accompanying Notes to Consolidated Financial Statements.

Consolidated Balance Sheets
EMERSON ELECTRIC CO. & SUBSIDIARIES

September 30 (Dollars and shares in millions, except per share amounts)

	2021	2022
ASSETS		
Current assets		
Cash and equivalents	\$ 2,354	1,804
Receivables, less allowances of \$116 in 2021 and \$108 in 2022	2,971	3,008
Inventories	2,050	2,191
Other current assets	1,057	1,503
Total current assets	8,432	8,506
Property, plant and equipment, net	3,738	3,361
Other assets		
Goodwill	7,723	14,662
Other intangible assets	2,877	6,724
Other	1,945	2,419
Total other assets	12,545	23,805
Total assets	\$ 24,715	35,672
LIABILITIES AND EQUITY		
Current liabilities		
Short-term borrowings and current maturities of long-term debt	\$ 872	2,115
Accounts payable	2,108	2,028
Accrued expenses	3,266	3,634
Total current liabilities	6,246	7,777
Long-term debt	5,793	8,259
Other liabilities	2,753	3,320
Equity		
Common stock, \$0.50 par value; authorized, 1,200.0 shares; issued, 953.4 shares; outstanding, 595.8 shares in 2021; 591.4 shares in 2022	477	477
Additional paid-in-capital	522	57
Retained earnings	26,047	28,053
Accumulated other comprehensive income (loss)	(872)	(1,485)
	26,174	27,102
Less: Cost of common stock in treasury, 357.6 shares in 2021; 362.0 shares in 2022	16,291	16,738
Common stockholders' equity	9,883	10,364
Noncontrolling interests in subsidiaries	40	5,952
Total equity	9,923	16,316
Total liabilities and equity	\$ 24,715	35,672

See accompanying Notes to Consolidated Financial Statements.

Consolidated Statements of Equity
EMERSON ELECTRIC CO. & SUBSIDIARIES

Years ended September 30
(Dollars in millions, except per share amounts)

	2020	2021	2022
Common stock	\$ 477	477	477
Additional paid-in-capital			
Beginning balance	393	470	522
Stock plans	77	52	85
Heritage AspenTech acquisition	—	—	(550)
Ending balance	470	522	57
Retained earnings			
Beginning balance	24,199	24,955	26,047
Net earnings common stockholders	1,965	2,303	3,231
Dividends paid (per share: 2020, \$2.00; 2021, \$2.02; 2022, \$2.06)	(1,209)	(1,210)	(1,225)
Adoption of accounting standard updates	—	(1)	—
Ending balance	24,955	26,047	28,053
Accumulated other comprehensive income (loss)			
Beginning balance	(1,722)	(1,577)	(872)
Foreign currency translation	83	82	(636)
Pension and postretirement	64	605	37
Cash flow hedges	(2)	18	(14)
Ending balance	(1,577)	(872)	(1,485)
Treasury stock			
Beginning balance	(15,114)	(15,920)	(16,291)
Purchases	(942)	(500)	(500)
Issued under Emerson stock plans	136	129	53
Ending balance	(15,920)	(16,291)	(16,738)
Common stockholders' equity	8,405	9,883	10,364
Noncontrolling interests in subsidiaries			
Beginning balance	40	42	40
Net earnings	25	24	(1)
AspenTech Stock plans	—	—	35
Other comprehensive income	2	(1)	(8)
Dividends paid	(25)	(25)	(4)
Heritage AspenTech acquisition	—	—	5,890
Ending balance	42	40	5,952
Total equity	\$ 8,447	9,923	16,316

See accompanying Notes to Consolidated Financial Statements.

Consolidated Statements of Cash Flows
EMERSON ELECTRIC CO. & SUBSIDIARIES

Years ended September 30 (Dollars in millions)

	2020	2021	2022
Operating activities			
Net earnings	\$ 1,990	2,327	3,230
Adjustments to reconcile net earnings to net cash provided by operating activities:			
Depreciation and amortization	854	969	1,039
Stock compensation expense	110	224	144
Pension expense	67	28	2
Pension funding	(66)	(41)	(43)
Changes in operating working capital	148	203	(515)
Gain on subordinated interest	—	—	(453)
Gain on sale of business	—	—	(486)
Other, net	(20)	(135)	4
Cash provided by operating activities	3,083	3,575	2,922
Investing activities			
Capital expenditures	(538)	(581)	(531)
Purchases of businesses, net of cash and equivalents acquired	(126)	(1,611)	(5,702)
Divestitures of businesses	—	34	601
Proceeds from subordinated interest	—	—	438
Other, net	(76)	38	(140)
Cash used in investing activities	(740)	(2,120)	(5,334)
Financing activities			
Net decrease in short-term borrowings	(90)	(504)	1,241
Proceeds from short-term borrowings greater than three months	1,043	71	1,162
Payments of short-term borrowings greater than three months	(1,043)	(71)	(1,165)
Proceeds from long-term debt	2,233	—	2,975
Payments of long-term debt	(503)	(308)	(522)
Dividends paid	(1,209)	(1,210)	(1,223)
Purchases of common stock	(942)	(500)	(500)
Other, net	2	100	80
Cash used in financing activities	(509)	(2,422)	2,048
Effect of exchange rate changes on cash and equivalents	(13)	6	(186)
Increase (Decrease) in cash and equivalents	1,821	(961)	(550)
Beginning cash and equivalents	1,494	3,315	2,354
Ending cash and equivalents	\$ 3,315	2,354	1,804
Changes in operating working capital			
Receivables	\$ 207	(165)	(214)
Inventories	(6)	(126)	(469)
Other current assets	33	(99)	(65)
Accounts payable	(196)	370	122
Accrued expenses	110	223	111
Total changes in operating working capital	\$ 148	203	(515)

See accompanying Notes to Consolidated Financial Statements.

Notes to Consolidated Financial Statements

EMERSON ELECTRIC CO. & SUBSIDIARIES

Years ended September 30

(Dollars in millions, except per share amounts or where noted)

(1) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Financial Statement Presentation

The preparation of the financial statements in conformity with U.S. generally accepted accounting principles (U.S. GAAP) requires management to make estimates and assumptions that affect reported amounts and related disclosures. Actual results could differ from these estimates. Certain prior year amounts have been reclassified to conform with current year presentation to reflect the business combination with AspenTech (see Note 4), which is reported as a new segment and includes the historical results of Open Systems International, Inc. and the Geological Simulation Software business. These businesses were previously reported in the Automation Solutions segment (see Note 18).

Effective October 1, 2021, the Company adopted three accounting standard updates which had an immaterial or no impact on the Company's financial statements for the year ended September 30, 2022. These included:

- Updates to Accounting Standards Codification ("ASC") 805, *Business Combinations*, which clarify the accounting for contract assets and liabilities assumed in a business combination. In general, this will result in contract liabilities being recognized at their historical amounts under ASC 606, rather than at fair value in accordance with the general requirements of ASC 805.
- Updates to ASC 740, *Income Taxes*, which require the recognition of a franchise tax that is partially based on income as an income-based tax with any incremental amount as a non-income based tax. These updates also make certain changes to intra-period tax allocation principles and interim tax calculations.
- Updates to ASC 321, *Equity Securities*, ASC 323 *Investments - Equity Method and Joint Ventures*, and ASC 815, *Derivatives and Hedging*, which clarify how to account for the transition into and out of the equity method of accounting when evaluating observable transactions.

In fiscal 2021, the Company adopted two accounting standard updates and one new accounting standard, and in fiscal 2020 adopted updates to ASC 815, all of which had an immaterial impact on the Company's financial statements. These included:

- Updates to ASC 350, *Intangibles - Goodwill and Other*, which eliminate the requirement to measure impairment based on the implied fair value of goodwill compared to the carrying amount of a reporting unit's goodwill. Instead, goodwill impairment will be measured as the excess of a reporting unit's carrying amount over its estimated fair value.
- Updates to ASC 350, *Intangibles - Goodwill and Other*, which align the requirements for capitalizing implementation costs incurred in a software hosting arrangement with the requirements for costs incurred to develop or obtain internal-use software.
- Adoption of ASC 326, *Financial Instruments - Credit Losses*, which amends the impairment model by requiring entities to use a forward-looking approach to estimate lifetime expected credit losses on certain types of financial instruments, including trade receivables.
- Updates to ASC 815, *Derivatives and Hedging*, which permit hedging certain contractually specified risk components. The updates also eliminate the requirement to separately measure and report hedge ineffectiveness and simplify hedge documentation and effectiveness assessment requirements.

Principles of Consolidation

The consolidated financial statements include the accounts of the Company and its controlled affiliates. Intercompany transactions, profits and balances are eliminated in consolidation. Investments of 20 percent to 50 percent of the voting shares of other entities are accounted for by the equity method. Investments in publicly traded

companies of less than 20 percent are carried at fair value, with changes in fair value reflected in accumulated other comprehensive income. Investments in nonpublicly traded companies of less than 20 percent are carried at cost, minus impairment, and adjusted for observable price changes in orderly transactions.

Foreign Currency Translation

The functional currency for most of the Company's non-U.S. subsidiaries is the local currency. Adjustments resulting from translating local currency financial statements into U.S. dollars are reflected in accumulated other comprehensive income.

Cash Equivalents

Cash equivalents consist of highly liquid investments with original maturities of three months or less.

Inventories

Inventories are stated at the lower of cost and net realizable value. The majority of inventory is valued based on standard costs, which are revised at the beginning of each year and approximate average costs, while the remainder is principally valued on a first-in, first-out basis. Following are the components of inventory as of September 30:

	2021	2022
Finished products	\$ 616	628
Raw materials and work in process	1,434	1,563
Total inventories	<u>\$ 2,050</u>	<u>2,191</u>

Fair Value Measurement

ASC 820, *Fair Value Measurement*, establishes a formal hierarchy and framework for measuring certain financial statement items at fair value, and requires disclosures about fair value measurements and the reliability of valuation inputs. Under ASC 820, measurement assumes the transaction to sell an asset or transfer a liability occurs in the principal or at least the most advantageous market for that asset or liability. Within the hierarchy, Level 1 instruments use observable market prices for an identical item in active markets and have the most reliable valuations. Level 2 instruments are valued through broker/dealer quotation or other approaches using market-observable inputs for similar items in active markets, including forward and spot prices, interest rates and volatilities. Level 3 instruments are valued using inputs not observable in an active market, such as company-developed future cash flow estimates, and are considered the least reliable. Valuations for all of the Company's financial instruments fall within Level 2. The fair value of the Company's long-term debt is Level 2, estimated using current interest rates and pricing from financial institutions and other market sources for debt with similar maturities and characteristics.

Property, Plant and Equipment

The Company records investments in land, buildings, and machinery and equipment at cost. Depreciation is computed principally using the straight-line method over estimated service lives, which for principal assets are 30 to 40 years for buildings and 8 to 12 years for machinery and equipment. Long-lived tangible assets are reviewed for impairment whenever events or changes in business circumstances indicate the carrying value of the assets may not be recoverable. Impairment losses are recognized based on estimated fair values if the sum of estimated future undiscounted cash flows of the related assets is less than the carrying values.

The components of property, plant and equipment as of September 30 follow:

	2021	2022
Land	\$ 359	317
Buildings	2,493	2,364
Machinery and equipment	6,097	5,678
Construction in progress	478	459
Property, plant and equipment, at cost	<u>9,427</u>	<u>8,818</u>
Less: Accumulated depreciation	5,689	5,457
Property, plant and equipment, net	<u>\$ 3,738</u>	<u>3,361</u>

Goodwill and Other Intangible Assets

Assets and liabilities acquired in business combinations are accounted for using the acquisition method and recorded at their respective fair values. Substantially all goodwill is assigned to the reporting unit that acquires a

business. A reporting unit is an operating segment as defined in ASC 280, *Segment Reporting*, or a business one level below an operating segment if discrete financial information for that business unit is prepared and regularly reviewed by the segment manager. The Company conducts annual impairment tests of goodwill in the fourth quarter. If an initial assessment indicates it is more likely than not goodwill might be impaired, it is evaluated by comparing the reporting unit's estimated fair value to its carrying value. An impairment charge would be recorded for the amount by which the carrying value of the reporting unit exceeds the estimated fair value. Goodwill is also tested for impairment between annual tests if events or circumstances indicate the fair value of a unit may be less than its carrying value. Estimated fair values of reporting units are Level 3 measures and are developed generally under an income approach that discounts estimated future cash flows using risk-adjusted interest rates, as well as earnings multiples or other techniques as warranted. Fair values are subject to changes in underlying economic conditions.

All of the Company's identifiable intangible assets are subject to amortization on a straight-line basis over their estimated useful lives. Identifiable intangibles consist of intellectual property such as technology, patents and trademarks, customer relationships and capitalized software. Identifiable intangibles are also subject to evaluation for potential impairment if events or circumstances indicate the carrying amount may not be recoverable. See Note 8.

Leases

The Company leases offices; manufacturing facilities and equipment; and transportation, information technology and office equipment under operating lease arrangements. Finance lease arrangements are immaterial. The Company determines whether an arrangement is, or contains, a lease at contract inception. An arrangement contains a lease if the Company has the right to direct the use of and obtain substantially all of the economic benefits of an identified asset. Right-of-use assets and lease liabilities are recognized at lease commencement based on the present value of lease payments over the lease term. Leases with an initial term of 12 months or less are not recognized on the balance sheet and are recorded as short-term lease expense. The discount rate used to calculate present value is the Company's incremental borrowing rate based on the lease term and the economic environment of the applicable country or region.

Certain leases contain renewal options or options to terminate prior to lease expiration, which are included in the measurement of right-of-use assets and lease liabilities when it is reasonably certain they will be exercised. The Company has elected to account for lease and non-lease components as a single lease component for its offices and manufacturing facilities. Some lease arrangements include payments that are adjusted periodically based on actual charges incurred for common area maintenance, utilities, taxes and insurance, or changes in an index or rate referenced in the lease. The fixed portion of these payments is included in the measurement of right-of-use assets and lease liabilities at lease commencement, while the variable portion is recorded as variable lease expense. The Company's leases typically do not contain material residual value guarantees or restrictive covenants.

Product Warranty

Warranties vary by product line and are competitive for the markets in which the Company operates. Warranties are largely offered to provide assurance that the product will function as intended and generally extend for a period of one to two years from the date of sale or installation. Provisions for warranty expense are estimated at the time of sale based on historical experience and adjusted quarterly for any known issues that may arise. Product warranty expense is less than one-half of one percent of sales.

Revenue Recognition

Emerson is a global manufacturer that designs and manufactures products and delivers services that bring technology and engineering together to provide innovative solutions for its customers, largely in the form of tangible products. The Company evaluates its contracts with customers to identify the promised goods or services and recognizes revenue for the identified performance obligations at the amount the Company expects to be entitled to in exchange for those goods or services. A performance obligation is a promise in a contract to transfer a distinct good or service to a customer. Revenue is recognized when, or as, performance obligations are satisfied and control has transferred to the customer, typically when products are shipped or delivered, title and risk of loss pass to the customer, and the Company has a present right to payment. The majority of the Company's revenues relate to a broad offering of manufactured products which are recognized at the point in time when control transfers, generally in accordance with shipping terms. A portion of the Company's revenues relate to the sale of software and post-contract customer support, parts and labor for repairs, and engineering services. In some circumstances,

contracts include multiple performance obligations, where revenue is recognized separately for each good or service, as well as contracts where revenue is recognized over time as control transfers to the customer.

Revenue is recognized over time for approximately 10 percent of the Company's revenues. The majority of these revenues relate to projects in the Systems & Software product offering within the Automation Solutions segment where revenue is recognized using the percentage-of-completion method to reflect the transfer of control over time, while a smaller amount is attributable to long-term maintenance and service contracts where revenue is typically recognized on a straight-line basis as the services are provided. Approximately 5 percent of revenues relate to sales arrangements with multiple performance obligations, principally in the Automation Solutions and AspenTech segments. Tangible products represent a large majority of the delivered items in contracts with multiple performance obligations or where revenue is recognized over time, while a smaller portion is attributable to installation, service and maintenance.

For projects where revenue is recognized over time, the Company typically uses an input method to determine progress and recognize revenue, based on costs incurred. The Company believes costs incurred closely correspond with its performance under the contract and the transfer of control to the customer.

In sales arrangements that involve multiple performance obligations, revenue is allocated based on the relative standalone selling price for each performance obligation. Observable selling prices from actual transactions are used whenever possible. In other instances, the Company determines the standalone selling price based on third-party pricing or management's best estimate. Generally, contract duration is short-term, and cancellation, termination or refund provisions apply only in the event of contract breach and are rarely invoked.

Payment terms vary but are generally short-term in nature. The Company's long-term contracts, where revenue is generally recognized over time, are typically billed as work progresses in accordance with the contract terms and conditions, either at periodic intervals or upon achievement of certain milestones. The timing of revenue recognition and billings under these contracts results in either unbilled receivables (contract assets) when revenue recognized exceeds billings, or customer advances (contract liabilities) when billings exceed revenue recognized. Unbilled receivables are reclassified to accounts receivable when an unconditional right to consideration exists, typically when a milestone in the contract is achieved. The Company does not evaluate whether the transaction price includes a significant financing component for contracts where the time between cash collection and performance is less than one year.

Certain arrangements with customers include variable consideration, typically in the form of rebates, cash discounts or penalties. In limited circumstances, the Company sells products with a general right of return. In most instances, returns are limited to product quality issues. The Company records a reduction to revenue at the time of sale to reflect the ultimate amount of consideration it expects to receive. The Company's estimates are updated quarterly based on historical experience, trend analysis, and expected market conditions. Variable consideration is typically not constrained at the time revenue is recognized. See Notes 2 and 18 for additional information about the Company's revenues.

Derivatives and Hedging

In the normal course of business, the Company is exposed to changes in interest rates, foreign currency exchange rates and commodity prices due to its worldwide presence and diverse business profile. The Company's foreign currency exposures relate to transactions denominated in currencies that differ from the functional currencies of its business units, primarily in euros, Mexican pesos, and Singapore dollars. Primary commodity exposures are price fluctuations on forecasted purchases of copper and aluminum and related products. As part of the Company's risk management strategy, derivative instruments are selectively used in an effort to minimize the impact of these exposures. Foreign exchange forwards and options are utilized to hedge foreign currency exposures impacting sales or cost of sales transactions, firm commitments and the fair value of assets and liabilities, while swap and option contracts may be used to minimize the effect of commodity price fluctuations on the cost of sales. Non-U.S. dollar obligations are utilized to reduce foreign currency risk associated with the Company's net investments in foreign operations. All derivatives are associated with specific underlying exposures and the Company does not hold derivatives for trading or speculative purposes. The duration of hedge positions is generally two years or less, except for the Company's net investment hedges.

All derivatives are accounted for under ASC 815, *Derivatives and Hedging*, and recognized at fair value. For derivatives hedging variability in future cash flows, any gain or loss is deferred in stockholders' equity and recognized when the underlying hedged transaction impacts earnings. The majority of the Company's derivatives

that are designated as hedges and qualify for hedge accounting are cash flow hedges. For derivatives hedging the fair value of existing assets or liabilities, both the gain or loss on the derivative and the offsetting loss or gain on the hedged item are recognized in earnings each period. Currency fluctuations on non-U.S. dollar obligations that have been designated as hedges of net investments in foreign operations are recognized in accumulated other comprehensive income (loss) and reclassified to income in the same period when a foreign operation is sold or substantially liquidated and the gain or loss related to the sale is included in income. To the extent that any hedge is not fully effective at offsetting changes in the underlying hedged item, there could be a net earnings impact.

The Company also uses derivatives to hedge economic exposures that do not receive hedge accounting under ASC 815. The underlying exposures for these hedges relate primarily to purchases of commodity-based components used in the Company's manufacturing processes, and the revaluation of certain foreign-currency-denominated assets and liabilities. In addition, in fiscal 2022 AspenTech entered into foreign currency forward contracts to mitigate the impact of foreign currency exchange associated with the Micromine purchase price. Gains or losses on derivative instruments not designated as hedges are recognized in the income statement immediately.

Counterparties to derivative arrangements are companies with investment-grade credit ratings. The Company has bilateral collateral arrangements with counterparties with credit rating-based posting thresholds that vary depending on the arrangement. If credit ratings on the Company's debt fall below pre-established levels, counterparties can require immediate full collateralization on all derivatives in net liability positions. The maximum amount that could potentially have been required was immaterial. The Company also can demand full collateralization of derivatives in net asset positions should any counterparty credit ratings fall below certain thresholds. No collateral was posted with counterparties and none was held by the Company at year end. Risk from credit loss when derivatives are in asset positions is not considered material. The Company has master netting arrangements in place with its counterparties that allow the offsetting of certain derivative-related amounts receivable and payable when settlement occurs in the same period. Accordingly, counterparty balances are netted in the consolidated balance sheet and are reported in other current assets or accrued expenses as appropriate, depending on positions with counterparties as of the balance sheet date. See Note 9.

Income Taxes

The provision for income taxes is based on pretax income reported in the consolidated statements of earnings and tax rates currently enacted in each jurisdiction. Certain income and expense items are recognized in different time periods for financial reporting and income tax filing purposes, and deferred income taxes are provided for the effect of temporary differences. The Tax Cuts and Jobs Act subjects the Company to U.S. tax on global intangible low-taxed income earned by certain of its non-U.S. subsidiaries. The Company has elected to recognize this tax as a period expense when it is incurred. The Company also provides for withholding taxes and any applicable U.S. income taxes on earnings intended to be repatriated from non-U.S. locations. No provision has been made for these taxes on approximately \$6.0 billion of undistributed earnings of non-U.S. subsidiaries as of September 30, 2022, as these earnings are considered indefinitely invested or otherwise retained for continuing international operations. Recognition of withholding taxes and any applicable U.S. income taxes on undistributed non-U.S. earnings would be triggered by a management decision to repatriate those earnings. Determination of the amount of taxes that might be paid on these undistributed earnings if eventually remitted is not practicable. See Note 14.

(2) REVENUE RECOGNITION

The following table summarizes the balances of the Company's unbilled receivables (contract assets), which are reported in Other assets (current and noncurrent), and its customer advances (contract liabilities), which are reported in Accrued expenses and Other liabilities.

	2021	2022
Unbilled receivables (contract assets)	\$ 528	1,399
Customer advances (contract liabilities)	(730)	(879)
Net contract liabilities	\$ (202)	520

The majority of the Company's contract balances relate to (1) arrangements where revenue is recognized over time and payments from customers are made according to a contractual billing schedule, and (2) revenue from term software license arrangements sold by Heritage AspenTech where the license revenue is recognized upfront upon delivery. The change in the net contract balance was due to the Heritage AspenTech acquisition, which added net contract assets of approximately \$700, partially offset by an increase in net contract liabilities for the Company's existing businesses due to customer billings exceeding revenue recognized for performance completed during the period. Revenue recognized for 2022 included approximately \$552 that was included in the beginning contract liability balance. Other factors that impacted the change in net contract liabilities were immaterial.

Revenue recognized for 2022 for performance obligations that were satisfied in previous periods, including cumulative catchup adjustments on the Company's long-term contracts, was not material. Capitalized amounts related to incremental costs to obtain customer contracts and costs to fulfill contracts are immaterial.

As of September 30, 2022, the Company's backlog relating to unsatisfied (or partially unsatisfied) performance obligations in contracts with its customers was approximately \$8.1 billion, which includes approximately \$700 related to the Heritage AspenTech acquisition. Heritage AspenTech's remaining performance obligations primarily relate to software maintenance in long-term contracts for unspecified future software updates provided on a when-and-if available basis. The Company expects to recognize approximately 80 percent of its remaining performance obligations as revenue over the next 12 months, with the remainder substantially over the subsequent two years thereafter.

See Note 18 for additional information about the Company's revenues.

(3) WEIGHTED-AVERAGE COMMON SHARES

Basic earnings per common share consider only the weighted-average of common shares outstanding while diluted earnings per common share also consider the dilutive effects of stock options and incentive shares. An inconsequential number of shares of common stock were excluded from the computation of dilutive earnings per share in 2022, 2021 and 2020 as the effect would have been antidilutive. Earnings allocated to participating securities were inconsequential for all years presented.

Reconciliations of weighted-average shares for basic and diluted earnings per common share follow (shares in millions):

	2020	2021	2022
Basic shares outstanding	602.9	598.1	592.9
Dilutive shares	3.7	3.7	3.4
Diluted shares outstanding	606.6	601.8	596.3

(4) ACQUISITIONS AND DIVESTITURES

Aspen Technology

On May 16, 2022, the Company completed the transactions contemplated by its definitive agreement with Aspen Technology, Inc. ("Heritage AspenTech") to contribute two of Emerson's stand-alone industrial software businesses, Open Systems International, Inc. and the Geological Simulation Software business (collectively, the "Emerson Industrial Software Business"), along with approximately \$6.0 billion in cash to Heritage AspenTech stockholders, to create "New AspenTech", a diversified, high-performance industrial software leader with greater scale, capabilities and technologies (hereinafter referred to as "AspenTech"). Upon closing of the transaction, Emerson beneficially owned 55 percent of the outstanding shares of AspenTech common stock (on a fully diluted basis) and former Heritage AspenTech stockholders owned the remaining outstanding shares of AspenTech common stock. AspenTech and its subsidiaries now operate under Heritage AspenTech's previous name "Aspen Technology, Inc." and AspenTech common stock is traded on NASDAQ under AspenTech's previous stock ticker symbol "AZPN."

The business combination has been accounted for using the acquisition method of accounting with Emerson considered the accounting acquirer of Heritage AspenTech. The net assets of Heritage AspenTech were recorded at their estimated fair value and the Emerson Industrial Software Business continues at its historical basis. The Company recorded a noncontrolling interest of \$5.9 billion for the 45 percent ownership interest of former Heritage AspenTech stockholders in AspenTech. The noncontrolling interest associated with the Heritage AspenTech acquired net assets was recorded at fair value determined using the closing market price per share of Heritage AspenTech as of May 16, 2022, while the portion attributable to the Emerson Industrial Software business was recorded at its historical carrying amount. The impact of recognizing the noncontrolling interest in the Emerson Industrial Software Business resulted in a decrease to additional paid-in-capital of \$550.

The following table summarizes the components of the purchase consideration reflected in the acquisition accounting using Heritage AspenTech's shares outstanding and closing market price per share as of May 16, 2022 (in millions except share and per share data):

Heritage AspenTech shares outstanding	66,662,482
Heritage AspenTech share price	\$ 166.30
Purchase price	\$ 11,086
Value of stock-based compensation awards attributable to pre-combination service	102
Total purchase consideration	<u>\$ 11,188</u>

The total purchase consideration for Heritage AspenTech was preliminarily allocated to assets and liabilities as follows. Valuations of acquired assets and liabilities are in-process and subject to refinement.

Cash and equivalents	\$ 274
Receivables	61
Other current assets	262
Property, plant equipment	4
Goodwill (\$34 expected to be tax-deductible)	7,225
Other intangible assets	4,390
Other assets	511
Total assets	<u>12,727</u>
Short-term borrowings	27
Accounts payable	8
Accrued expenses	113
Long-term debt	255
Deferred taxes and other liabilities	1,136
Total purchase consideration	<u>\$ 11,188</u>

Emerson's cash contribution of approximately \$6.0 billion was paid out at approximately \$87.69 per share (on a fully diluted basis) to holders of issued and outstanding shares of Heritage AspenTech common stock as of the closing of the transactions, with \$168 of cash remaining on AspenTech's balance sheet as of the closing which is not included in the allocation of purchase consideration above.

The estimated intangible assets attributable to the transaction are comprised of the following (in millions):

	Amount	Estimated Useful Life (Years)
Developed technology	\$ 1,350	10
Customer relationships	2,300	15
Trade names	430	Indefinite-lived
Backlog	310	3
Total	\$ 4,390	

Results of operations for 2022 attributable to the Heritage AspenTech acquisition include sales of \$356 while the impact to GAAP net earnings was not material.

Pro Forma Financial Information

The following unaudited proforma consolidated condensed financial results of operations are presented as if the acquisition of Heritage AspenTech occurred on October 1, 2020. The pro forma information is presented for informational purposes only and is not indicative of the results of operations that would have been achieved had the acquisition occurred as of that time (\$ in millions, except per share amounts).

	2021	2022
Net Sales	\$ 18,966	20,042
Net earnings common stockholders	\$ 2,106	3,262
Diluted earnings per share	\$ 3.50	5.46

The pro forma results for 2021 include \$159 of transaction costs which were assumed to be incurred in the first fiscal quarter of 2021. Of these transaction costs, \$91 were included in the Company's reported results for 2022, but have been excluded from the fiscal 2022 pro forma results above. In addition, Heritage AspenTech incurred \$68 of transaction costs prior to the completion of the acquisition that were not included in Emerson's reported results. The pro forma results for 2021 include estimated interest expense of \$147, respectively, related to the issuance of \$3.0 billion of term debt and increased commercial paper borrowings to fund the acquisition, while results for 2022 include additional interest expense of \$56 to reflect the increased borrowings as if they were outstanding for the entire fiscal year.

Other Transactions

On July 27, 2022, AspenTech entered into an agreement to acquire Micromine, a global leader in design and operational solutions for the mining industry, for AU \$900 (approximately \$623 USD based on exchange rates when the transaction was announced). The transaction is expected to close by the end of calendar 2022, subject to various regulatory approvals.

On May 31, 2022 the Company completed the divestiture of its Therm-O-Disc sensing and protection technologies business, which was reported in the Climate Technologies segment, to an affiliate of One Rock Capital Partners, LLC. The Company recognized a pretax gain of \$486 (\$429 after-tax, \$0.72 per share).

On May 4, 2022, Emerson announced its intention to exit business operations in Russia and divest Metran, its Russia-based manufacturing subsidiary, and on September 27, 2022, announced an agreement to sell the business to the local management group. Emerson's historical net sales in Russia were principally in the Automation Solutions segment and in total, represented approximately 1.5 percent of consolidated annual sales. The Company recognized a pretax loss of \$181 (\$190 after-tax, in total \$0.32 per share) related to its exit of business operations in Russia. This charge, which included a loss of \$36 in operations and \$145 reported in Other deductions (\$10 of

which is reported in restructuring costs), is primarily non-cash. The transaction will be subject to regulatory and government approvals, and other customary closing conditions. Emerson will work closely with the local Russia management group to help ensure a smooth transition for employees through the sale process.

In 2022, the Company acquired three other businesses, two in the Automation Solutions segment and one in the AspenTech segment, for \$130, net of cash acquired. The three businesses had combined annual sales of approximately \$40.

On October 1, 2020, the Company completed the acquisition of Open Systems International, Inc. (OSI), a leading operations technology software provider in the global power industry, for approximately \$1.6 billion, net of cash acquired. This business, which had net sales of \$191 in fiscal 2021 and is reported in the AspenTech segment, expands the Company's offerings in the power industry to include the digitization and modernization of the electric grid. The Company recognized goodwill of \$967 (none of which is expected to be tax deductible), identifiable intangible assets of \$783, primarily intellectual property and customer relationships with a weighted-average useful life of approximately 11 years, and deferred tax liabilities of \$193. Results of operations for the year ended September 30, 2021 included first year pretax acquisition accounting charges related to backlog amortization and deferred revenue of \$30 and \$14, respectively, and fees of \$6.

As previously disclosed, the Company sold its network power systems business (rebranded as Vertiv, now a publicly traded company, symbol VRT) in 2017 and retained a subordinated interest contingent upon the equity holders first receiving a threshold cash return on their initial investment. In the first quarter of fiscal 2022, the equity holders' cumulative cash return exceeded the threshold and as a result, the Company received a distribution of \$438 in November 2021 (in total, a pretax gain of \$453 was recognized in the first quarter, \$358 after-tax, \$0.60 per share). Based on the terms of the agreement and the current calculation, the Company could receive additional distributions of approximately \$75 which are expected to be received over the next two-to-three years. However, the distributions are contingent on the timing and price at which Vertiv shares are sold by the equity holders and therefore, there can be no assurance as to the amount or timing of the remaining distributions to the Company.

In 2020, the Company acquired three businesses, two in the Automation Solutions segment and one in the Climate Technologies segment, for \$126, net of cash acquired. These three businesses had combined annual sales of approximately \$50.

(5) OTHER DEDUCTIONS, NET

Other deductions, net are summarized below:

	2020	2021	2022
Amortization of intangibles (intellectual property and customer relationships)	\$ 239	300	357
Restructuring costs	284	150	86
Acquisition/divestiture costs	—	—	110
Foreign currency transaction (gains) losses	21	4	7
Investment-related gains & gains from sales of capital assets	—	(69)	(30)
Russia business exit	—	—	135
Other	(12)	(67)	(64)
Total	\$ 532	318	601

In fiscal 2022, intangibles amortization included \$97 related to the Heritage AspenTech acquisition, while the prior year included backlog amortization related to the OSI acquisition of \$30. Foreign currency transaction losses included a \$50 mark-to-market loss in fiscal 2022 related to foreign currency forward contracts entered into by AspenTech to mitigate the impact of foreign currency exchange associated with the Micromine purchase price. Other is composed of several items, including pension expense, litigation costs, provision for bad debt and other items, none of which is individually significant.

(6) RESTRUCTURING COSTS

Each year the Company incurs costs to size its businesses to levels appropriate for current economic conditions and to continually improve its cost structure and operational efficiency, deploy assets globally, and remain competitive on a worldwide basis. Costs result from numerous individual actions implemented across the Company's various operating units on an ongoing basis and can include costs for moving facilities to best-cost locations, restarting plants after relocation or geographic expansion to better serve local markets, reducing forcecount or the number of facilities, exiting certain product lines, and other costs resulting from asset deployment decisions (such as contract termination costs, asset write-downs and vacant facility costs).

Restructuring expenses were \$86, \$150 and \$284 for 2022, 2021 and 2020, respectively. The Company expects fiscal year 2023 restructuring expense to be approximately \$100.

Restructuring costs by business segment follows:

	2020	2021	2022
Automation Solutions	\$ 225	121	52
AspenTech	7	2	—
Climate Technologies	23	15	10
Tools & Home Products	21	7	11
Commercial & Residential Solutions	44	22	21
Corporate	8	5	13
Total	\$ 284	150	86

Actions taken in 2022 included workforce reductions of approximately 2,200 positions and the exit of eight production facilities worldwide. Costs incurred in 2021 and 2020 primarily relate to the Company's initiatives to improve operating margins that began in the third quarter of fiscal 2019 and were expanded in the third quarter of fiscal 2020 in response to the effects of COVID-19 on demand for the Company's products. Expenses incurred in 2021 and 2020 included actions to exit eight and six facilities, and eliminate approximately 3,600 and 5,400 positions, respectively.

The change in the liability for restructuring costs during the years ended September 30 follows:

	2021	Expense	Utilized/Paid	2022
Severance and benefits	\$ 172	46	79	139
Other	4	40	38	6
Total	\$ 176	86	117	145

	2020	Expense	Utilized/Paid	2021
Severance and benefits	\$ 176	112	116	172
Other	5	38	39	4
Total	\$ 181	150	155	176

The tables above do not include \$43 and \$38 of costs related to restructuring actions incurred for the year ended September 30, 2022 and 2021, respectively, that are required to be reported in cost of sales and selling, general and administrative expenses.

(7) LEASES

The components of lease expense for the years ended September 30 were as follows:

	2021	2022
Operating lease expense	\$ 195	185
Variable lease expense	\$ 17	20

Short-term lease expense and sublease income were immaterial for the years ended September 30, 2022 and September 30, 2021. Cash paid for operating leases is classified within operating cash flows and was \$188 and \$192 for the years ended September 30, 2022 and 2021, respectively. Operating lease right-of-use asset additions was \$97 and \$194 for the years ended September 30, 2022 and 2021, respectively.

The following table summarizes the balances of the Company's operating lease right-of-use assets and operating lease liabilities as of September 30, 2021 and 2022, the vast majority of which relates to offices and manufacturing facilities:

	2021	2022
Right-of-use assets (Other assets)	\$ 558	489
Current lease liabilities (Accrued expenses)	\$ 155	144
Noncurrent lease liabilities (Other liabilities)	\$ 413	348

The weighted-average remaining lease term for operating leases was 5.7 years and 5.8 years, and the weighted-average discount rate was 3.0 percent and 2.6 percent as of September 30, 2022 and September 30, 2021, respectively.

Future maturities of operating lease liabilities as of September 30, 2022 are summarized below:

	2022
2023	\$ 152
2024	115
2025	80
2026	51
2027	37
Thereafter	104
Total lease payments	539
Less: Interest	47
Total lease liabilities	\$ 492

Lease commitments that have not yet commenced were immaterial as of September 30, 2022.

(8) GOODWILL AND OTHER INTANGIBLES

The change in the carrying value of goodwill by business segment follows:

	Automation Solutions	AspenTech	Climate Technologies	Tools & Home Products	Commercial & Residential Solutions	Total
Balance, September 30, 2020	\$ 5,506	77	730	421	1,151	6,734
Acquisitions	—	967	23	—	23	990
Foreign currency translation and other	2	—	—	(3)	(3)	(1)
Balance, September 30, 2021	5,508	1,044	753	418	1,171	7,723
Acquisitions	40	7,289	—	—	—	7,329
Foreign currency translation and other	(292)	(7)	(38)	(53)	(91)	(390)
Balance, September 30, 2022	\$ 5,256	8,326	715	365	1,080	14,662

The gross carrying amount and accumulated amortization of identifiable intangible assets by major class follow:

	Customer Relationships		Intellectual Property		Capitalized Software		Total	
	2021	2022	2021	2022	2021	2022	2021	2022
Gross carrying amount	\$ 2,391	4,563	2,062	4,121	1,458	1,457	5,911	10,141
Less: Accumulated amortization	896	1,056	923	1,123	1,215	1,238	3,034	3,417
Net carrying amount	\$ 1,495	3,507	1,139	2,998	243	219	2,877	6,724

Intangible asset amortization expense for the major classes included above for 2022, 2021 and 2020 was \$563, \$470 and \$369, respectively. Based on intangible asset balances as of September 30, 2022, amortization expense is expected to approximate \$778 in 2023, \$745 in 2024, \$672 in 2025, \$565 in 2026 and \$546 in 2027. The increase in goodwill and intangible assets in fiscal 2022 and 2021 reflect the Heritage AspenTech and OSI acquisitions, respectively.

(9) FINANCIAL INSTRUMENTS

Following is a discussion regarding the Company's use of financial instruments:

Hedging Activities

As of September 30, 2022, the notional amount of foreign currency hedge positions was approximately \$2.7 billion, and commodity hedge contracts totaled approximately \$138 (primarily 38 million pounds of copper and aluminum). All derivatives receiving hedge accounting are cash flow hedges. The majority of hedging gains and losses deferred as of September 30, 2022 are expected to be recognized over the next 12 months as the underlying forecasted transactions occur. Gains and losses on foreign currency derivatives reported in Other deductions, net reflect hedges of balance sheet exposures that do not receive hedge accounting.

Net Investment Hedge

In fiscal 2019, the Company issued euro-denominated debt of €1.5 billion. The euro notes reduce foreign currency risk associated with the Company's international subsidiaries that use the euro as their functional currency and have been designated as a hedge of a portion of the investment in these operations. Foreign currency gains or losses associated with the euro-denominated debt are deferred in accumulated other comprehensive income (loss) and will remain until the hedged investment is sold or substantially liquidated.

The following gains and losses are included in earnings and other comprehensive income (OCI):

	Location	Gain (Loss) to Earnings			Gain (Loss) to OCI		
		2020	2021	2022	2020	2021	2022
Commodity	Cost of sales	\$ (8)	33	12	10	29	(20)
Foreign currency	Sales	(5)	3	(2)	4	3	(9)
Foreign currency	Cost of sales	4	8	31	(25)	34	53
Foreign currency	Other deductions, net	(40)	53	48			
Net Investment Hedge							
Euro denominated debt					(123)	21	266
Total		\$ (49)	97	89	(134)	87	290

Regardless of whether derivatives and non-derivative financial instruments receive hedge accounting, the Company expects hedging gains or losses to be offset by losses or gains on the related underlying exposures. The amounts ultimately recognized will differ from those presented above for open positions, which remain subject to ongoing market price fluctuations until settlement. Derivatives receiving hedge accounting are highly effective and no amounts were excluded from the assessment of hedge effectiveness.

Fair Value Measurement

Valuations for all derivatives and the Company's long-term debt fall within Level 2 of the GAAP valuation hierarchy. The fair value of long-term debt was \$7.6 billion and \$6.8 billion, respectively, as of September 30, 2022 and 2021, which was lower than the carrying value by \$1,207 and exceeded the carrying value by \$485, respectively. The fair values of commodity and foreign currency contracts were reported in Other current assets and Accrued expenses as summarized below:

	2021		2022	
	Assets	Liabilities	Assets	Liabilities
Commodity	\$ 12	6	—	25
Foreign currency	\$ 36	6	51	80

(10) SHORT-TERM BORROWINGS AND LINES OF CREDIT

Short-term borrowings and current maturities of long-term debt are as follows:

	2021	2022
Current maturities of long-term debt	\$ 538	516
Commercial paper and other short-term borrowings	334	1,599
Total	\$ 872	2,115
Interest rate for weighted-average short-term borrowings at year end	0.1%	2.8%

In May 2018, the Company entered into a \$3.5 billion five-year revolving backup credit facility with various banks, which replaced the April 2014 \$3.5 billion facility. The credit facility is maintained to support general corporate purposes, including commercial paper borrowings. The Company has not incurred any borrowings under this or previous facilities. The credit facility contains no financial covenants and is not subject to termination based on a change of credit rating or material adverse changes. The facility is unsecured and may be accessed under various interest rate alternatives at the Company's option. Fees to maintain the facility are immaterial.

(11) LONG-TERM DEBT

The details of long-term debt follow:

	2021	2022
2.625% notes due December 2021	\$ 500	—
2.625% notes due February 2023	500	500
0.375% euro notes due May 2024	579	490
3.15% notes due June 2025	500	500
1.25% euro notes due October 2025	579	490
0.875% notes due October 2026	750	750
1.8% notes due October 2027	500	500
2.0% notes due December 2028	—	1,000
2.0% euro notes due October 2029	579	490
1.95% notes due October 2030	500	500
2.20% notes due December 2031	—	1,000
6.0% notes due August 2032	250	250
6.125% notes due April 2039	250	250
5.25% notes due November 2039	300	300
2.75% notes due October 2050	500	500
2.80% notes due December 2051	—	1,000
Other	44	255
Long-term debt	6,331	8,775
Less: Current maturities	538	516
Total, net	\$ 5,793	8,259

As of September 30, 2022, other includes \$240 in outstanding borrowings by AspenTech under a revolving term loan credit facility that matures on December 23, 2024. The interest rate is variable and was 4.31% as of September 30, 2022.

Long-term debt maturing during each of the four years after 2023 is \$738, \$527, \$484 and \$745, respectively. Total interest paid on long-term debt was approximately \$199, \$156 and \$163 in 2022, 2021 and 2020, respectively. During the year, the Company repaid \$500 of 2.625% notes that matured in December 2021. In 2021, the Company repaid \$300 of 4.25% notes that matured in November 2020. In December 2021, the Company issued \$1,000 of 2.0% notes due December 2028, \$1,000 of 2.20% notes due December 2031 and \$1,000 of 2.80% notes due December 2051.

The Company maintains a universal shelf registration statement on file with the SEC under which it can issue debt securities, preferred stock, common stock, warrants, share purchase contracts or share purchase units without a predetermined limit. Securities can be sold in one or more separate offerings with the size, price and terms to be determined at the time of sale.

(12) PENSION AND POSTRETIREMENT PLANS

Retirement plans expense includes the following components:

	U.S. Plans			Non-U.S. Plans		
	2020	2021	2022	2020	2021	2022
Defined benefit plans:						
Service cost (benefits earned during the period)	\$ 57	54	49	30	29	25
Interest cost	125	94	99	30	32	33
Expected return on plan assets	(268)	(264)	(253)	(72)	(74)	(56)
Net amortization and other	148	143	102	17	14	3
Net periodic pension expense	62	27	(3)	5	1	5
Defined contribution plans	112	114	124	56	52	52
Total retirement plans expense	\$ 174	141	121	61	53	57

Net periodic pension expense decreased in 2022 primarily due to lower amortization of deferred losses. For defined contribution plans, the Company makes cash contributions based on plan requirements, which are expensed as incurred.

The Company's principal U.S. defined benefit plan is closed to employees hired after January 1, 2016 while shorter-tenured employees ceased accruing benefits effective October 1, 2016.

Details of the changes in the actuarial present value of the projected benefit obligation and the fair value of plan assets for defined benefit pension plans follow:

	U.S. Plans		Non-U.S. Plans	
	2021	2022	2021	2022
Projected benefit obligation, beginning	\$ 4,525	4,338	1,633	1,562
Service cost	54	49	29	25
Interest cost	94	99	32	33
Actuarial gain	(13)	(1,170)	(101)	(404)
Benefits paid	(218)	(204)	(39)	(40)
Settlements	(105)	—	(35)	(29)
Foreign currency translation and other	1	—	43	(182)
Projected benefit obligation, ending	\$ 4,338	3,112	1,562	965
Fair value of plan assets, beginning	\$ 4,383	4,844	1,367	1,474
Actual return on plan assets	771	(1,030)	100	(337)
Employer contributions	12	15	29	28
Benefits paid	(218)	(204)	(39)	(40)
Settlements	(105)	—	(35)	(29)
Foreign currency translation and other	1	—	52	(188)
Fair value of plan assets, ending	\$ 4,844	3,625	1,474	908
Net amount recognized in the balance sheet	\$ 506	513	(88)	(57)
Location of net amount recognized in the balance sheet:				
Noncurrent asset	\$ 732	676	283	205
Current liability	(13)	(14)	(16)	(17)
Noncurrent liability	(213)	(149)	(355)	(245)
Net amount recognized in the balance sheet	\$ 506	513	(88)	(57)
Pretax accumulated other comprehensive loss	\$ (274)	(284)	(182)	(136)

Actuarial gains in 2022 were largely due to an increase in the discount rates used to estimate the benefit obligations for the U.S. and non-U.S. plans, which were 5.64% and 4.9% at September 30, 2022 compared to 2.92% and 2.2% at September 30, 2021, respectively. Actuarial gains in 2021 were largely due to an increase in the discount rates used to estimate the benefit obligations for the U.S. and non-U.S. plans, which was 2.92% and 2.2% at September 30, 2021 compared to 2.81% and 1.9% at September 30, 2020, respectively. As of September 30, 2022, U.S. pension plans were overfunded by \$513 in total, including unfunded plans totaling \$162. The non-U.S. plans were underfunded by \$57, including unfunded plans totaling \$236.

As of the September 30, 2022 and 2021 measurement dates, the plans' total accumulated benefit obligation was \$3,910 and \$5,634, respectively. The total projected benefit obligation, accumulated benefit obligation and fair value of plan assets for individual plans with projected benefit obligations in excess of plan assets were \$527, \$444 and \$102, respectively, for 2022, and \$1,142, \$1,016 and \$544, respectively, for 2021. The total projected benefit obligation, accumulated benefit obligation and fair value of plan assets for individual plans with accumulated benefit obligations in excess of plan assets were \$477, \$421 and \$63, respectively, for 2022, and \$711, \$626 and \$123, respectively, for 2021.

Future benefit payments by U.S. plans are estimated to be \$215 in 2023, \$220 in 2024, \$225 in 2025, \$229 in 2026, \$232 in 2027 and \$1,174 in total over the five years 2028 through 2032. Based on foreign currency exchange rates as of September 30, 2022, future benefit payments by non-U.S. plans are estimated to be \$60 in 2023, \$58 in 2024, \$59 in 2025, \$62 in 2026, \$65 in 2027 and \$366 in total over the five years 2028 through 2032. The Company expects to contribute approximately \$40 to its retirement plans in 2023.

The weighted-average assumptions used in the valuation of pension benefits follow:

	U.S. Plans			Non-U.S. Plans		
	2020	2021	2022	2020	2021	2022
<u>Net pension expense</u>						
Discount rate used to determine service cost	3.40 %	3.16 %	3.16 %	1.9 %	1.9 %	2.2 %
Discount rate used to determine interest cost	2.87 %	2.10 %	2.31 %	1.9 %	1.9 %	2.2 %
Expected return on plan assets	6.75 %	6.50 %	6.00 %	5.8 %	5.6 %	4.4 %
Rate of compensation increase	3.25 %	3.25 %	4.00 %	3.7 %	3.6 %	3.7 %
<u>Benefit obligations</u>						
Discount rate	2.81 %	2.92 %	5.64 %	1.9 %	2.2 %	4.9 %
Rate of compensation increase	3.25 %	3.25 %	4.00 %	3.6 %	3.7 %	4.0 %

The discount rate for the U.S. retirement plans was 5.64 percent as of September 30, 2022. An actuarially developed, company-specific yield curve is used to determine the discount rate. To determine the service and interest cost components of pension expense for its U.S. retirement plans, the Company applies the specific spot rates along the yield curve, rather than the single weighted-average rate, to the projected cash flows to provide more precise measurement of these costs. The expected return on plan assets assumption is determined by reviewing the investment returns of the plans for the past 10 years plus longer-term historical returns of an asset mix approximating the Company's asset allocation targets, and periodically comparing these returns to expectations of investment advisors and actuaries to determine whether long-term future returns are expected to differ significantly from the past.

The Company's asset allocations at September 30, 2022 and 2021, and weighted-average target allocations follow:

	U.S. Plans			Non-U.S. Plans		
	2021	2022	Target	2021	2022	Target
Equity securities	39 %	39 %	35-45%	35 %	11 %	10-20%
Debt securities	55	54	50-60	55	73	70-80
Other	6	7	0-10	10	16	10-20
Total	100 %	100 %	100%	100 %	100 %	100%

The primary objective for the investment of pension assets is to secure participant retirement benefits by earning a reasonable rate of return. Plan assets are invested consistent with the provisions of the prudence and diversification rules of ERISA and with a long-term investment horizon. The Company continuously monitors the value of assets by class and routinely rebalances to remain within target allocations. The equity strategy is to minimize concentrations of risk by investing primarily in a mix of companies that are diversified across geographies, market capitalization, style, sectors and industries worldwide. The approach for bonds emphasizes investment-grade corporate and government debt with maturities matching a portion of the longer duration pension liabilities. The bonds strategy also includes a high-yield element which is generally shorter in duration. For diversification, a small portion of U.S. plan assets is allocated to private equity partnerships and real asset fund investments, providing opportunities for above market returns. Leveraging techniques are not used and the use of derivatives in any fund is limited and inconsequential.

The fair values of defined benefit pension assets as of September 30, organized by asset class and by the fair value hierarchy of ASC 820, *Fair Value Measurement*, follow. Investments valued based on the net asset value (NAV) of fund units held, as derived from the fair value of the underlying assets, are excluded from the fair value hierarchy.

	Level 1	Level 2	Level 3	Measured at NAV	Total	%
2022						
U.S. equities	\$ 405	6		633	1,044	23 %
International equities	225	10		123	358	8 %
Emerging market equities		1		124	125	3 %
Corporate bonds		1,143		859	2,002	44 %
Government bonds		468		152	620	14 %
Other	(9)	7	130	256	384	8 %
Total	\$ 621	1,635	130	2,147	4,533	100 %
2021						
U.S. equities	\$ 591	9		670	1,270	20 %
International equities	356	17		563	936	15 %
Emerging market equities		1		212	213	3 %
Corporate bonds		1,516		565	2,081	33 %
Government bonds		642		730	1,372	22 %
Other	46	8	135	257	446	7 %
Total	\$ 993	2,193	135	2,997	6,318	100 %

Asset Classes

U.S. equities reflect companies domiciled in the U.S., including multinational companies. International equities are comprised of companies domiciled in developed nations outside the U.S. Emerging market equities are comprised of companies domiciled in portions of Asia, Eastern Europe and Latin America. Corporate bonds represent investment-grade debt of issuers primarily from the U.S. Government bonds include investment-grade instruments issued by federal, state and local governments, primarily in the U.S. Other includes cash, interests in mixed asset funds investing in commodities, natural resources, agriculture, real estate and infrastructure funds, life insurance contracts (U.S.), and shares in certain general investment funds of financial institutions or insurance arrangements (non-U.S.) that typically ensure no market losses or provide for a small minimum return guarantee.

Fair Value Hierarchy Categories

Valuations of Level 1 assets for all classes are based on quoted closing market prices from the principal exchanges where the individual securities are traded. Cash is valued at cost, which approximates fair value. Debt securities categorized as Level 2 assets are generally valued based on independent broker/dealer bids or by comparison to other debt securities having similar durations, yields and credit ratings. Valuation techniques and inputs for these assets include discounted cash flow analysis, earnings multiple approaches, recent transactions, transfer restrictions, prevailing discount rates, volatilities, credit ratings and other factors. In the Other class, interests in mixed asset funds are Level 2, and U.S. life insurance contracts and non-U.S. general fund investments and insurance arrangements are Level 3. Investments measured at NAV are primarily nonexchange-traded commingled or collective funds where the underlying securities have observable prices available from active markets and typically provide liquidity daily or within a few days. The NAV category also includes fund investments in private equities, real estate and infrastructure where the fair value of the underlying assets is determined by the investment manager. Total unfunded commitments for the private equity funds were approximately \$190 at September 30, 2022. These investments cannot be redeemed, but instead the funds will make distributions through liquidation of the underlying assets, which is expected to occur over approximately the next 10 years. The real estate and infrastructure funds typically offer quarterly redemption.

Postretirement Plans

The Company also sponsors unfunded postretirement benefit plans (primarily health care) for certain U.S. retirees and their dependents. The Company's principal U.S. postretirement plan has been frozen to new employees since 1993. The postretirement benefit liability for all plans was \$83 and \$119 as of September 30, 2022 and 2021, respectively, and included deferred actuarial gains in accumulated other comprehensive income of \$112 and \$98, respectively. Service and interest costs are negligible and more than offset by the amortization of deferred actuarial gains, which resulted in net postretirement income of \$12 for 2022 and \$15 for 2021 and \$12 for 2020. Benefits paid

were \$10 and \$9 for 2022 and 2021, respectively, and the Company estimates that future health care benefit payments will be approximately \$10 per year for 2023 through 2027, and \$33 in total over the five years 2028 through 2032.

(13) CONTINGENT LIABILITIES AND COMMITMENTS

The Company is a party to a number of pending legal proceedings and claims, including those involving general and product liability (including asbestos) and other matters, several of which claim substantial amounts of damages. The Company accrues for such liabilities when it is probable that future costs (including legal fees and expenses) will be incurred and such costs can be reasonably estimated. Accruals are based on developments to date; management's estimates of the outcomes of these matters; and the Company's experience in contesting, litigating and settling similar matters. The Company engages an outside expert to develop an actuarial estimate of its expected costs to resolve all pending and future asbestos claims, including defense costs, as well as its related insurance receivables. The reserve for asbestos litigation, which is recorded on an undiscounted basis, is based on projected claims through 2065. See Note 19 for additional information about the Company's asbestos liabilities and related insurance receivables.

Although it is not possible to predict the ultimate outcome of these matters, the Company historically has been largely successful in defending itself against claims and suits that have been brought against it, and will continue to defend itself vigorously in all such matters. While the Company believes a material adverse impact is unlikely, given the inherent uncertainty of litigation, a remote possibility exists that a future development could have a material adverse impact on the Company. The Company enters into certain indemnification agreements in the ordinary course of business in which the indemnified party is held harmless and is reimbursed for losses incurred from claims by third parties, usually up to a prespecified limit. In connection with divestitures of certain assets or businesses, the Company often provides indemnities to the buyer with respect to certain matters including, for example, environmental or unidentified tax liabilities related to periods prior to the disposition. Because of the uncertain nature of the indemnities, the maximum liability cannot be quantified. As such, contingent liabilities are recorded when they are both probable and reasonably estimable. Historically, payments under indemnity arrangements have been inconsequential.

At September 30, 2022, there were no known contingent liabilities (including guarantees, pending litigation, taxes and other claims) that management believes will be material in relation to the Company's financial statements, nor were there any material commitments outside the normal course of business.

(14) INCOME TAXES

Pretax earnings consist of the following:

	2020	2021	2022
United States	\$ 1,360	1,491	2,684
Non-U.S.	975	1,421	1,401
Total pretax earnings	\$ 2,335	2,912	4,085

The principal components of income tax expense follow:

	2020	2021	2022
Current:			
U.S. federal	\$ 123	152	511
State and local	15	26	60
Non-U.S.	288	355	400
Deferred:			
U.S. federal	(44)	81	(101)
State and local	1	(2)	(13)
Non-U.S.	(38)	(27)	(2)
Income tax expense	<u>\$ 345</u>	<u>585</u>	<u>855</u>

Reconciliations of the U.S. federal statutory income tax rate to the Company's effective tax rate follow.

	2020	2021	2022
U.S. federal statutory rate	21.0 %	21.0 %	21.0 %
State and local taxes, net of U.S. federal tax benefit	0.6	0.7	0.8
Non-U.S. rate differential	1.7	2.0	1.6
Non-U.S. tax holidays	(1.1)	(0.8)	(0.9)
Research and development credits	(1.8)	(0.6)	(0.3)
Foreign derived intangible income	(1.2)	(1.4)	(1.4)
Gain on divestiture	—	—	(1.1)
Russia business exit	—	—	1.2
Subsidiary restructuring	(4.4)	(0.5)	(0.3)
Other	—	(0.3)	0.3
Effective income tax rate	<u>14.8 %</u>	<u>20.1 %</u>	<u>20.9 %</u>

The tax rates for 2022, 2021 and 2020 include benefits from restructuring subsidiaries of \$11, \$13 and \$103, respectively. The impact on the 2022 tax rate from the gain on divestiture of the Therm-O-Disc business and the Russia business exit in 2022 essentially offset. The lower rate in 2020 included the impact of a research and development tax credit study.

The Company has elected to recognize the tax on global intangible low-taxed income earned by certain of its non-U.S. subsidiaries as a period expense when it is incurred.

On March 27, 2020, the CARES Act was enacted in response to the COVID-19 pandemic, and among other things, provides tax relief to businesses. Tax provisions of the CARES Act include the deferral of certain payroll taxes, relief for retaining employees, and other provisions. The Company deferred \$73 of certain payroll taxes through the end of calendar year 2020, of which approximately \$37 was paid in December 2021 with the remaining amount due in December 2022.

Non-U.S. tax holidays reduce tax rates in certain jurisdictions. Approximately half of the tax holidays expired by September 2022, with the remaining expiring over the next 8 years.

Following are changes in unrecognized tax benefits before considering recoverability of any cross-jurisdictional tax credits (U.S. federal, state and non-U.S.) and temporary differences. The amount of unrecognized tax benefits is not expected to change significantly in the next 12 months.

	2021	2022
Unrecognized tax benefits, beginning	\$ 195	219
Additions for current year tax positions	27	25
Additions for prior year tax positions	17	9
Reductions for prior year tax positions	(6)	(65)
Acquisitions and divestitures	1	1
Reductions for settlements with tax authorities	(5)	—
Reductions for expiration of statutes of limitations	(10)	(11)
Unrecognized tax benefits, ending	\$ 219	178

If none of the unrecognized tax benefits shown is ultimately paid, the tax provision and the calculation of the effective tax rate would be favorably impacted by \$151, which is net of cross-jurisdictional tax credits and temporary differences. The Company accrues interest and penalties related to income taxes in income tax expense. Total expense (income) recognized was \$(6), \$(4) and \$1 in 2022, 2021 and 2020, respectively. As of September 30, 2022 and 2021, total accrued interest and penalties were \$24 and \$24, respectively.

The U.S. is the major jurisdiction for which the Company files income tax returns. Examinations for U.S. federal are complete through 2017, except for 2014. The status of state and non-U.S. tax examinations varies due to the numerous legal entities and jurisdictions in which the Company operates.

The principal items that gave rise to deferred income tax assets and liabilities follow:

	2021	2022
Deferred tax assets:		
Net operating losses, capital losses and tax credits	\$ 316	212
Accrued liabilities	216	217
Postretirement and postemployment benefits	29	21
Employee compensation and benefits	149	125
Other	128	135
Total	\$ 838	710
Valuation allowances	\$ (236)	(174)
Deferred tax liabilities:		
Intangibles	\$ (787)	(1,633)
Pensions	(107)	(119)
Property, plant and equipment	(212)	(208)
Undistributed non-U.S. earnings	(38)	(37)
Other	(54)	(160)
Total	\$ (1,198)	(2,157)
Net deferred income tax liability	\$ (596)	(1,621)

Total income taxes paid were approximately \$720, \$680 and \$400 in 2022, 2021 and 2020, respectively. Approximately two-thirds of the \$212 of net operating losses can be carried forward indefinitely, while most of the remainder expire over the next 10 years.

(15) STOCK-BASED COMPENSATION

The Company's stock-based compensation plans include performance shares, restricted stock, restricted stock units, and stock options. Although the Company has discretion, shares distributed under these plans are issued from treasury stock.

In fiscal 2022, the Company changed the terms of its annual performance share awards that were issued in the first quarter. The new terms meet the criteria for equity classification in accordance with ASC 718, *Compensation - Stock Compensation*, and therefore expense will be recognized on a fixed basis over the three-year performance period. The terms of the performance share awards issued in fiscal 2020 and 2021 are unchanged and therefore continue to be accounted for as liability awards and marked-to-market each period based on changes in the stock price.

AspenTech also has stock-based compensation plans that are settled in its own stock. These plans consist of restricted stock units and stock options.

Total compensation expense and income tax benefits for Emerson and AspenTech stock options and incentive shares follows.

	2020	2021	2022
Performance shares	\$ 98	203	89
Restricted stock and restricted stock units	11	21	23
Stock options	1	—	—
AspenTech stock-based compensation plans	—	—	32
Total stock compensation expense	\$ 110	224	144
Income tax benefits recognized	\$ 18	27	19

As of September 30, 2022, total unrecognized compensation expense related to unvested shares awarded under Emerson plans was \$153, which is expected to be recognized over a weighted-average period of 1.3 years, while the total future unrecognized compensation cost related to AspenTech stock options and RSUs was \$41 and \$97, respectively, which is expected to be recorded over a weighted average period of 2.1 years and 1.8 years, respectively.

Emerson Performance Shares, Restricted Stock and Restricted Stock Units

The Company's incentive shares plans include performance shares awards which distribute the value of common stock to key management employees at the conclusion of a three-year period subject to certain operating performance conditions and other terms and restrictions. The form of distribution is primarily shares of common stock, with a portion in cash in the first quarter following the end of the applicable three-year performance period. Dividend equivalents are only paid on earned awards after the performance period has concluded. Compensation expense for performance shares is recognized over the service period based on the number of shares ultimately expected to be earned.

Information related to performance share payouts for the years ended September 30, 2021 and 2022 follows (shares in thousands):

	2021	2022
Performance period	2018 - 2020	2019 - 2021
Percent payout	100 %	101 %
Total shares earned	1,535	1,341
Shares distributed in cash, primarily for tax withholding	672	586

As of September 30, 2022, approximately 1,469,000 shares awarded primarily in 2020 were outstanding, contingent on the Company achieving its performance objectives through 2022. The objectives for these shares were met at the 106 percent level and the shares will be distributed in early fiscal 2023.

Additionally, the rights to receive approximately 1,057,000 and 1,481,000 common shares awarded in 2022 and 2021, respectively, are outstanding and contingent upon the Company achieving its performance objectives through 2024 and 2023, respectively.

Incentive shares plans also include restricted stock awards and restricted stock units. Restricted stock awards involve distribution of common stock to key management employees subject to cliff vesting at the end of service periods ranging from three to ten years while restricted stock units granted to employees cliff vest at the end of a three-year period. The fair value of restricted stock awards and restricted stock units is determined based on the average of the high and low market prices of the Company's common stock on the date of grant, with compensation expense recognized ratably over the applicable vesting period. In 2022, approximately 116,000 shares of restricted stock vested as a result of participants fulfilling the applicable service requirements. Consequently, approximately 76,000 shares were issued while 40,000 shares were withheld for income taxes in accordance with minimum withholding requirements. As of September 30, 2022, there were approximately 1,272,000 shares of unvested restricted stock and restricted stock units outstanding.

In addition to the employee stock option and incentive shares plans, in 2022 the Company awarded approximately 19,000 shares of restricted stock under the restricted stock plan for non-management directors. As of September 30, 2022, approximately 79,000 shares were available for issuance under this plan.

As of September 30, 2022, 3.8 million shares remained available for award under incentive shares plans.

Changes in shares outstanding but not yet earned under incentive shares plans during the year ended September 30, 2022 follow (shares in thousands; assumes 100 percent payout of unvested awards):

	Shares	Average Grant Date Fair Value Per Share
Beginning of year	5,641	\$ 70.22
Granted	1,451	\$ 95.54
Earned/vested	(1,614)	\$ 67.65
Canceled	(198)	\$ 79.08
End of year	5,280	\$ 77.58

Information related to Emerson incentive shares plans follows:

	2020	2021	2022
Total fair value of shares earned/vested	\$ 164	131	158
Share awards distributed in cash, primarily for tax withholding	\$ 81	58	69

Emerson Stock Options

There were no stock option grants in 2022, 2021 and 2020. The Company's stock option plans expired in fiscal year 2021. Previously awarded stock options allow key officers and employees to purchase common stock at specified prices, which are equal to 100 percent of the closing market price of the Company's stock on the date of grant. Options generally vest one-third in each of the three years subsequent to grant and expire 10 years from the date of grant. Compensation expense is recognized ratably over the vesting period based on the number of options expected to vest.

Changes in shares subject to options during the year ended September 30, 2022 follow (shares in thousands):

	Weighted- Average Exercise Price Per Share	Shares	Total Intrinsic Value of Shares	Average Remaining Life (Years)
Beginning of year	\$ 57.96	2,017		
Options granted	\$ —	—		
Options exercised	\$ 57.21	(315)		
Options canceled	\$ 57.98	(10)		
End of year	\$ 58.10	1,692	\$ 27	2.2
Exercisable at end of year	\$ 58.10	1,692	\$ 27	2.2

Information related to Emerson stock options follows:

	2020	2021	2022
Cash received for option exercises	\$ 126	114	15
Intrinsic value of options exercised	\$ 47	53	11
Tax benefits related to option exercises	\$ 8	6	7

AspenTech Stock-Based Compensation

As discussed in Note 4, Emerson completed the acquisition of Heritage AspenTech in the third quarter of fiscal 2022. AspenTech, as defined in Note 4, operates as a separate publicly traded company and has various stock-based compensation plans, including stock options and restricted stock units, which are settled in their own common stock and are accounted for as equity awards. Restricted stock units generally vest over four years. Option awards have been granted with an exercise price equal to the market closing price of AspenTech's stock on the trading day prior to the grant date. These options generally vest over 4 years and expire within 7 years or 10 years of grant. AspenTech's policy is to issue new shares upon the exercise of vested stock awards.

Pursuant to the terms of the transaction agreement between Emerson and Heritage AspenTech, each outstanding option to purchase shares of Heritage AspenTech common stock, whether vested or unvested, that was unexercised as of immediately prior to the closing date was converted into an option to acquire shares of AspenTech. Each converted option is subject to the same terms and conditions as applied to the original option. In addition, each outstanding award of restricted stock units with respect to shares of Heritage AspenTech common stock that were unvested as of immediately prior to the closing date was converted into an award of restricted stock units with respect to shares of AspenTech. Each converted restricted stock unit is also subject to the same terms and conditions as applied to the original restricted stock unit.

ASC 805 required the Company to determine the fair value of the AspenTech share-based payment awards related to the replacement of the Heritage AspenTech share-based payment awards, and allocate the total fair value based on the services that are attributable to the pre- and post-combination service periods, respectively. The portion that is attributable to the pre-combination service period was considered part of the consideration transferred for Heritage AspenTech and included as part of the purchase price. The portion that is attributable to the post-combination service period is recognized as stock-based compensation expense in the post-combination consolidated financial statements over the remaining requisite service period.

AspenTech Stock Options

AspenTech utilizes the Black-Scholes option valuation model for estimating the fair value of options granted. The Black-Scholes option valuation model incorporates assumptions regarding expected stock price volatility, the expected life of the option, the risk-free interest rate, dividend yield and the market value of AspenTech's common stock. The expected stock price volatility is determined based on AspenTech's stock's historic prices over a period commensurate with the expected life of the award. The expected life of an option represents the period for which options are expected to be outstanding as determined by historic option exercises and cancellations. The risk-free interest rate is based on the U.S. Treasury yield curve for notes with terms approximating the expected life of the options granted. The expected dividend yield is zero, based on AspenTech's history and expectation of not paying dividends on common shares. Stock-based compensation expense is recognized on a straight-line basis, net of forfeitures as they occur, over the requisite service period for time-vested awards.

The weighted-average assumptions used in valuations for 2022 are: risk-free interest rate, 3.0 percent; dividend yield, none; expected volatility, 36.6 percent; and expected life, approximately 5.1 years.

A summary of AspenTech stock option activity in fiscal 2022 is as follows (shares in thousands):

	Weighted- Average Exercise Price Per Share	Shares	Total Intrinsic Value of Shares	Average Remaining Contractual Term (Years)
Beginning of year	\$ —	—		
Issuance of replacement awards	\$ 101.44	1,165		
Issuance of non-replacement awards	\$ 204.27	238		
Exercised	\$ 108.96	(137)		
Canceled/Forfeited	\$ 149.16	(10)		
End of year	\$ 131.26	1,256	\$ 134	7.0
Exercisable at end of year	\$ 101.76	727	\$ 99	5.6
Vested and expected to vest at September 30, 2022	\$ 131.20	1,252	\$ 134	7.0

The weighted average estimated fair value of option awards granted during fiscal 2022 was \$72.26. The total intrinsic value of options exercised during fiscal 2022 was \$13. Cash proceeds of \$14 from issuances of shares of AspenTech common stock were received during fiscal 2022.

AspenTech Restricted Stock Units

A summary of AspenTech restricted stock unit activity in fiscal 2022 is as follows (shares in thousands):

	Weighted- Average Grant Date Fair Value	Shares
Beginning of year	\$ —	—
Issuance of replacement awards	\$ 166.30	454
Issuance of non-replacement awards	\$ 202.39	288
Settled	\$ 190.07	(136)
Canceled/forfeited	\$ 188.48	(17)
End of year	\$ 193.82	589
Vested and expected to vest at September 30, 2022	\$ 177.58	556

During fiscal 2022, the total fair value of vested shares from AspenTech RSU grants amounted to \$34. Withholding taxes of \$5 were paid on vested RSUs during fiscal 2022.

At September 30, 2022, common stock reserved for future issuance under all AspenTech equity compensation plans was 4.1 million shares.

(16) COMMON AND PREFERRED STOCK

At September 30, 2022, 11.7 million shares of common stock were reserved for issuance under the Company's stock-based compensation plans. During 2022, 5.7 million common shares were purchased and 1.3 million treasury shares were reissued. In 2021, 5.3 million common shares were purchased and 3.1 million treasury shares were reissued.

At September 30, 2022 and 2021, the Company had 5.4 million shares of \$2.50 par value preferred stock authorized, with none issued.

(17) ACCUMULATED OTHER COMPREHENSIVE INCOME (LOSS)

Activity in Accumulated other comprehensive income (loss) is shown below, net of income taxes:

	2020	2021	2022
<u>Foreign currency translation</u>			
Beginning balance	\$ (794)	(711)	(629)
Other comprehensive income (loss), net of taxes of \$29, \$(5) and \$(62), respectively	83	82	(636)
Ending balance	(711)	(629)	(1,265)
<u>Pension and postretirement</u>			
Beginning balance	(928)	(864)	(259)
Actuarial gains (losses) deferred during the period, net of taxes of \$15, \$(150) and \$10, respectively	(49)	499	(33)
Amortization of deferred actuarial losses into earnings, net of taxes of \$(34), \$(34) and \$(21), respectively	113	106	70
Ending balance	(864)	(259)	(222)
<u>Cash flow hedges</u>			
Beginning balance	—	(2)	16
Gains (Losses) deferred during the period, net of taxes of \$2, \$(15) and \$(6), respectively	(9)	51	18
Reclassifications of realized (gains) losses to sales and cost of sales, net of taxes of \$(2), \$11 and \$10, respectively	7	(33)	(32)
Ending balance	(2)	16	2
Accumulated other comprehensive income (loss)	\$ (1,577)	(872)	(1,485)

(18) BUSINESS SEGMENTS INFORMATION

The Company designs and manufactures products and delivers services that bring technology and engineering together to provide innovative solutions for customers in a wide range of industrial, commercial and consumer markets around the world.

As a result of the Heritage AspenTech acquisition, the Company identified one additional segment in fiscal 2022. The new segment reflects the combined results of Heritage AspenTech and the Emerson Industrial Software Business (see Note 4 for further details). The results for this new segment include the historical results of the Emerson Industrial Software Business (which were previously reported in the Automation Solutions segment), while results related to the Heritage AspenTech business only include periods subsequent to the close of the transaction on May 16, 2022. Prior year amounts for the Automation Solutions segment have been reclassified to conform to the current year presentation.

The Company now reports four segments: **Automation Solutions**, **AspenTech**; and **Climate Technologies** and **Tools & Home Products**, which together comprise the **Commercial & Residential Solutions** business.

The **Automation Solutions** segment enables process, hybrid and discrete manufacturers to maximize production, protect personnel and the environment, reduce project costs, and optimize their energy efficiency and operating costs through a broad offering of integrated solutions, software, services and products, including measurement and analytical instrumentation, industrial valves and equipment, and process control software and systems. Markets served include oil and gas, refining, chemicals, power generation, life sciences, food and beverage, automotive, pulp and paper, metals and mining, and municipal water supplies. The segment's major product offerings are described below.

- **Measurement & Analytical Instrumentation** products measure the physical properties of liquids or gases in a process stream and communicate this information to a process control system or other software applications, and analyze the chemical composition of process fluids and emissions to enhance quality and efficiency, as well as environmental compliance.

- **Valves, Actuators & Regulators** consists of control, isolation and pressure relief valves which respond to commands from a control system to continuously and precisely modulate the flow of process fluids and gases, smart actuation and control technologies, pressure management products, and industrial and residential regulators that reduce the pressure of fluids and gases moving from high-pressure supply lines into lower pressure systems.
- **Industrial Solutions** provides fluid control and pneumatic mechanisms, electrical distribution equipment, and materials joining and precision cleaning products which are used in a variety of manufacturing operations to provide integrated solutions to customers.
- **Systems & Software** provides a digital ecosystem that controls plant processes by communicating with and adjusting the "intelligent" plant devices described above to provide precision measurement, control, monitoring, asset optimization, and plant safety and reliability for plants that produce power, or process fluids or other items.

The **AspenTech** segment provides asset optimization software that enables industrial manufacturers to design, operate, and maintain their operations for maximum performance through a combination of decades of modeling, simulation, and optimization capabilities with industrial operations expertise and apply advanced analytics to improve the profitability and sustainability of production assets.

The **Commercial & Residential Solutions** business consists of the Climate Technologies and Tools & Home Products segments. This business provides products and solutions that promote energy efficiency and sustainability, enhance household and commercial comfort, and protect food quality and sustainability through heating, air conditioning and refrigeration technology, as well as a broad range of mechanical, electrical, utility and do-it-yourself tools that promote safety and productivity.

The **Climate Technologies** segment provides products, services and solutions for all areas of the climate control industry, including residential heating and cooling, commercial air conditioning, commercial and industrial refrigeration, and cold chain management. Products include compressors, temperature sensors and controls, thermostats, flow controls, and stationary and mobile remote monitoring technologies and services that enable homeowners and businesses to better manage their heating, air conditioning and refrigeration systems for improved control and comfort, and lower energy costs.

The **Tools & Home Products** segment offers tools for professionals and homeowners that promote safety and productivity. Products include professional pipe-working tools, electrical and utility tools, and wet-dry vacuums.

The principal distribution method for each segment is direct sales forces, although the Company also uses independent sales representatives and distributors. Due to its global presence, certain of the Company's international operations are subject to risks including the stability of governments and business conditions in foreign countries which could result in adverse changes in exchange rates, changes in regulations or disruption of operations.

The primary income measure used for assessing segment performance and making operating decisions is earnings before interest and income taxes. Certain expenses are reported at Corporate, including stock compensation expense and a portion of pension and postretirement benefit costs. Corporate and other includes unallocated corporate expenses, acquisition/divestiture costs, first year acquisition accounting charges (which include fair value adjustments related to inventory, backlog and deferred revenue) and other items. Corporate assets are primarily comprised of cash and cash equivalents, investments and certain fixed assets. Summarized below is information about the Company's operations by business segment and by geography.

Business Segments

	Sales			Earnings (Loss)			Total Assets		
	2020	2021	2022	2020	2021	2022	2020	2021	2022
Automation Solutions	\$ 11,026	11,292	11,758	\$ 1,539	1,955	2,356	\$ 13,704	13,734	13,184
AspenTech	131	319	656	(16)	(7)	12	546	2,089	14,484
Climate Technologies	3,980	4,748	5,200	801	965	1,038	3,065	3,269	3,209
Tools & Home Products	1,663	1,905	2,033	317	399	402	1,491	1,598	1,486
Commercial & Residential Solutions	5,643	6,653	7,233	1,118	1,364	1,440	4,556	4,867	4,695
Corporate items:									
Stock compensation				(110)	(224)	(144)			
Unallocated pension and postretirement costs				53	94	99			
Corporate and other				(93)	(116)	(424)	4,076	4,025	3,309
Gain on subordinated interest				—	—	453			
Gain on sale of business				—	—	486			
Eliminations/Interest	(15)	(28)	(18)	(156)	(154)	(193)			
Total	\$ 16,785	18,236	19,629	\$ 2,335	2,912	4,085	\$ 22,882	24,715	35,672

In fiscal 2022, Corporate and other includes a loss of \$181 related to the Company's exit of business operations in Russia and acquisition/divestiture costs of \$110.

Automation Solutions sales by major product offering are summarized below.

	2020	2021	2022
Measurement & Analytical Instrumentation	\$ 3,108	3,071	3,206
Valves, Actuators & Regulators	3,589	3,483	3,604
Industrial Solutions	2,012	2,266	2,403
Systems & Software	2,317	2,472	2,545
Total	\$ 11,026	11,292	11,758

	Depreciation and Amortization			Capital Expenditures		
	2020	2021	2022	2020	2021	2022
Automation Solutions	\$ 530	537	514	\$ 306	319	248
AspenTech	27	95	242	2	6	4
Climate Technologies	184	191	177	158	143	206
Tools & Home Products	77	76	71	58	94	52
Commercial & Residential Solutions	261	267	248	216	237	258
Corporate and other	36	70	35	14	19	21
Total	\$ 854	969	1,039	\$ 538	581	531

Depreciation and amortization includes intellectual property, customer relationships and capitalized software.

Geographic Information

Sales by major geographic destination are summarized below:

	Automation Solutions			AspenTech		
	2020	2021	2022	2020	2021	2022
Americas	\$ 5,004	4,901	5,548	\$ 40	200	362
Asia, Middle East & Africa	3,761	3,986	4,049	42	60	140
Europe	2,261	2,405	2,161	49	59	154
Total	\$ 11,026	11,292	11,758	\$ 131	319	656

	Commercial & Residential Solutions			Total		
	2020	2021	2022	2020	2021	2022
Americas	\$ 3,896	4,513	5,106	\$ 8,940	9,614	11,016
Asia, Middle East & Africa	1,053	1,277	1,267	4,856	5,323	5,456
Europe	694	863	860	3,004	3,327	3,175
Total	\$ 5,643	6,653	7,233	\$ 16,800	18,264	19,647

Sales in the U.S. were \$9,084, \$7,952 and \$7,420 for 2022, 2021 and 2020, respectively, while Asia, Middle East & Africa includes sales in China of \$2,331, \$2,252 and \$1,845 in those years.

	Property, Plant and Equipment		
	2020	2021	2022
Americas	\$ 2,345	2,375	2,255
Asia, Middle East & Africa	679	678	576
Europe	664	685	530
Total	\$ 3,688	3,738	3,361

Property, plant and equipment located in the U.S. was \$2,006 in 2022, \$2,141 in 2021 and \$2,124 in 2020.

(19) OTHER FINANCIAL DATA

Items reported in earnings during the years ended September 30 included the following:

	2020	2021	2022
Research and development expense	\$ 439	485	526
Rent expense	\$ 239	228	215

The components of depreciation and amortization expense reported for the years ended September 30 included the following:

	2020	2021	2022
Depreciation expense	\$ 485	499	476
Amortization of intangibles (includes \$17, \$57 and \$108 reported in Cost of Sales in 2020, 2021 and 2022, respectively) (a)	256	357	465
Amortization of capitalized software	113	113	98
Total	\$ 854	969	1,039

(a) Amortization of intangibles includes \$148 related to the Heritage AspenTech acquisition for the year ended September 30, 2022 and backlog amortization of \$30 related to the OSI acquisition for the year ended September 30, 2021. For the year ended September 30, 2022, \$14 of amortization of intangibles included in the table above is reported as a restructuring related cost.

Items reported in other noncurrent assets included the following:

	2021	2022
Pension assets	\$ 1,015	881
Operating lease right-of-use assets	\$ 558	489
Unbilled receivables (contract assets)	\$ —	428
Deferred income taxes	\$ 115	99
Asbestos-related insurance receivables	\$ 95	85

Items reported in accrued expenses included the following:

	2021	2022
Customer advances (contract liabilities)	\$ 730	853
Employee compensation	\$ 690	597
Operating lease liabilities (current)	\$ 155	144
Product warranty	\$ 146	122

Other liabilities are summarized as follows:

	2021	2022
Deferred income taxes	\$ 711	1,720
Pension and postretirement liabilities	676	467
Operating lease liabilities (noncurrent)	413	348
Asbestos litigation	256	223
Other	697	562
Total	\$ 2,753	3,320

(20) QUARTERLY FINANCIAL INFORMATION (UNAUDITED)

	First Quarter		Second Quarter		Third Quarter		Fourth Quarter		Full Year	
	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022
Net sales	\$ 4,161	4,473	4,431	4,791	4,697	5,005	4,947	5,360	18,236	19,629
Gross profit	\$ 1,723	1,822	1,862	1,952	1,982	2,097	1,996	2,317	7,563	8,188
Net earnings common stockholders	\$ 445	896	561	674	627	921	670	740	2,303	3,231
Net earnings per common share:										
Basic	\$ 0.74	1.51	0.94	1.13	1.05	1.55	1.12	1.25	3.85	5.44
Diluted	\$ 0.74	1.50	0.93	1.13	1.04	1.54	1.11	1.24	3.82	5.41
Dividends per common share	\$ 0.505	0.515	0.505	0.515	0.505	0.515	0.505	0.515	2.02	2.06

Earnings per share are computed independently each period; as a result, the quarterly amounts may not sum to the calculated annual figure.

Emerson Electric Co. common stock (symbol EMR) is listed on the New York Stock Exchange and NYSE Chicago.

(21) SUBSEQUENT EVENTS

In October 2022, the Board of Directors approved and the Company announced an agreement to sell a majority stake in its Climate Technologies business (which constitutes the Climate Technologies segment, excluding Therm-O-Disc which was divested earlier in fiscal 2022) to private equity funds managed by Blackstone ("Blackstone") in a transaction valued at \$14.0 billion. Emerson will receive upfront, pre-tax cash proceeds of approximately \$9.5 billion and a note of \$2.25 billion at close (which will accrue 5 percent interest payable in kind by capitalizing interest), while retaining a 45 percent non-controlling common equity ownership interest in a new standalone joint venture between Emerson and Blackstone. The Climate Technologies business, which includes the Copeland compressor business and the entire portfolio of products and services across all residential and commercial HVAC and refrigeration end-markets, had fiscal 2022 net sales of approximately \$5.0 billion and pretax earnings of \$1.0 billion. The transaction is expected to close in the first half of calendar year 2023, subject to regulatory approvals and customary closing conditions.

On October 31, 2022, the Company completed the divestiture of its InSinkErator business, which manufactures food waste disposers, to Whirlpool Corporation for \$3.0 billion. This business had net sales of \$630 and pretax earnings of \$152 for fiscal 2022 and is reported in the Tools & Home Products segment. The agreement was announced in August 2022 and the assets and liabilities of InSinkErator were classified as held-for-sale as of September 30, 2022 and are included in other current assets, other assets, accrued expenses and other liabilities in the consolidated balance sheet.

Report of Independent Registered Public Accounting Firm

To the Stockholders and Board of Directors
Emerson Electric Co.:

Opinions on the Consolidated Financial Statements and Internal Control Over Financial Reporting

We have audited the accompanying consolidated balance sheets of Emerson Electric Co. and subsidiaries (the Company) as of September 30, 2022 and 2021, the related consolidated statements of earnings, comprehensive income, equity, and cash flows for each of the years in the three-year period ended September 30, 2022, and the related notes (collectively, the consolidated financial statements). We also have audited the Company's internal control over financial reporting as of September 30, 2022, based on criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of September 30, 2022 and 2021, and the results of its operations and its cash flows for each of the years in the three-year period ended September 30, 2022, in conformity with U.S. generally accepted accounting principles. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of September 30, 2022 based on criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission.

The Company acquired Aspen Technology, Inc. during 2022, and management excluded from its assessment of the effectiveness of the Company's internal control over financial reporting as of September 30, 2022, Aspen Technology, Inc.'s internal control over financial reporting representing 36 percent of total assets and 2 percent of total revenues included in the consolidated financial statements of the Company as of and for the year ended September 30, 2022. Our audit of internal control over financial reporting of the Company also excluded an evaluation of the internal control over financial reporting of Aspen Technology, Inc.

Basis for Opinions

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

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

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

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.

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 the 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 a separate opinion on the critical audit matters or on the accounts or disclosures to which they relate.

Sufficiency of Audit Evidence over Net Sales

As discussed in Notes 1, 2 and 18 to the Company's consolidated financial statements, and disclosed in the consolidated statement of earnings, the Company recorded \$19.6 billion of net sales in 2022.

We identified the evaluation of the sufficiency of audit evidence over net sales as a critical audit matter. Net sales are recognized primarily from the sale of tangible products from hundreds of Company locations around the world. Evaluating the sufficiency of audit evidence obtained required especially subjective auditor judgment because of the geographical dispersion of the Company's net sales generating activities. This included determining the Company locations at which procedures were performed and the supervision and review of procedures performed at those locations.

The following are the primary procedures we performed to address this critical audit matter. We applied auditor judgment to determine the nature and extent of procedures to be performed over net sales, including the determination of the Company locations at which those procedures were to be performed. At each Company location where procedures were performed, we:

- Evaluated the design and tested the operating effectiveness of certain internal controls over the Company's net sales processes, including the Company's controls over the accurate recording of amounts.
- Assessed the recorded net sales by selecting a sample of transactions and compared the amounts recognized for consistency with underlying documentation, including contracts with customers and shipping documentation.

Evaluation of the Acquisition Date Fair Value of Certain Acquired Intangible Assets

As discussed in Notes 1 and 4 to the consolidated financial statements, on May 16, 2022, the Company consummated a business combination for total consideration of \$11.2 billion. In connection with the business combination, the Company recorded various intangible assets, which included customer relationship and developed technology intangible assets with an acquisition date fair value of \$2.3 billion and \$1.35 billion, respectively.

We identified the evaluation of the acquisition date fair value of the customer relationship and developed technology intangible assets as a critical audit matter. A high degree of subjective and complex auditor judgment was required to evaluate key assumptions used to value these acquired intangible assets. Specifically, key assumptions included projected revenue for the customer relationship intangible asset and

projected revenue and obsolescence rates for the developed technology intangible asset. Changes to these assumptions could have had a significant impact on the fair value of such assets. In addition, valuation professionals with specialized skills and knowledge were needed to assist in the evaluation of the obsolescence rates.

The following are the primary procedures we performed to address this critical audit matter. We evaluated the design and tested the operating effectiveness of certain internal controls related to the Company's business combinations process, including controls related to the development of the projected revenue and obsolescence rate assumptions used in the Company's valuations. We evaluated the projected revenue used by the Company by (1) comparing to historical results of the acquired entity and publicly available information for peer companies and (2) inquiring of individuals outside of the accounting function about projected revenue and the process used to develop them. In addition, we compared the acquiree's historical projected revenue to actual revenue to evaluate the Company's ability to forecast. We involved valuation professionals with specialized skills and knowledge, who assisted in evaluating the obsolescence rates by comparing them to certain comparable companies.

/s/ KPMG LLP

We or our predecessor firms have served as the Company's auditor since 1938.

St. Louis, Missouri
November 14, 2022

ITEM 9 - CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A - CONTROLS AND PROCEDURES

The Company maintains a system of disclosure controls and procedures which is designed to ensure that information required to be disclosed by the Company in the reports filed or submitted under the Securities Exchange Act of 1934 is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms and is accumulated and communicated to management, including the Company's certifying officers, as appropriate to allow timely decisions regarding required disclosure. Based on an evaluation performed, the Company's certifying officers have concluded that the disclosure controls and procedures were effective as of September 30, 2022 to provide reasonable assurance of achieving these objectives.

Notwithstanding the foregoing, there can be no assurance that the Company's disclosure controls and procedures will detect or uncover all failures of persons within the Company and its consolidated subsidiaries to report material information otherwise required to be set forth in the Company's reports. There was no change in the Company's internal control over financial reporting during the quarter ended September 30, 2022, that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting.

Management's report on internal control over financial reporting, and the related report of the Company's auditor, KPMG LLP, an independent registered public accounting firm, set forth in Item 7 and Item 8, respectively, of this Annual Report on Form 10-K, are hereby incorporated by reference.

ITEM 9B - OTHER INFORMATION

None.

ITEM 9C - DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS

Not applicable.

PART III

ITEM 10 - DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Information regarding nominees and directors appearing under "Proxy Item No. 1: Election of Directors" in the Emerson Electric Co. Notice of Annual Meeting of Shareholders and Proxy Statement for the February 2023 annual shareholders' meeting (the "2023 Proxy Statement") is hereby incorporated by reference. Information regarding executive officers is set forth in Part I of this report. Information regarding the Audit Committee and Audit Committee Financial Expert appearing under "Board and Committee Operations—Board and Corporate Governance— Committees of Our Board of Directors," "Board and Committee Operations—Corporate Governance and Nominating Committee—Nomination Process" and "— Proxy Access" in the 2023 Proxy Statement is hereby incorporated by reference.

The Company has adopted a Code of Ethics that applies to the Company's Chief Executive Officer, Chief Financial Officer and Chief Accounting Officer; has posted such Code of Ethics on its website; and intends to satisfy the disclosure requirement under Item 5.05 of Form 8-K by posting such information on its website. The Company has adopted Charters for its Audit Committee, Compensation Committee, and Corporate Governance and Nominating Committee and a Code of Business Ethics for directors, officers and employees, which are available on its website and in print to any stockholder who requests them. The Company has also adopted Corporate Governance Principles and Practices, which are available on its website and in print to any stockholder who requests them. The Corporate Governance section of the Company's website may be accessed as follows: www.Emerson.com, Investors, Corporate Governance.

ITEM 11 - EXECUTIVE COMPENSATION

Information appearing under "Executive Compensation" (including the information set forth under "Compensation Discussion and Analysis"), "Compensation Tables," "Board and Committee Operations—Corporate Governance and Nominating Committee—Director Compensation," "Board and Committee Operations—Compensation Committee" (including, but not limited to, the information set forth under "Role of Executive Officers and the Compensation Consultant," "Compensation Committee Report" and "Compensation Committee Interlocks and Insider Participation") in the 2023 Proxy Statement is hereby incorporated by reference.

The information contained in the "Compensation Committee Report" shall not be deemed to be filed with the SEC or subject to the liabilities of Section 18 of the Securities Exchange Act of 1934 (the "Exchange Act"), except to the extent that the Company specifically incorporates such information into future filings under the Securities Act of 1933 or the Exchange Act.

ITEM 12 - SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The information regarding beneficial ownership of shares by nominees and continuing directors, named executive officers, five percent beneficial owners, and by all directors and executive officers as a group appearing under "Ownership of Emerson Equity Securities" in the 2023 Proxy Statement is hereby incorporated by reference.

The following table sets forth aggregate information regarding the Company's equity compensation plans as of September 30, 2022:

<u>Plan Category</u>	<u>Number of Securities to be Issued upon Exercise of Outstanding Options, Warrants and Rights</u>	<u>Weighted-Average Exercise Price of Outstanding Options, Warrants and Rights</u>	<u>Number of Securities Remaining Available for Future Issuance under Equity Compensation Plans (Excluding Securities Reflected in Column (a))</u>
	(a)	(b)	(c)
Equity compensation plans approved by security holders (1)	7,866,000	\$58.10	3,837,000
Equity compensation plans not approved by security holders	—	—	—
Total	<u>7,866,000</u>	<u>\$58.10</u>	<u>3,837,000</u>

(1) Includes the Stock Option and Incentive Shares Plans previously approved by the Company's security holders. Shares included in column (a) assume the maximum payouts, where applicable, and are as follows: (i) 1,692,000 shares reserved for outstanding stock option awards, (ii) 1,533,000 shares reserved for performance share awards granted in 2022, (iii) 2,148,000 shares reserved for performance share awards granted in 2021, (iv) 1,836,000 shares reserved for performance share awards granted in 2020 and (v) 657,000 shares reserved for outstanding restricted stock unit awards. As provided by the Company's Incentive Shares Plans, performance shares awards represent a commitment to issue such shares without cash payment by the employee, contingent upon achievement of the performance objectives and continued service by the employee.

The price in column (b) represents the weighted-average exercise price for outstanding options. Included in column (c) are shares remaining available for award under previously approved plans as follows: (i) 2,928,000 under the 2015 Incentive Shares Plan, (ii) 830,000 under the 2006 Incentive Shares Plan, and (iii) 79,000 under the Restricted Stock Plan for Non-Management Directors.

Information regarding stock option plans and incentive shares plans is set forth in Note 15.

ITEM 13 - CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

Information appearing under "Board and Committee Operations—Board and Corporate Governance—Review, Approval or Ratification of Transactions with Related Persons," "—Certain Business Relationships and Related

Party Transactions" and "—Director Independence" in the 2023 Proxy Statement is hereby incorporated by reference.

ITEM 14 - PRINCIPAL ACCOUNTANT FEES AND SERVICES

Information appearing under "Board and Committee Operations—Audit Committee—Fees Paid to KPMG LLP" in the 2023 Proxy Statement is hereby incorporated by reference.

PART IV

ITEM 15 - EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

A) Documents filed as a part of this report:

1. The consolidated financial statements and accompanying notes of the Company and subsidiaries and the report thereon of KPMG LLP set forth in Item 8 of this Annual Report on Form 10-K.
2. Financial Statement Schedules - All schedules are omitted because they are not required, not applicable or the required information is provided in the financial statements or notes thereto contained in this Annual Report on Form 10-K.
3. Exhibits (Listed by numbers corresponding to the Exhibit Table of Item 601 in Regulation S-K).
 - 2(a)** [Transaction Agreement and Plan of Merger, dated as of October 10, 2021](#), among Emerson Electric Co., Aspen Technology, Inc., EMR Worldwide, Inc., Emersub CX, Inc. and Emersub CXI, Inc., incorporated by reference to the Company's Form 8-K, filed on October 12, 2021, File No. 1-278, Exhibit 2.1.
 - 2(b) [Amendment No. 1 to the Transaction Agreement and Plan of Merger](#), dated as of March 23, 2022, among Emerson Electric Co., Aspen Technology, Inc., EMR Worldwide Inc., Emersub CX, Inc. and Emersub CXI, Inc., incorporated by reference to Emerson Electric Co. Form 10-Q for the quarter ended March 31, 2022, filed on May 4, 2022, File No. 1-278, Exhibit 2(b).
 - 2(c)** [Amendment No. 2 to the Transaction Agreement and Plan of Merger](#), dated as of May 3, 2022, among Emerson Electric Co., Aspen Technology, Inc., EMR Worldwide Inc., Emersub CX, Inc. and Emersub CXI, Inc., incorporated by reference to Emerson Electric Co. Form 10-Q for the quarter ended March 31, 2022, filed on May 4, 2022, File No. 1-278, Exhibit 2(c).
 - 2(d)** [Transaction Agreement, dated as of October 30, 2022](#), among Emerson Electric Co., BCP Emerald Aggregator L.P., Emerald Debt Merger Sub L.L.C and Emerald JV Holdings L.P, incorporated by reference to Emerson Electric Co. Form 8-K, filed on October 31, 2022, File No. 1-278, Exhibit 2.1.
 - 3(a) [Restated Articles of Incorporation of Emerson Electric Co.](#), incorporated by reference to Emerson Electric Co. Form 10-Q for the quarter ended March 31, 2001, File No. 1-278, Exhibit 3(a); [Termination of Designated Shares of Stock and Certificate of Designation, Preferences and Rights of Series B Junior Participating Preferred Stock](#), incorporated by reference to Emerson Electric Co. 1998 Form 10-K, File No. 1-278, Exhibit 3(a).
 - 3(b) [Bylaws of Emerson Electric Co.](#), as amended through May 4, 2021, incorporated by reference to the Company's Form 8-K dated May 4, 2021, filed on May 4, 2021, File No. 1-278, Exhibit 3.1.
 - 4(a) [Indenture dated as of December 10, 1998, between Emerson Electric Co. and Wells Fargo Bank, National Association, as successor trustee to The Bank of New York Mellon Trust Company, N.A. \(successor to The Bank of New York Mellon \(formerly known as the Bank of New York\)\), as trustee](#), incorporated by reference to Emerson Electric Co. 1998 Form 10-K, File No. 1-278, Exhibit 4(b), ***Form of 2.000% Notes due 2028, incorporated by reference to Emerson Electric Co. Form 8-K, filed on December 21, 2021, File No. 1-278, Exhibit 4.2, ***Form of 2.200% Notes due 2031, incorporated by reference to Emerson Electric Co. Form 8-K, filed on December 21, 2021, File No.

1-278, Exhibit 4.3. ***Form of 2.800% Notes due 2051, incorporated by reference to Emerson Electric Co. Form 8-K, filed on December 21, 2021, File No. 1-278, Exhibit 4.4.

- 4(b) [Agreement of Resignation, Appointment and Acceptance dated as of April 26, 2019 by and among Emerson Electric Co., Wells Fargo Bank, National Association, as successor trustee, and The Bank of New York Mellon Trust Company, N.A., as resigning trustee](#), incorporated by reference to the Company's Form 8-K dated May 15, 2019, filed on May 17, 2019, File No. 1-278, Exhibit 4.4.
- 4(c) [Description of Capital Stock](#) incorporated by reference to Emerson Electric Co., 2020 Form 10-K, File No. 1-278, Exhibit 4(c).
- 4(d) [Description of 0.375% Notes due 2024, 1.250% Notes due 2025 and 2.000% Notes due 2029](#), incorporated by reference to Emerson Electric Co., 2019 Form 10-K, File No. 1-278, Exhibit 4(d).

No other long-term debt instruments are filed since the total amount of securities authorized under any such instrument does not exceed 10 percent of the total assets of Emerson Electric Co. and its subsidiaries on a consolidated basis. Emerson Electric Co. agrees to furnish a copy of such instruments to the SEC upon request.

- 10(a)* [Amended and Restated Emerson Electric Co. Continuing Compensation Plan for Non-Management Directors](#), incorporated by reference to Emerson Electric Co. 2007 Form 10-K, File No. 1-278, Exhibit 10(c).
- 10(b)* [Amended and Restated Deferred Compensation Plan for Non-Employee Directors and Forms of Payment Election Form, Initial Notice of Election and Notice of Election Change](#), incorporated by reference to Emerson Electric Co. 2007 Form 10-K, File No. 1-278, Exhibit 10(d).
- 10(c)* [First Amendment to the Emerson Electric Co. Supplemental Executive Retirement Plan](#), incorporated by reference to Emerson Electric Co. 1999 Form 10-K, File No. 1-278, Exhibit 10(h), and [Form of Change of Control Election](#), incorporated by reference to Emerson Electric Co. Form 8-K dated October 1, 2004, Exhibit 10.9 (applicable only with respect to benefits vested as of December 31, 2004).
- 10(d)* [Amended and Restated Emerson Electric Co. Pension Restoration Plan dated October 6, 2015](#), incorporated by reference to Emerson Electric Co. 2015 Form 10-K, File No. 1-278, Exhibit 10(e); [Forms of Participation Award Letter, Acceptance of Award and Benefit Election Forms \(applicable only with respect to benefits after January 1, 2005\)](#), incorporated by reference to Emerson Electric Co. 2007 Form 10-K, File No. 1-278, Exhibit 10(f); and Lump Sum Distribution Election Forms.
- 10(e)* [Fifth Amendment to the Supplemental Executive Savings Investment Plan](#), incorporated by reference to Emerson Electric Co. Form 10-Q for the quarter ended March 31, 1999, File No. 1-278, Exhibit 10(j), and [Form of Participation Agreement and Form of Annual Election](#), incorporated by reference to Emerson Electric Co. Form 8-K filed October 1, 2004, Exhibit 10.8 (applicable only with respect to benefits vested as of December 31, 2004).
- 10(f)* Amended and Restated Emerson Electric Co. Savings Investment Restoration Plan and Forms of Participation Agreement, Annual Election Form and Payment Election Form (applicable only with respect to benefits after January 1, 2005), incorporated by reference to Emerson Electric Co. 2007 Form 10-K, File No. 1-278, Exhibit 10(h), [First Amendment to Emerson Electric Co. Savings Investment Restoration Plan](#), incorporated by reference to Emerson Electric Co. Form 10-Q for the quarter ended March 31, 2008, File No. 1-278, Exhibit 10.1 and [Second Amendment to the Emerson Electric Co. Savings Investment Restoration Plan](#), incorporated by reference to Emerson Electric Co., Form 10-Q for the quarter ended March 31, 2020, File No. 1-278, Exhibit 10.2.
- 10(g)* [Amended and Restated Emerson Electric Co. Annual Incentive Plan and Form of Acceptance of Award](#), incorporated by reference to Emerson Electric Co. 2007 Form 10-K, File No. 1-278, Exhibit 10(i).

- 10(h)* [Emerson Electric Co. Description of Split Dollar Life Insurance Program Transition](#), incorporated by reference to Emerson Electric Co. Form 8-K filed September 2, 2005, Exhibit 10.1.
- 10(i)* [Amended and Restated Restricted Stock Plan for Non-Management Directors](#), incorporated by reference to Emerson Electric Co. Form 10-Q for the quarter ended December 31, 2009, File No. 1-278, Exhibit 10.1, [Form of Restricted Stock Award Letter under the Emerson Electric Co. Restricted Stock Plan for Non-Management Directors](#), incorporated by reference to Emerson Electric Co. Form 8-K filed February 1, 2005, Exhibit 10.2, and [Form of Restricted Stock Unit Award Letter under the Emerson Electric Co. Restricted Stock Plan for Non-Management Directors](#), incorporated by reference to Emerson Electric Co. Form 10-Q for the quarter ended December 31, 2009, File No. 1-278, Exhibit 10.1.
- 10(j)* [Description of Non-Management Director Compensation](#), incorporated by reference to Emerson Electric Co. Form 10-K filed November 20, 2017, Exhibit 10(n).
- 10(k)* [Description of Named Executive Officer Compensation](#), incorporated by reference to Emerson Electric Co. Form 10-K filed November 20, 2017, Exhibit 10(o).
- 10(l)* [Emerson Electric Co. 2006 Incentive Shares Plan](#), incorporated by reference to Emerson Electric Co. 2006 Proxy Statement dated December 16, 2005, Appendix C, [Amendment for 409A Compliance](#), incorporated by reference to Emerson Electric Co. 2007 Form 10-K, File No. 1-278, Exhibit 10(q), [Forms of Performance Shares Award Certificate and Acceptance of Award \(used on or prior to September 30, 2009\) and Restricted Shares Award Agreement \(used on or prior to September 30, 2011\)](#), incorporated by reference to Emerson Electric Co. 2007 Form 10-K, File No. 1-278, Exhibit 10(q), [Amendment to Emerson Electric Co. 2006 Incentive Shares Plan](#), incorporated by reference to Emerson Electric Co. Form 10-Q for the quarter ended June 30, 2008, File No. 1-278, Exhibit 10.1, [Forms of Performance Shares Award Certificate, Acceptance of Award and 2010 Performance Shares Program Award Summary](#), incorporated by reference to Emerson Electric Co. Form 10-Q for the quarter ended December 31, 2009 (used after September 30, 2009 and on or prior to September 30, 2011), File No. 1-278, Exhibit 10.2, [Forms of Performance Shares Award Certificate and Acceptance of Award](#), incorporated by reference to Emerson Electric Co. Form 10-Q for the quarter ended December 31, 2011, File No. 1-278, Exhibit 10.3 (used after September 30, 2011), and [Form of Restricted Shares Award Agreement](#), incorporated by reference to Emerson Electric Co. Form 10-Q for the quarter ended December 31, 2011, File No. 1-278, Exhibit 10.4 (used after September 30, 2011).
- 10(m) Credit Agreement dated as of May 23, 2018, incorporated by reference to Emerson Electric Co. Form 8-K dated May 23, 2018 and filed May 29, 2018, File No. 1-278, Exhibit 10.1, Suspension of Rights Agreement dated October 12, 2021 between Emerson Electric Co. and JPMorgan Chase Bank, N.A., as Agent, under the Credit Agreement dated as of May 23, 2018 (as amended or otherwise modified from time to time), incorporated by reference to Emerson Electric Co. Form 10-Q for the quarter ended December 31, 2021, File No. 1-278, Exhibit 10.1.
- 10(n)* [2011 Stock Option Plan](#), incorporated by reference to Emerson Electric Co. 2011 Proxy Statement dated December 10, 2010, File No. 1-278, Appendix B, 2011 [Stock Option Plan as Amended and Restated effective October 1, 2012](#), incorporated by reference to Emerson Electric Co. 2012 Form 10-K, File No. 1-278, Exhibit 10(r), [Forms of Notice of Grant of Stock Options, Option Agreement and Incentive Stock Option Agreement under the 2011 Stock Option Plan](#), incorporated by reference to Emerson Electric Co. Form 10-Q for the quarter ended March 31, 2012, File No. 1-278, Exhibit 10.1 and [Forms of Notice of Grant of Stock Options, Option Agreement and Nonqualified Stock Option Agreement under the 2011 Stock Option Plan](#), incorporated by reference to Emerson Electric Co. Form 10-Q for the quarter ended March 31, 2012, File No. 1-278, Exhibit 10.2.
- 10(o)* [Emerson Electric Co. 2015 Incentive Shares Plan](#), incorporated by reference to Emerson Electric Co. 2015 Proxy Statement dated December 12, 2014, Appendix B, [Forms of Performance Shares Award Certificate and Acceptance of Award \(used on or prior to November 5, 2018\), Performance Shares Program Award Summary \(used on or prior to November 5, 2018\) and Form of Restricted Shares Award Agreement \(used on or prior to November 5, 2018\)](#), incorporated by reference to Emerson Electric Co. 2015 Form 10-K, File No. 1-278, Exhibit 10(u), [Form of Restricted Shares](#)

[Award Agreement \(used after November 5, 2018\)](#), incorporated by reference to Emerson Electric Co. Form 10-Q for the quarter ended December 31, 2018, Exhibit 10.1, [Form of Restricted Stock Units Program Acceptance of Award \(used after November 5, 2018\)](#), incorporated by reference to Emerson Electric Co. Form 10-Q for the quarter ended December 31, 2018, Exhibit 10.2 and Form of Performance Share Program Acceptance of Award (used after November 5, 2018), incorporated by reference to Emerson Electric Co. Form 10-Q for the quarter ended December 31, 2018, Exhibit 10.3., Form of Emerson Electric Co. Performance Shares Program Award Agreement (used after November 1, 2021), incorporated by reference to Emerson Electric Co. Form 10-Q for the quarter ended December 31, 2021, File No. 1-278, Exhibit 10.2

- 10(p) [Transaction Agreement dated as of July 29, 2016 among Emerson Electric Co., Cortes NP Holdings, LLC, Cortes NP Acquisition Corporation, ASCO Power Grp, LLC and Cortes NP JV Holdings, LLC](#), incorporated by reference to Emerson Electric Co. 2016 Form 10-K, File No. 1-278, Exhibit 10(w).
- 10(q)* [Emerson Electric Co. Savings Investment Restoration Plan II](#), incorporated by reference to the Emerson Electric Co. Form 10-Q for the quarter ended June 30, 2018, File No. 1-278, Exhibit 10.1, [Second Amendment to the Emerson Electric Co. Savings Investment Restoration Plan](#), incorporated by reference to Emerson Electric Co., Form 10-Q for the quarter ended March 31, 2020, File No. 1-278, Exhibit 10.2 and [First Amendment to the Emerson Electric Co. Savings Investment Restoration Plan II](#), incorporated by reference to Emerson Electric Co., Form 10-Q for the quarter ended March 31, 2020, File No. 1-278, Exhibit 10.1.
- 21 [Subsidiaries of Emerson Electric Co.](#)
- 23 [Consent of Independent Registered Public Accounting Firm](#)
- 24 [Power of Attorney](#)
- 31 [Certifications pursuant to Exchange Act Rule 13a-14\(a\)](#)
- 32 [Certifications pursuant to Exchange Act Rule 13a-14\(b\) and 18 U.S.C. Section 1350](#)
- 101 Attached as Exhibit 101 to this report are the following documents formatted in iXBRL (Inline Extensible Business Reporting Language): (i) Consolidated Statements of Earnings for the years ended September 30, 2020, 2021 and 2022, (ii) Consolidated Statements of Comprehensive Income for the years ended September 30, 2020, 2021, and 2022 (iii) Consolidated Balance Sheets at September 30, 2021 and 2022, (iv) Consolidated Statements of Equity for the years ended September 30, 2020, 2021 and 2022, (v) Consolidated Statements of Cash Flows for the years ended September 30, 2020, 2021 and 2022, and (vi) Notes to Consolidated Financial Statements for the year ended September 30, 2022.
- 104 Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101).

* Management contract or compensatory plan.

** Certain schedules and exhibits have been omitted pursuant to Item 601(a)(5) of Regulation S-K. Emerson agrees to furnish supplementally a copy of any omitted schedule or exhibit to the SEC upon request. Portions of these exhibits have been redacted in compliance with Regulation S-K Item 601(b)(10).

*** The Company entered into two global notes for each series of notes (Notes A-1 and A-2), which are identical other than with respect to the note number

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.

EMERSON ELECTRIC CO.

By /s/ F. J. Dellaquila

F. J. Dellaquila
Senior Executive Vice President and
Chief Financial Officer
November 14, 2022

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below on November 14, 2022, by the following persons on behalf of the registrant and in the capacities indicated.

<u>Signature</u>	<u>Title</u>
_____ /s/ S. L. Karsanbhai S. L. Karsanbhai	President and Chief Executive Officer
_____ /s/ F. J. Dellaquila F. J. Dellaquila	Senior Executive Vice President and Chief Financial Officer
_____ /s/ M. J. Baughman M. J. Baughman	Vice President, Controller and Chief Accounting Officer
_____ * J. S. Turley	Chair of the Board
_____ * M. A. Blinn	Director
_____ * C. A. H. Boersig	Director
_____ * J. B. Bolten	Director
_____ * M. S. Craighead	Director
_____ * W. H. Easter III	Director
_____ * G. A. Flach	Director
_____ * A. F. Golden	Director
_____ * C. Kendle	Director
_____ * L. Lee	Director
_____ * M. S. Levatich	Director

* By /s/ F. J. Dellaquila
F. J. Dellaquila
Attorney-in-Fact

**Subsidiaries and Affiliates of Emerson Electric Co.
September 30, 2022**

<u>LEGAL NAME</u>	<u>JURISDICTION OF INCORPORATION</u>
Appleton Holding Corp.	Delaware
Appleton Group Canada, Ltd.	Ontario
Appleton Grp LLC	Delaware
Appleton Electric LLC	Delaware
Appleton Electric, S.A. de C.V.	Mexico
EGS Comercializadora Mexico, S. de R.L. de C.V.	Mexico
Nutsteel DHC B.V.	Netherlands
Nutsteel Indústria Metalúrgica Ltda	Brazil
Appleton Holding Sarl	France
ATX SAS	France
Easy Heat Europe SAS	France
EGS Mexico S. de R.L. de C.V.	Mexico
EGS Private Ltd.	Singapore
Emerson Hazardous Electrical Equipment (Shanghai) Co., Ltd.	China
GSEG LLC	Delaware
ASCO Numatics Holding, Inc.	Delaware
Bristol, Inc.	Delaware
Energy Solutions International Sub, LLC	Delaware
Energy Solutions International GP, LLC	Pennsylvania
Energy Solutions International Ltd.	United Kingdom
Energy Solutions International (India) Private Limited	India
California Emerson LLC	Delaware
Computational Systems, Incorporated	Tennessee
DMCO Holding, Inc.	Delaware
DMCO UK Holding Limited	United Kingdom
DMCO Holding Limited	United Kingdom
Spectra-Tek UK Limited	United Kingdom
Daniel Measurement Solutions Private Limited	India
Spectra-Tek International Limited	United Kingdom
Greenfield (UK) Limited	United Kingdom
Danmasa S.A. de C.V.	Mexico
Emerson Automation Solutions Actuation Technologies Holding, Inc.	Delaware
Emerson Process Management Valve Automation, Inc.	Delaware
Bettis Canada Ltd.	Canada
Bettis Holdings Limited	United Kingdom
Bettis UK Limited	United Kingdom
RPP, LLC	Massachusetts
EECO, Inc.	Delaware
Apple JV Holding Corp.	Delaware
Easy Heat, Inc.	Delaware
Emersub CV, Inc.	Delaware
Flow Control US Holding Corporation	Delaware
Emerson Final Control US Holding LLC	Texas
Emerson Automation Solutions Final Control France SARL	France
FC QSF, LLC	Delaware

	The J.R. Clarkson Company LLC	Nevada
	Crosby Valve, LLC	Nevada
	Emerson Automation Solutions Final Control US LP	Delaware
	Emerson Vulcan Holding LLC	Delaware
	TV&C GP Holding, LLC	Nevada
	Vulsub Holdings A, LLC	Delaware
	Emerson Automation Solutions Final Control (Thailand) Ltd.	Thailand
	Vulsub VZ, C.A.	Venezuela
	Vulsub Holdings B, LLC	Delaware
	Emerson Automation Solutions Final Control Hong Kong Limited	Hong Kong
	Emerson Automation Solutions Final Control (Beijing) Co., Ltd.	China
	Keystone Valve (Korea) LLC	Korea
	Vulsub Holdings D, LLC	Delaware
	Vulsub Property Holding, LLC	Delaware
Emerson Climate Technologies, Inc.		Delaware
	Copeland Access +, Inc.	Delaware
	Copeland Corporation LLC	Delaware
	Copeland de Mexico, S.A. de C.V.	Mexico
	Emerson Climate Technologies (India) Private Limited	India
	Copeland Redevelopment Corporation	Missouri
	Emerson Digital Cold Chain, Inc.	Delaware
	Emerson Climate Services, LLC	Delaware
	Scroll Compressors LLC	Delaware
	Scroll Mexico LLC	Delaware
Emerson Electric (U.S.) Holding Corporation		Delaware
	Automatic Switch Company	Delaware
	ASC Investments, Inc.	Delaware
	ASCO Japan Co., Ltd.	Japan
	ASCO, L.P.	Delaware
	Aventics LLC	Delaware
	Emerson (Taiwan) Limited	Taiwan
	Ascomatica S.A. de C.V.	Mexico
	Ascomation Pty. Ltd.	Australia
	Ascomation (N.Z.) Ltd.	New Zealand
	ASCO Numatics (India) Private Limited	India
	Aventics India Private Limited	India
	Ascotech, S.A. de C.V.	Mexico
	Ascoval Industria e Comercio Ltda	Brazil
	Emerson Fluid Control & Pneumatics, S. de R.L. de C.V.	Mexico
Branson Ultrasonics Corporation		Delaware
	Branson Korea Co., Ltd.	Korea
	Branson Ultrasonidos S.A.E.	Spain
	Branson Ultrasons SAS	France
Emerson Climate Technologies GmbH		Germany
	Emerson Climate Technologies Limited	United Kingdom
	Emerson Climate Technologies Refrigeration SA	Belgium
	Emerson Climate Technologies S.A.	Spain
	Emerson Climate Technologies Sarl	France
	Emerson Climate Technologies S.R.L.	Italy
	Gustav Klauke GmbH	Germany
Emerson Dietzenbach GmbH		Germany
Emerson Electric Overseas Finance Corp.		Delaware
Emerson Process Management Verwaltung GmbH		Germany
	Emerson Process Management GmbH & Co. OHG	Germany
	Aventics Services Germany GmbH	Germany
	Aventics GmbH	Germany
	Aventics AG	Switzerland
	Aventics GmbH	Austria

	epro GmbH	Germany
	Flow Control Holding GmbH & Co. KG	Germany
	Flow Control Holding Verwaltungs GmbH	Germany
	Sempell GmbH	Germany
	Emerson Automation Solutions Final Control Germany GmbH	Germany
	Mecafrance (Deutschland) GmbH	Germany
	SABO-Armaturen Service GmbH	Germany
	Emerson Retail Services Europe GmbH	Germany
	Emerson Technologies Verwaltungs GmbH	Germany
	Emerson Technologies GmbH & Co. OHG	Germany
	Emersub LXXXVI, Inc.	Delaware
	Ridge Tool GmbH	Germany
	Ridge Tool GmbH & Co. OHG	Germany
	Rosemount Inc.	Minnesota
	Dieterich Standard, Inc.	Delaware
	Emerson Asia Pacific Private Limited	Singapore
	Aventics Singapore Pte. Ltd.	Singapore
	Emerson Automation Solutions Final Control Singapore Pte. Ltd.	Singapore
	Emerson Automation Solutions Final Control Malaysia Sdn. Bhd.	Malaysia
	Emerson Automation Solutions Final Control (Sichuan) Co., Ltd.	China
	Emerson Automation Solutions Final Control (Shanghai) Co., Ltd.	China
	PT Emerson Solutions Indonesia	Indonesia
	Safety Systems UK Pte. Ltd.	Singapore
	Sakhi Raimondi Valve (India) Limited	India
	Emerson Process Management Chennai Private Limited	India
	Emerson Process Management Manufacturing (M) Sdn Bhd	Malaysia
	Emerson Process Management Valve Automation (M) Sdn Bhd	Malaysia
	Spectronix Ltd.	Israel
	Emerson Automation Solutions AS	Norway
	Emerson Industrial Automation USA Inc.	Delaware
	Fincor Holding, LLC	Delaware
	Emerson Korea Limited	Korea
	Aventics Ltd.	Korea
	Emerson Process Management AB	Sweden
	Emerson Process Management A/S (Denmark)	Denmark
	Roxar Flow Measurement Sdn Bhd	Malaysia
	Emerson Process Management Oy	Finland
	Emerson Process Management, S.L.	Spain
	Emersub LXXXIV, Inc.	Delaware
	Keystone Germany Holdings Corp.	Delaware
	Chemat GmbH Armaturen fur Industrie - und Nuklearanlage	Germany
	Emerson Automation Solutions Final Control de México, S.A. de C.V.	Mexico
	Emerson Process Management, S.A. de C.V.	Mexico
	EMR Europe Holdings Inc.	Delaware
	EMR Holdings (France) SAS	France
	ASCO SAS	France
	Asco Numatics GmbH	Germany
	Emerson Automation Fluid Control & Pneumatics Iberia, S.A.	Spain
	Joucomatic N.V.	Belgium
	Aventics Holding S.A.S.	France
	Aventics S.A.S.	France
	Emerson Process Management SAS	France
	Emerson Process Management, Lda	Portugal
	France SAS	France
	Generale de Robinetterie Industrielle et de Systemes de Surete S.A.S.	France
	Klaue France SARL	France
	Ridgid France SAS	France
	Micro Motion, Inc.	Colorado

	Emerson Automation Solutions Measurement Systems & Services LLC	Delaware
	Metco Services Venezuela, C.A.	Venezuela
	P I Components Corp.	Texas
	Rosemount China Inc.	Minnesota
	Rosemount Limited	Hong Kong
	Rosemount Nuclear Instruments, Inc.	Delaware
	Rosemount Specialty Products LLC	Delaware
Emersub 15 LLC		Delaware
Ridge Tool Company		Ohio
	Greenlee Tools, Inc.	Delaware
	Emerson Professional Tools, LLC	Delaware
	Emerson Professional Tools Mfg LLC	Delaware
	Ridge Tool (Australia) Pty. Ltd.	Australia
	Ridge Tool Manufacturing Company	Delaware
	Ridge Tool Pattern Company	Delaware
	RIDGID, Inc.	Delaware
	Ridgid Italia S.R.L.	Italy
	Ridgid Online, Inc.	Ohio
	Ridgid Werkzeuge AG	Switzerland
	Thermodisc (Thailand) Limited	Thailand
E.G.P. Corporation		Delaware
Emerson Arabia, Inc.		Delaware
	Emerson Climate Technologies Arabia Limited Co.	Saudi Arabia
	Emerson Process Management Arabia Limited	Saudi Arabia
	Emersub 4 LLC	Delaware
Emerson Climate Technologies Mexico, S.A. de C.V.		Mexico
Emerson Commercial & Residential Motors Mexico, S. de R.L. de C.V.		Mexico
Emerson Electric (Asia) Limited		Hong Kong
	Emerson Electric (South Asia) Pte. Ltd.	Singapore
	Emerson (Philippines) Corporation	Philippines
Emerson Electric II, C.A.		Venezuela
	Soluciones 0925, C.A.	Venezuela
Emerson Electric International, Inc.		Delaware
Emerson Electric Ireland Limited		Bermuda
	Emersub Treasury Ireland Unlimited Company	Ireland
Emerson Electric (Mauritius) Ltd		Mauritius
	Emerson Electric Company (India) Private Limited	India
	Westinghouse Electric Pvt. Limited	Mauritius
	Emerson Process Management Power & Water Solutions India Private Limited	India
Emerson Finance LLC		Delaware
Emerson Middle East, Inc.		Delaware
	Rosemount Tank Gauging Middle East W.L.L.	Bahrain
Emerson Ventures Inc.		Delaware
Emersub 3 LLC		Delaware
Emersub 14 LLC		Delaware
	Vilter Manufacturing LLC	Wisconsin
Emersub 16 LLC		Delaware
Emersub CII, Inc.		Delaware
Emersub XLVI, Inc.		Nevada
	Copesub, Inc.	Delaware
	Alliance Compressors LLC	Delaware
Emersub Italia S.R.L.		Italy
EMR Foundation, Inc.		Missouri
EMR Holdings, Inc.		Delaware
	Branson de Mexico, S.A. de C.V.	Mexico
	Copeland Compresores Hermeticos, S.A. de C.V.	Mexico
	Dar Ibtikar Al Iraq for General Services and General Trade LLC	Iraq
	Emerson Argentina S.A.	Argentina

Chloride Koexa S.A.	Argentina
Emerson Automation Solutions GmbH	Switzerland
Emerson Automation Solutions Isolation Valves, LLC	Delaware
Emerson Climate Technologies Australia Pty. Ltd.	Australia
Emerson Dominicana, Srl	Dominican Republic
Emerson Electric (U.S.) Holding Corporation (Chile) Limitada	Chile
Emerson Electric CR, Limitada	Costa Rica
Emerson Electric de Mexico S.A. de C.V.	Mexico
Emerson Electric Korea Ltd.	Korea
Emerson Electric (M) Sdn Bhd	Malaysia
Emerson Process Management Magyarország Kft.	Hungary
Emerson Process Management NV	Belgium
AE Valves	Belgium
Emerson Puerto Rico, Inc.	Puerto Rico
Emerson (Thailand) Limited	Thailand
Emersub 5 LLC	Delaware
Emersub Mexico, Inc.	Nevada
Copeland Scroll Compresores de Mexico S.A. de C.V.	Mexico
Emerson Tool and Appliance Company, S. de R.L. de C.V.	Mexico
Emerson Tool Company de Mexico, S. de R.L. de C.V.	Mexico
Emersub 1 LLC	Delaware
EMR Worldwide Inc.	Delaware
Aspen Technology, Inc.	Delaware
Alias Investment LLC	Delaware
Open Systems International, Inc.	Minnesota
Adherent Consulting LLC	Minnesota
Open Systems International Australia Pty Ltd	Australia
Open Systems International Europe SL	Spain
OSI Automation Software Systems (Beijing) Co., Ltd.	China
OSI du Canada Inc.	Quebec
OSI Energy Automation India Private Limited	India
Paradigm B.V.	Netherlands
AGI Mexicana S.A. de C.V.	Mexico
Paradigm France S.A.	France
Paradigm Geophysical B.V.	Netherlands
Paradigm Geophysical de Venezuela, C.A.	Venezuela
Paradigm Geophysical do Brasil Ltda	Brazil
Paradigm Geophysical Italy SRL	Italy
Paradigm Geophysical (Nigeria) Limited	Nigeria
Paradigm Geophysical S.A.	Argentina
Paradigm Geophysical Sdn. Bhd.	Malaysia
Paradigm Geophysical (KL) Sdn. Bhd.	Malaysia
Paradigm Geophysical Spain S.L.	Spain
Paradigm Geotechnology (Egypt) S.A.E.	Egypt
Paradigm Kazakhstan LLP	Kazakhstan
Paradigm Middle East FZ-LLC	United Arab Emirates
Roxar Paradigm, E&P Software Services LLC	Russia
Paradigm Geophysical (India) Private Limited	India
Paradigm Geophysical Limited	Israel
Paradigm Geoservices Canada Ltd.	Canada
Paradigm Technology (Beijing) Co., Ltd.	China
Paradigm (UK) Holding Limited	United Kingdom
Paradigm Geophysical Pty Ltd	Australia
PT. Paradigm Geophysical Indonesia	Indonesia
Paradigm Geophysical (U.K.) Limited	United Kingdom
Roxar Software Solutions AS	Norway
Roxar Services AS	Norway
Roxar Services OOO	Russia

	Roxar Technologies AS	Norway
Paradigm Geophysical Corp.		Delaware
Aspen Paradigm Holding LLC		Delaware
AspenTech Corporation		Delaware
AspenTech Africa (Pty.) Ltd.		South Africa
AspenTech Argentina S.R.L.		Argentina
AspenTech Canada Holdings, LLC		Delaware
AspenTech Canada Corporation		Canada
AspenTech Solutions Sdn. Bhd.		Malaysia
Aspen Technology S.L.		Spain
AspenTech de Mexico, S. de R.L. de C.V.		Mexico
AspenTech Europe B.V.		Netherlands
Apex Optimisation Technologies B.V.		Netherlands
AspenTech Norway AS		Norway
Camo Smart Software, Inc.		New Jersey
Camo Software Japan Co., Ltd.		Japan
AspenTech SRL		Romania
inmation Software GmbH		Germany
inmation BNX B.V.		Netherlands
inmation Lux S.a.r.l.		Luxembourg
inmation UK Ltd.		United Kingdom
AspenTech Europe S.A./N.V.		Belgium
AspenTech Holding Corporation		Delaware
Mtelligence Corporation		Delaware
Optiplant Inc.		Delaware
The Fidelis Group, LLC		Texas
AspenTech Ltd.		United Kingdom
Apex Optimisation SRO		Czech Republic
Argent & Waugh Limited		United Kingdom
Sabisu Ltd.		United Kingdom
AspenTech Pte. Ltd.		Singapore
AspenTech Software Brasil Ltda.		Brazil
AspenTech Software Corporation		Delaware
Aspen Technology LLC		Russia
AspenTech S.r.l.		Italy
AspenTech Venezuela, C.A.		Venezuela
Aspen Technology (Asia) Inc.		Delaware
AspenTech (Beijing) Ltd.		China
AspenTech (Shanghai) Ltd.		China
Aspen Tech (Thailand) Ltd.		Thailand
AspenTech India Pvt. Ltd.		India
AspenTech Japan Co., Ltd.		Japan
Aspen Technology Australia Pty. Ltd.		Australia
AspenTech Australia Holidng Pty. Ltd.		Australia
Aspen Technology International, Inc.		Delaware
Aspen Technology S.A.S.		Colombia
Aspen Technology Services Corporation		Delaware
Mnubo Solutions Inc.		Canada
Emerson DHC B.V.		Netherlands
Emerson Commercial & Residential Asia Limited		Hong Kong
Emerson Electric do Brasil Ltda		Brazil
Emerson Electric (Thailand) Limited		Thailand
Emerson Process Management Ltda		Brazil
American Governor do Brasil Participacoes Ltda.		Brazil
Emerson Scroll Machining (Thailand) Limited		Thailand
Emersub 7 LLC		Delaware
Emersub 8 LLC		Delaware
Emersub 9 LLC		Delaware

Emersub 10 LLC	Delaware
Emersub 11 LLC	Delaware
Emersub 12 LLC	Delaware
Emerson Electric Canada Limited	Canada
EMR Worldwide B.V. in liquidatie	Netherlands
Rutherford Acquisitions Limited	United Kingdom
Branson Ultrasonics a.s.	Slovakia
Dixell S.R.L.	Italy
Emerson Automation Solutions Final Control South Africa (Pty) Ltd	South Africa
Emerson Climate Technologies (South Africa) (Pty) Ltd	South Africa
Emerson Comres de Mexico, S. de R.L. de C.V.	Mexico
Emerson International Holding Company Limited	United Kingdom
Branson Ultrasonic Sarl	Switzerland
Digital Appliance Controls (UK) Limited	United Kingdom
Emerson Holding Company Limited	United Kingdom
Copeland Limited	United Kingdom
Emerson Automation Fluid Control & Pneumatics UK Limited	United Kingdom
Emerson Electric U.K. Limited	United Kingdom
Artesyn Hungary Elektronikai Kft.	Hungary
Bray Lectroheat Limited	United Kingdom
Buehler Europe Limited	United Kingdom
Bannerscientific Limited	United Kingdom
Buehler UK Limited	United Kingdom
Metallurgical Services Laboratories Limited	United Kingdom
Metaserv Limited	United Kingdom
Emerson Automation Solutions Egypt LLC	Egypt
Emerson Egypt LLC	Egypt
Emerson FZE	UAE
Emerson Automation Solutions Mozambique Limitada	Mozambique
Emerson Climate Technologies FZE	UAE
Emerson Gabon SARL	Gabon
Emerson Process Management Angola Lda	Angola
EMRSN Process Management Morocco Sarl	Morocco
Emerson Saudi Arabia LLC	Saudi Arabia
Emerson Energy Systems (UK) Limited	United Kingdom
Emerson Process Management Limited	United Kingdom
Emerson Automation Solutions Actuation Technologies Limited	United Kingdom
Emerson Automation Solutions Ireland Limited	Ireland
Emerson Process Management Distribution Limited	United Kingdom
Emerson Process Management Shared Services Limited	United Kingdom
METCO Services Limited	United Kingdom
Permasense Limited	United Kingdom
Roxar Limited	United Kingdom
Emerson UK Trustees Limited	United Kingdom
Rosemount Topco Limited	United Kingdom
Rosemount Measurement Limited	United Kingdom
Cascade Technologies Holdings Limited	Scotland
Cascade	Scotland

	Emerson Automation Fluid Control & Pneumatics Czech Republic s.r.o.	Czech Republic
	Emerson Automation Fluid Control & Pneumatics Poland Sp. z o.o.	Poland
Emerson Process Management AG		Switzerland
	Emerson LLC	Azerbaijan
	Emerson LLP	Kazakhstan
	Emerson Process Management del Peru, S.A.C.	Peru
	Emerson Process Management Kft.	Hungary
	Emerson Process Management Romania S.R.L.	Romania
	Emerson Automation Solutions Bulgaria EOOD	Bulgaria
	Emerson Process Management Sp. z o.o.	Poland
	Emerson Process Management UAB	Lithuania
	Emerson Process Management Ticaret Limited Sirket	Turkey
	Emerson Process Management, s.r.o.	Czech Republic
	Emerson Process Management, s.r.o.	Slovakia
	Emerson TOV	Ukraine
Emerson Process Management Co., Ltd.		China
	Emerson Process Management Power & Water Solutions (Shanghai) Co., Ltd.	China
EMR Emerson Holdings (Switzerland) GmbH		Switzerland
	Emerson Climate Technologies - Transportation Solutions ApS	Denmark
	Emerson Process Management Qatar W.L.L.	Qatar
	EMR (Asia) Limited	Hong Kong
	Emerson Electric (China) Holdings Co., Ltd.	China
	ASCO Valve (Shanghai) Co., Ltd.	China
	Aventics Pneumatics Trading (Shanghai) Co., Ltd.	China
	Beijing Rosemount Far East Instrument Co., Ltd.	China
	Branson Ultrasonics (Shanghai) Co., Ltd.	China
	Emerson Beijing Instrument Company, Ltd.	China
	Emerson Climate Technologies (Suzhou) Co., Ltd.	China
	Emerson Climate Technologies (Suzhou) Trading Co., Ltd.	China
	Emerson InSinkErator Appliance (Nanjing) Co., Ltd.	China
	Emerson Machinery Equipment (Shenzhen) Co., Ltd.	China
	Emerson Process Management Flow Technologies Co., Ltd.	China
	Emerson Process Management	China

	(Tianjin) Valves Co., Ltd.	
	Emerson Professional Tools (Shanghai) Co., Ltd.	China
	Emerson Trading (Shanghai) Co., Ltd.	China
	Emerson Xi'an Engineering Center	China
	Fisher Jeon Gas Equipment (Chengdu) Co., Ltd.	China
	Fisher Regulators (Shanghai) Co., Ltd.	China
	Parex Industries Limited	New Zealand
	Rosemount Tank Radar AB	Sweden
	Emerson Process Management Marine Solutions Singapore Pte. Ltd.	Singapore
	Rosemount Tank Radar Properties AB	Sweden
	Virgo Valves & Controls (ME) FZE	UAE
Emerson Electric Nederland B.V.		Netherlands
Aegir Norge Holding AS		Norway
Roxar AS		Norway
	Roxar Flow Measurement AS	Norway
	Emerson Process Management Nigeria Limited	Nigeria
	Roxar Maximum Reservoir Performance W.L.L.	Bahrain
	Roxar de Venezuela C.A.	Venezuela
	Roxar Saudi Co.	Saudi Arabia
A.P.M. Automation Solutions Ltd.		Israel
Damcos Holding A/S		Denmark
Damcos A/S		Denmark
	Emerson Process Management Marine Solutions Korea Co., Ltd.	Korea
	Emerson Process Management Marine Systems (Shanghai) Co., Ltd.	China
Emerson Automation Solutions Final Control Netherlands B.V.		Netherlands
Emerson Electric Company Lanka (Private) Limited		Sri Lanka

Emerson LLC	Russia
Emerson Network Power DHC B.V.	Netherlands
Beckman Industrial B.V.	Netherlands
Branson Ultrasonics B.V. in liquidation	Netherlands
EI-O-Matic B.V.	Netherlands
Emerson Process Management (South Africa) (Proprietary) Ltd.	South Africa
EMRSN HLDG B.V.	Netherlands
Emerson Process Management Flow B.V.	Netherlands
Emerson Process Management B.V.	Netherlands
System Plast International B.V.	Netherlands
Emerson S.R.L.	Romania
EMERSON CLIMATE TECHNOLOGIES, s.r.o.	Czech Republic
Emerson Process Management (Vietnam) Co., Ltd.	Vietnam
Emerson Nigeria FZE	Nigeria
Emerson Process Management Europe GmbH	Switzerland
Emerson Sice S.r.l.	Italy
Branson Ultrasuoni S.R.L.	Italy
Emerson Automation Fluid Control & Pneumatics Italy S.R.L.	Italy
Emerson Climate Technologies Retail Solutions Europe S.R.L.	Italy
Emerson Process Management S.R.L.	Italy
Progea S.r.l.	Italy
Progea Deutschland GmbH	Germany
Progea International, S.A.	Switzerland
Vulsub Italia S.r.l.	Italy
Biffi Italia S.r.l.	Italy
Emerson Automation Solutions Final Control Italia S.r.l.	Italy
Emerson USD Finance Company Limited	United Kingdom
HTE Engineering Services Limited	Ireland
Klauke Handelsgesellschaft mbH	Austria
Klauke Slovakia s.r.o.	Slovakia
Klauke UK Ltd	United Kingdom
Mita-Teknik A/S	Denmark
Mita-Teknik (Ningbo) Co., Ltd.	China
Mita-Teknik Technology Private Limited	India
Mita-Teknik, Utlejning ApS	Denmark
Mita-Teknik Ltd.	Ukraine
Verdant Environmental Technologies Inc.	Canada
Emerson Mexico Finance, S.A. de C.V., SOFOM, ENR	Mexico
Emerson Process Management de Colombia SAS	Colombia
Emerson Process Management d.o.o.	Croatia
Emerson Process Management (India) Private Limited	India
Emerson Process Management S.A.	Greece
Emerson Valves & Controls Japan Co., Ltd.	Japan
Taiwan Valve Co., Ltd.	Taiwan
Vulsub Brasil Holding	Luxembourg
Vulsub Brasil Ltda.	Brazil
Westlock Equipamentos de Controle Ltda.	Brazil
Hiter Industria e Comercio de Controles Termo-Hidraulicos Ltda.	Brazil
Vulsub Holding Ltd	Isle of Man
Vulsub Holdings II Limited	United Kingdom
Vulsub Middle East Holdings, LLC	Delaware
Emerson Automation Solutions Final Control Middle East FZE	United Arab Emirates
Vulsub Gulf Holding Limited	United Arab Emirates
Emirates Techno Casting FZE	United Arab Emirates
JCF Fluid Flow India Private Limited	India
Vulsub S.A.	Argentina
F-R Tecnologias de Flujo, S.A. de C.V.	Mexico
PT. Emerson Indonesia	Indonesia

Rey-Lam, S. de R.L. de C. V.	Mexico
Termotec de Chihuahua, S.A. de C.V.	Mexico
Tranmet Holdings Limited	United Kingdom
Tranmet Holdings B.V.	Netherlands
Industrial Group Metran JSC	Russia
JSC Metran-Export	Russia
ENPESNA, Inc.	Delaware
EPMCO Holdings, Inc.	Delaware
Emerson Process Management Regulator Technologies, Inc.	Delaware
Fromex, S.A. de C.V.	Mexico
Emersub CXII, Inc.	Delaware
Fisher Controls International LLC	Delaware
Emerson Process Management Australia Pty Ltd	Australia
Emerson Automation Solutions Final Control Australia Pty Limited	Australia
Emerson Automation Solutions Final Control Sales Australia Pty Limited	Australia
Emerson Process Management New Zealand Limited	New Zealand
Fisher Controles de Mexico, S.A. de C.V.	Mexico
Instrument & Valve Services Company	Delaware
Nippon Fisher Co., Ltd.	Japan
Fisher-Rosemount Systems, Inc.	Delaware
Emerson Process Management Holding LLC	Delaware
Emerson Process Management LLLP	Delaware
Emerson Process Management Power & Water Solutions, Inc.	Delaware
American Governor Company LLC	Delaware
EPM Tulsa Holdings Corp.	Delaware
Emerson Process Management Regulator Technologies Tulsa, LLC	Oklahoma
Fiberconn Assemblies Morocco Sarl	Morocco
Fusite Corporation	Ohio
Emerson Japan, Ltd.	Japan
Fusite Land Company	Delaware
General Equipment and Manufacturing Company, Inc.	Kentucky
Hiross India Private Limited	India
Humboldt Hermetic Motor Corp.	Delaware
Woodstock Land Company LLC	Missouri
Intelligent Platforms, LLC	Delaware
Emerson Automation Solutions Intelligent Platforms Asia Pacific Pte. Ltd.	Singapore
Emerson Automation Solutions Intelligent Platforms Private Limited	India
Emerson Automation Solutions Intelligent Platforms (Shanghai) Co., Ltd.	China
ICC Intelligent Platforms GmbH	Germany
Industrial Controls Canada ULC	Nova Scotia
Intrinsic Safety Equipment of Texas, Inc.	Texas
Motores Hermeticos del Sur, S.A. de C.V.	Mexico
ProTeam, Inc.	Idaho
Ridge Tool Europe NV	Belgium
Emerson Professional Tools AG	Switzerland
Ridgid Scandinavia A/S	Denmark
Rosemount Tank Gauging North America Inc.	Texas
System Plast USA de Mexico, S. de R.L. de C.V.	Mexico
Termocontroles de Juarez, S.A. de C.V.	Mexico
Tescom Corporation	Minnesota
Tescom Europe Management GmbH	Germany
Tescom Europe GmbH & Co. KG	Germany

Consent Of Independent Registered Public Accounting Firm

The Board of Directors
Emerson Electric Co.:

We consent to the incorporation by reference in the Registration Statement Nos. 333-206096, 333-173933, 333-221671, 333-154362, 333-154361, 333-152917, and 333-152916 on Form S-8 and Registration Statement Nos. 333-250115, 333-52658, 333-84673, and 333-66865 on Form S-3 of our report dated November 14, 2022, with respect to the consolidated financial statements, and the related notes of Emerson Electric Co. and the effectiveness of internal control over financial reporting.

/s/ KPMG LLP

St. Louis, Missouri
November 14, 2022

POWER OF ATTORNEY

The undersigned members of the Board of Directors and Executive Officers of Emerson Electric Co., a Missouri corporation with principal offices at 8000 West Florissant Avenue, St. Louis, Missouri 63136, hereby appoint F. J. Dellaquila, S. Y. Bosco, M. J. Baughman and J. A. Sperino as their Attorneys-in-Fact for the purpose of signing Emerson Electric Co.'s Securities and Exchange Commission Form 10-K (and any and all Amendments thereto) for fiscal year ended September 30, 2022.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ J. S. Turley</u> J. S. Turley	Chair of the Board	October 4, 2022
<u>/s/ M. A. Blinn</u> M. A. Blinn	Director	October 4, 2022
<u>/s/ J. B. Boltan</u> J. B. Boltan	Director	October 4, 2022
<u>/s/ M. S. Craighead</u> M. S. Craighead	Director	October 4, 2022
<u>/s/ W. H. Easter III</u> W. H. Easter III	Director	October 4, 2022
<u>/s/ G. A. Flach</u> G. A. Flach	Director	October 4, 2022
<u>/s/ A. F. Golden</u> A. F. Golden	Director	October 4, 2022
<u>/s/ C. Kendle</u> C. Kendle	Director	October 4, 2022
<u>/s/ L. M. Lee</u> L. M. Lee	Director	October 4, 2022
<u>/s/ M. S. Levatich</u> M. S. Levatich	Director	October 4, 2022
<u>/s/ S. L. Karsanbhai</u> S. L. Karsanbhai	President and Chief Executive Officer and Director	October 4, 2022
<u>/s/ F. J. Dellaquila</u> F. J. Dellaquila	Senior Executive Vice President and Chief Financial Officer	October 4, 2022
<u>/s/ M. J. Baughman</u> M. J. Baughman	Vice President, Controller and Chief Accounting Officer	October 4, 2022

Certification

I, S. L. Karsanbhai, certify that:

1. I have reviewed this annual report on Form 10-K of Emerson Electric Co.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors:
 - 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: November 14, 2022

/s/ S. L. Karsanbhai

S. L. Karsanbhai
President and
Chief Executive Officer
Emerson Electric Co.

Certification

I, F. J. Dellaquila, certify that:

1. I have reviewed this annual report on Form 10-K of Emerson Electric Co.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors:
 - 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: November 14, 2022

/s/ F. J. Dellaquila

F. J. Dellaquila
Senior Executive Vice President and
Chief Financial Officer
Emerson Electric Co.

**CERTIFICATION PURSUANT TO
EXCHANGE ACT RULE 13a-14(b) AND
18 U.S.C. SECTION 1350**

In connection with the Annual Report of Emerson Electric Co. (the "Company") on Form 10-K for the period ended September 30, 2022, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, S. L. Karsanbhai, certify, to the best of my knowledge, pursuant to Exchange Act Rule 13a-14(b) and 18 U.S.C. Section 1350, that:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ S. L. Karsanbhai

S. L. Karsanbhai
President and
Chief Executive Officer
Emerson Electric Co.
November 14, 2022

**CERTIFICATION PURSUANT TO
EXCHANGE ACT RULE 13a-14(b) AND
18 U.S.C. SECTION 1350**

In connection with the Annual Report of Emerson Electric Co. (the "Company") on Form 10-K for the period ended September 30, 2022, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, F. J. Dellaquila, certify, to the best of my knowledge, pursuant to Exchange Act Rule 13a-14(b) and 18 U.S.C. Section 1350, that:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ F. J. Dellaquila

F. J. Dellaquila
Senior Executive Vice President and
Chief Financial Officer
Emerson Electric Co.
November 14, 2022