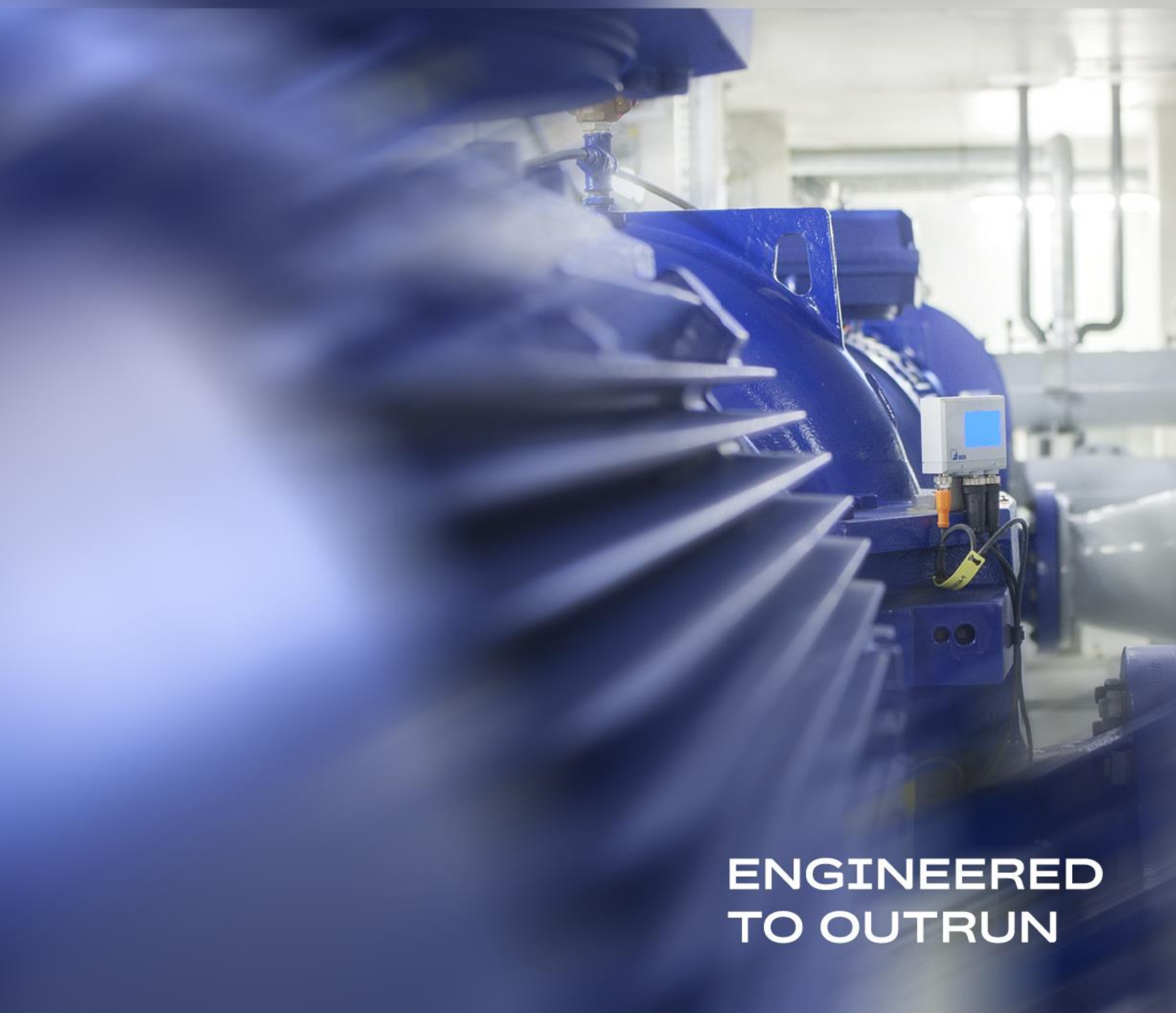
FINANCIAL REPORT 2024



ENGINEERED TO OUTRUN

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FINANCIAL REVIEW OF ABB GROUP

INTRODUCTION

ABOUT ABB

ABB is a global technology leader in electrification and automation, enabling a more sustainable and resource-efficient future. By connecting its engineering and digitalization expertise, ABB helps industries run at high performance, while becoming more efficient, productive and sustainable so they outperform. At ABB, we call this ‘Engineered to Outrun’. Our company has over 140 years of history and around 110,000 employees worldwide.

We operate in approximately 100 countries across three regions: Europe, the Americas, and Asia, Middle East and Africa, and generate revenues in numerous currencies. We are headquartered in Zurich, Switzerland, and we govern our company through our four Business areas: Electrification, Motion, Process Automation, and Robotics & Discrete Automation. For a breakdown of our consolidated revenues (i) by Business area, (ii) by geographic region, and (iii) by product type, see “Analysis of results of operations—Revenues” and “Note 24 - Operating segment and geographic data” to our Consolidated Financial Statements.

EMPLOYEES

A breakdown of our employees by geographic region is as follows:

December 31,	**2024**	2023	2022
Europe	52,100	51,400	49,700
The Americas	26,800	26,400	26,400
Asia, Middle East and Africa	31,000	30,100	29,000
Total	**109,900**	**107,900**	**105,100**

HISTORY OF THE ABB GROUP

The ABB Group was formed in 1988 through a merger between Asea AB and BBC Brown Boveri AG. Initially founded in 1883, Asea AB was a major participant in the introduction of electricity into Swedish homes and businesses and in the development of Sweden’s railway network. In the 1940s and 1950s, Asea AB expanded into the power, mining and steel industries. Brown Boveri and Cie. (later renamed BBC Brown Boveri AG) was formed in Switzerland in 1891 and initially specialized in power generation and turbines. In the early to mid-1900s, it expanded its operations throughout Europe and broadened its business operations to include a wide range of electrical engineering activities.

In January 1988, Asea AB and BBC Brown Boveri AG each contributed almost all of their businesses to the newly formed ABB Asea Brown Boveri Ltd, of which they each owned 50 percent. In 1996, Asea AB was renamed ABB AB and BBC Brown Boveri AG was renamed ABB AG. In February 1999, the ABB Group announced a group reconfiguration designed to establish a single parent holding company and a single class of shares. ABB Ltd was incorporated on March 5, 1999, under the laws of Switzerland. In June 1999, ABB Ltd became the holding company for the entire ABB Group. This was accomplished by having ABB Ltd issue shares to the shareholders of ABB AG and ABB AB, the two companies that formerly owned the ABB Group. The ABB Ltd shares were exchanged for the shares of those two companies, which, as a result of the share exchange and certain related transactions, became wholly-owned subsidiaries of ABB Ltd.

ABB Ltd shares are currently traded on the SIX Swiss Exchange and the NASDAQ OMX Stockholm Exchange, and the sponsored level I American Depositary Shares (ADS) are traded on the over-the-counter (OTC) markets under the ticker ABBNY. ABB filed a Form 15F to voluntarily deregister and suspend SEC reporting on June 10, 2024. The deregistration became effective in September 2024. We continue to meet financial reporting requirements as per the regulations of the SIX Swiss Exchange and Nasdaq Stockholm.

ABB TODAY

The ABB Purpose

ABB's purpose is to enable a more sustainable and resource-efficient future with our technology leadership in electrification and automation. Our offering is relevant for the global transition towards low-carbon energy, increased energy efficiency, and the transition to more adaptive manufacturing and automation, putting us right in the center of long-term secular trends.

Market leading technology

Our market-leading position is based on cutting-edge technology including value derived from software, our ability to scale, decades-long domain expertise and close customer relationships, all of which act as barriers to market entry for potential competitors.

We continuously evolve our offering to remain a relevant and trusted partner to our customers. Our annual non-order related research and development spending in 2024 amounted to approximately 4.5 percent of revenues. We focus our research and development expenditures on key areas of innovation and have spent approximately $10.6 billion since the beginning of 2016, focusing on developing best-in-class products and services in the fields of electrification and automation with the goal of helping our customers to create sustainable resource-efficient value. Embedding software and AI in our products and solutions is an integral part of our strategy, with the majority of our offering including software or being digitally enabled. Over half of our research and development employees are focused on digital solutions. It enables differentiation, customer value creation and drives quality of revenues for ABB.

All four of our Business areas are market leaders in their respective areas. Our global reach along with our extensive local presence assists us in scaling innovations to achieve stronger returns, which supports higher absolute investments for future growth. Active globally, our revenues are well-balanced across regions with customers served directly and through a strong channel partner network.

With its long history, ABB not only invented or pioneered many power and automation technologies but has retained technology and market leadership in many of these areas. Being present in various vertical markets for decades, with close long-term relationships with customers and channel partners, has resulted in our unique deep domain expertise, enabling a thorough understanding of customers’ needs and operations.

The ABB Way

Our decentralized operating model, ABB Way, comprises a select number of common processes covering our business model, our people and culture, the ABB brand and our governance framework. It facilitates accountability, transparency and speed in ABB.

In our operating model, the divisions represent the highest level of operating decisions. They are closest to their respective markets and customer needs. Each division progresses through the strategic mandates and priorities of stability and profitability before growth. In order to deploy full focus on organic and acquired growth to the extent of consolidating the market, the business' structure should be robust and profitability should be at least in line with industry peers.

Each division has full accountability for its results and carries the responsibility for business development and research and development for leading technology to secure a leading market position. During 2024 we cemented the decentralized way of working at ABB within all our divisions, ensuring accountability, transparency and speed in decision making. In 2025, we aim to move accountability further down within the organization, empowering leaders below the division level with strategic mandates and corresponding incentives to further drive results. Clear mandates and accountability at the business line level will enhance transparency and operational speed across the organization. Furthermore, we continue to shift our focus to profitable growth.

Strong performance management is key in a decentralized business model. We apply a standardized monthly scorecard system for the Divisions and Business areas, to support full transparency of operational performance. It is accompanied by a limited select number of short-term incentives, including the mandatory target to make annual productivity improvements of at least 5 percent each year.

The corporate functions focus on necessary strategic, financial and governance activities, with a lean headcount of less than 800 employees.

Enhanced growth profile

Over the past several years, we have taken significant actions to align our business portfolio around the ABB Purpose, resulting in all divisions now active only within the markets of electrification and automation. Both of these markets are benefiting from increasing global investments to decarbonize, increase energy efficiency and to automate and increase flexibility in society, including power generation, industrial manufacturing, buildings and process industries. Additionally, we have increased the proportion of sales stemming from short-cycle businesses, meaning a reduced proportion from project-related activities, which we believe should reduce the risk and volatility in our earnings. This ongoing shift towards better quality of revenues is now an integral part of governance and business execution.

The responsibility for growth has been fully transferred to the divisions, as they are closest to customers. This includes both organic and acquired growth. The divisions have the best insights into current and future customer needs and are accountable for building their respective business accordingly. With more divisions transitioning over time from stability and profitability to growth, we expect to see a gradual strengthening of our growth profile.

Finally, environmental, social and governance (ESG) drivers are accelerating and translating into increased demand for our electrification and automation offering. The demand for electricity is growing nine times as fast as other energy sources, resulting in approximately 70 percent higher average annual investments into distribution networks over the next seven years (source: IEA World Energy Outlook 2024, Announced Pledges Scenario). The share of low-carbon sources in the global energy mix is expected to increase to approximately 70 percent by 2050 from only 20 percent today (source: IEA World Energy Outlook 2024, Announced Pledges Scenario). The need to improve energy efficiency has never been more relevant, from both the perspective of sustainable operations and reducing operating costs in a high energy cost environment. Investments in energy efficiency are expected to increase 53 percent per year over the next seven years versus the seven previous years (source: IEA World Energy Outlook 2024, Announced Pledges Scenario). Today, approximately 45 percent of the world's electricity is converted into motion by electric motors yet only less than 25 percent of the world's electric motors are optimized through the control of drives. Lastly, the global number of working age people (15 to 64 years) per retiree (65 years or over) is expected to fall by about 24 percent between 2023 and 2035 (source: United Nations World Population Prospects 2024), supporting demand for robotics and automation solutions. We believe ABB's offering is well positioned to address these trends.

BUSINESSES

OUR MARKETS

ABB is a technology leader in electrification and automation with a comprehensive digitalized offering of electrification, motion and automation solutions. Our exposure to customers is geographically balanced while catering to multiple end-markets and segments. We believe our customer offering is well positioned to benefit from secular growth drivers, including urbanization, labor shortage, shift to electrification, automation and robotization, as well as other data and digitalization trends.

We are focused on creating superior customer value through our comprehensive, modular offering, combining traditional products and services with software-enabled products and systems as well as digital services and software that we sell both separately and combined as scalable solutions. Our advanced software is a key differentiation of our digital offering and over half of our approximately 7,800 employees in research and development are active in software development.

The majority of our businesses are market leaders within their respective segments. We believe market leadership is critical, as it provides the opportunity for price leadership, which in turn supports profitability, enabling us to invest further in research and development to sustain our technological leadership. For a discussion of the geographic distribution of our total revenues, see “Analysis of results of operations—Revenues.”

Industry market

Approximately half of our revenues are derived from customers within the industrial segment where we serve production facilities and factories all around the world, from process industries such as oil and gas, pulp and paper as well as mining, to discrete industries including automotive, food and beverage and consumer electronics.

In discrete industries, orders declined sharply as customers in the machine builders segment adjusted their order patterns in response to shorter delivery lead times as well as the impacts from a weak underlying market. The robotics segment declined, driven mainly by fewer investments in the automotive sector and consumer electronics, while positive momentum was reported in logistics and general industry.

Late-cycle process industries remained broadly stable from last year’s high level. Strength was noted in conventional power generation as well as the energy-related low-carbon segments. Oil and gas, mining and metals remained broadly stable, while some softness was noted in pulp and paper, and chemicals.

Buildings market

Approximately one-fifth of our offering is sold into the buildings market, with about two-thirds focused on commercial buildings and one-third on residential. Overall, orders in the buildings market improved, driven by positive developments in the commercial sector, particularly in the United States, while China continues to show weakness. The residential segment stabilized outside of China, which remains a challenging market.

Transport & infrastructure market

Approximately one-fifth of our customers operate in the transport & infrastructure market. Our expertise provides efficient, reliable and sustainable solutions for these customers, with a focus on energy efficiency and reduced operating costs.

Demand for data centers remained robust, fueled by the expansion of digital services, including AI and remote work. In the marine segment, we experienced positive developments in both marine and port operations, while strong customer activity continued in the rail segment.

Utilities market

We deliver solutions mainly for distribution utilities and renewables customers, while continuing to service conventional power generation customers with our control and automation solutions.

During 2024, the renewables markets continued to see strong growth. Business levels in the conventional power generation market have improved. Demand from electrical distribution utilities remained strong, with ongoing investments to increase grid reliability and resilience due to increased integration of renewables.

We serve our customers through our operating divisions which are included in our Business areas. Developments in these Business areas are discussed in more detail below. Revenue figures presented in this “Businesses” section are before intersegment eliminations.

ELECTRIFICATION BUSINESS AREA

Overview

Electrification provides leading electrical distribution and management technologies, solutions and services to electrify the world in a safe, smart and sustainable way. The portfolio includes medium- and low-voltage electrical components, switchgear, digital devices, enclosures, and circuit breakers, among others. With our products, solutions and services, we collaborate with customers to improve power delivery and security, enhance energy management, efficiency and operational reliability, as we seek to achieve a low carbon society.

The Electrification Business area delivers products to end customers through a global network of channel partners. More than half of the Business area’s revenue is derived from distributors and approximately 20 percent is derived from direct sales to end-users. The remaining revenues are generated from original equipment manufacturers (OEMs), engineering, procurement and construction (EPC) contracting companies, system integrators, utilities and panel builders. The proportion of direct compared to channel partner sales varies by segment, product technology and geographic markets.

The Electrification Business area had approximately 51,700 employees as of December 31, 2024, and generated $15.4 billion of revenues in 2024.

Customers

The Electrification Business area serves a wide range of customer segments, including residential, commercial and industrial buildings, utilities, oil and gas, chemicals, data centers, renewables, food and beverage, transport and infrastructure, among others. From some of the world’s tallest buildings to the busiest airports, the Business area’s products and solutions cover a wide range of applications and business segments.

Products and Services

The Electrification Business area’s products and services are delivered through five operating divisions.

The Distribution Solutions Division offers indoor and outdoor medium-voltage components, switchgear, and solutions that connect and protect the evolving energy grid. The Division enables the reliable integration of diverse power sources, including renewable energy, into the grid, ensuring continuous power delivery to industries, commercial facilities, and residential users. Its future-proof technologies protect utilities and industries from potential grid anomalies and its digital solutions enhance grid reliability by enabling fault analysis, prediction, and preventive maintenance by applying analytics and artificial intelligence. The Division supports customers and partners to stay ahead of increasing electrification needs and regulatory changes, providing technologies and solutions to adapt in a rapidly evolving energy landscape.

The Smart Power Division provides energy distribution solutions for data centers, industrial and manufacturing plants, critical infrastructure and commercial buildings. The Division’s technical teams work closely with industry partners, delivering advanced solutions that support rapid growth, energy transition, and sustainability objectives. The Division’s portfolio includes industrial circuit breakers, low-voltage systems, motor starting applications, and safety devices like switches and relays. Its Power Protection unit supports the world’s largest data center companies with advanced energy-efficient UPS solutions. The Division’s ABB Ability™ Energy Manager provides a scalable, easy-to-use platform that helps organizations save energy and reduce CO_2 emissions.

The Smart Buildings Division enables energy efficiency, safety, and comfort for any building type, through new installations or retrofit solutions. The Division offers integrated building automation systems to control HVAC, lighting, shutters, door entry and emergency lighting. It ensures safe and reliable energy distribution solutions including DIN rail protection devices, enclosures and energy management systems through to industrial plugs and sockets and conventional wiring accessories, accommodating single family homes, multiple dwellings, commercial buildings, infrastructure and industrial applications. The Division's highly innovative technologies and digital solutions serve the rising global demand among real estate developers, owners, and investors for smart building technologies that optimize energy distribution and building automation. The scalable solutions aim to deliver significant sustainable and financial benefits, meeting social and environmental demands, while being able to address even the most complex of customers' carbon reduction strategies.

The Installation Products Division helps manage the connection, protection and distribution of electrical power from source to socket. The Division's products are engineered to provide ease of installation and perform in demanding and harsh conditions, helping to ensure safety and continuous operation for utilities, businesses and people around the world. The Commercial Essentials product segment includes electrical junction boxes, commercial fittings, strut and cable tray metal framing systems for commercial and residential construction. The Premier Industrial product segment includes multiple product lines, such as Ty-Rap® cable ties, T&B Liquidtight Systems® protection products, PVC coated and nylon conduit systems, power connection and grounding systems, and cable protection systems of conduits and fittings for harsh and industrial applications. The Division also manufactures solutions for medium-voltage applications used in the utility market under its marquee brands including Elastimold™ reclosers and switchgear with no SF6 gas, capacitor switches, current limiting fuses, Homac™ distribution connectors, Hi-Tech Valiant™ full-range current limiting fuse for fire mitigation, faulted current indicators and distribution connectors, cable accessories and apparatus with products for overhead and underground distribution. Manufacturing includes made-to-stock and custom-made solutions.

The Service Division partners with our customers to improve the availability, reliability, predictability and sustainability of electrical products and installations. The Division's extensive service portfolio offers product care, modernization, and advisory services to improve performance, extend equipment lifetime and deliver new levels of operational and sustainable efficiency. We help customers keep resources in use for as long as possible, extracting the maximum value from them, and then recovering and regenerating products and materials at the end of their useful life.

Sales and Marketing

Sales and marketing is generally conducted within the divisions in the Electrification Business area. This enables the divisions to manage their respective end-to-end activities and create demand across all channels, products and solutions. They increase focus and speed for our customers to drive faster growth. Where necessary, the divisions work together on joint services, such as the management of accounts, channels, and segment-sales, engaging in a range of promotional activities, both internal and external.

Competition

The Electrification Business area's principal competitors vary by product group and include Atkore, Chint, Eaton, Hager, Hubbell, Legrand, LS Electric, Mitsubishi Electric, nVent, Panasonic, Schneider Electric, Siemens and Vertiv.

Capital Expenditures

The Electrification Business area's capital expenditures for property, plant and equipment totaled $472 million in 2024, compared to $386 million in 2023. Investments in 2024 principally related to real estate investments, capacity expansion to support growth, as well as equipment replacement and upgrades. Geographically, in 2024, Europe represented 51 percent of the capital expenditures, followed by the Americas (38 percent) and Asia, Middle East and Africa (11 percent).

MOTION BUSINESS AREA

Overview

The Motion Business area provides pioneering technology, products, solutions and related services to industrial customers to improve safety and reliability, achieve better performance and provide energy efficient, decarbonizing and circular solutions. The portfolio includes motors, generators and drives for a wide range of applications in all industrial sectors.

The Motion Business area designs, manufactures and sells drives, motors, generators, and traction solutions. Building on long-standing experience in electric powertrains, the Business area combines domain expertise and technology to deliver the optimum solution for a wide range of applications for a comprehensive range of industrial segments. In addition, the Business area, along with its channel partners, has an industry leading global service presence.

The Motion Business area had approximately 22,400 employees as of December 31, 2024, and generated $7.8 billion of revenues in 2024.

Customers

The Motion Business area serves a wide range of customers in different industrial segments such as pulp and paper, oil and gas, metals and mining, food and beverage, HVAC, water and wastewater, transportation, power generation, marine and offshore.

Products and Services

The Motion Business area's products and services are delivered through seven operating divisions.

The Drive Products Division is a global technology leader serving industries, infrastructure segments and machine builders with world-class drives and programmable logic controllers (PLC). With its products, global scale and local presence, the Division helps customers, partners and equipment manufacturers to improve energy efficiency, asset reliability, productivity and safety.

The System Drives Division is the market leader in high-power, high-performance drives and drive systems for industrial process and large infrastructure and marine applications, and a leading independent supplier of power conversion equipment for renewable energy. The Division offers to customers and partners global support, domain expertise in all major industries and an innovative and digitally enabled portfolio to help them achieve asset reliability, performance and energy efficiency in mission critical applications.

The Service Division serves customers worldwide by maximizing uptime, extending life cycle, and improving the performance and energy efficiency of their motors, drives and generators. The Division leads the way in digitalization and delivers service solutions through dedicated service experts, service workshops, and its partner network, ensuring customer operations run profitably, safely and reliably.

The Traction Division is a globally trusted independent supplier and recognized leader in onboard propulsion technologies that drive innovation in rail, bus, and industrial vehicle electrification. The Division partners with OEMs, operators, system integrators, and vehicle owners, offering a comprehensive range of high-performance and full lifecycle managed propulsion, auxiliary and energy storage solutions. Each solution is engineered to meet specific customer requirements and the operational conditions of the respective vehicle. This enables maximum energy efficiency, low carbon emissions and high reliability.

The IEC Low Voltage Division is a global technology leader delivering a full range of energy-efficient low voltage motors, including hyper-efficient solutions such as IE6 SynRM (synchronous reluctance motors). Through a global footprint, domain expertise and rugged designs, the Division provides reliable technology that improves efficiency and productivity even in the most demanding applications.

The Large Motors and Generators Division helps customers in all major industries and applications reach new levels of efficiency and energy savings, even under the most demanding conditions, by offering a comprehensive product portfolio of large AC motors and generators. The Division's induction, synchronous and special design motors and synchronous generators power critical applications across industry, infrastructure and marine transportation. Combining the best available materials with superior technology, the large motors and generators are designed to operate efficiently and reliably, even for challenging processes or applications. These leading energy-efficient products allow for a reduced payback time and a lower total cost of ownership.

The NEMA Motors Division is a marketer, designer and manufacturer that offers Baldor-Reliance® industrial electric motors, primarily in North America. The Division focuses on quality, reliability and efficiency to provide a comprehensive offering of NEMA motors in the market across most industrial segments and applications.

Sales and Marketing

Sales are made both through direct sales forces and through channel partners, such as distributors and wholesalers, as well as installers, OEMs and system integrators. The proportion of direct sales to end users compared to channel partner sales varies among the different industries, products and geographic markets.

Competition

The principal competitors of the Motion Business area include Schneider Electric, Siemens, Toshiba, WEG Industries, Wolong and Danfoss.

Capital Expenditures

Capital expenditures in the Motion Business area for property, plant and equipment totaled $191 million in 2024, compared to $171 million in 2023. Principal expenditures in 2024 related to real estate investments, capacity expansion, equipment replacement and upgrades across various countries including the United States, Finland, Switzerland, China and India. Geographically, in 2024, Europe represented 49 percent of the capital expenditures, followed by the Americas (38 percent) and Asia, Middle East and Africa (13 percent).

PROCESS AUTOMATION BUSINESS AREA

Overview

The Process Automation Business area provides a comprehensive range of integrated automation, electrical and digital systems and services for customers in the process, hybrid and maritime industries. These offerings, coupled with deep domain knowledge in each end market, help to optimize productivity, energy efficiency, sustainability and safety of industrial processes and operations.

The Business area's offering can be grouped into two categories, with approximately half of the offering related to solutions for new and brownfield projects and half related to service, mainly for the existing installed base. Process Automation also integrates offerings from the Electrification, Motion and Robotics & Discrete Automation Business areas into its projects. The Business area's offerings are sold primarily through its direct sales force with a smaller share through partners and distributors.

The Business area had approximately 22,500 employees as of December 31, 2024, and generated revenues of $6.8 billion in 2024.

Customers

The Process Automation Business area's end customers include companies across process, hybrid and maritime industries. These industries include oil, gas, renewables, chemicals, mining, metals, cement, pulp and paper, pharmaceuticals, battery manufacturing, food and beverage, space, power generation, water, marine and ports.

Products and Services

The Process Automation Business area offering includes an extensive portfolio of products, solutions, digital applications and services for the control of the simplest to the most complex and critical industrial processes and infrastructure. These systems can link various process and information flows, allowing customers to manage and control their entire production process based on real-time information. The Business area's automation offering includes the distributed control system (DCS) ABB Ability™ System 800xA®, which is also an electrical control system, a safety system and a collaboration enabler with the capacity to improve engineering efficiency, operator performance and asset utilization. Other control solutions include Symphony® Plus (designed to address automation needs of the power and water industry segments) and the Freelance DCS solution. Components for basic automation solutions, process controllers, I/O modules, panels, and Human Machine Interfaces (HMI) are available through the Compact Product Suite offering. The product portfolio is complemented by a suite of ABB Ability™ advanced digital services and by ABB Care, a subscription-based lifecycle management program that provides services to maintain and continually advance and enhance ABB's distributed control systems and optimize customers' lifecycle costs. The ABB Ability™ Genix industrial IoT and AI suite contextualizes and integrates data from IT, engineering, and operations systems to provide deep, meaningful and actionable insights. The portfolio is complemented by a range of industry-specific technologies and applications in each division.

As of December 31, 2024, the Process Automation Business area's products and services are delivered through four operating divisions.

The Energy Industries Division serves a wide range of industrial sectors, including hydrocarbons, renewables, chemicals, pharmaceuticals, power generation and water. With its integrated solutions that automate, electrify and digitalize operations, the Division is committed to supporting traditional industries in their efforts to decarbonize. The Division also supports the development, integration and scaling up of new and renewable energy models. The Division's goal is to help customers adapt and succeed in the rapidly changing global energy transition. Harnessing data, machine learning and AI, the Division brings over 50 years of domain expertise delivering solutions designed to improve energy, process and production efficiency, as well as reduce risk, operational cost and capital cost, while minimizing waste for customers, from project start-up and throughout the entire plant lifecycle.

The Process Industries Division serves the mining, minerals processing, metals, cement, pulp and paper, battery manufacturing, and food and beverage, as well as their associated service industries. The Division brings deep industry domain expertise coupled with the ability to integrate both automation and electrical systems, increase productivity and reduce overall capital and operating costs for customers. For mining, metals and cement customers, solutions include specialized products and services, as well as total production systems. The Division designs, plans, engineers, supplies, installs and commissions integrated electrical and motion systems, including electric equipment, drives, motors, high power rectifiers and equipment for automation and supervisory control within a variety of areas including mineral handling, mining operations, aluminum smelting, hot and cold steel applications and cement production. The offering for the pulp and paper industries includes control systems, quality control systems, drive systems, on-line sensors, actuators and field instruments. Digitalization solutions, including collaborative operations and augmented reality, help improve plant and enterprise productivity, and reduce maintenance and energy costs.

The Marine & Ports Division serves the shipping and ports industries through its extensive portfolio of integrated systems and solutions that improve the flexibility, reliability and energy efficiency of vessels and container terminals. By coupling power, propulsion, automation, marine software and services that ensure maximum vessel uptime, the Division is well positioned to help the marine industry to achieve its decarbonization targets while improving the profitability and sustainability of our customers' business throughout the entire lifecycle of vessels. With ABB Ability™ marine software solutions and ABB Ability™ Collaborative Operations Centers around the world, shipowners and operators can run their fleets at lower fuel and maintenance costs, while improving crew, passenger and cargo safety as well as overall productivity of their operations. Further, the Division delivers automation, electrical systems and digital solutions for container and bulk cargo handling, from ship to gate. These solutions help terminal operators meet the challenge of larger ships, taller cranes and bigger volumes per call, and make terminal operations safer, greener and more productive.

The Measurement & Analytics Division is among the world's leading manufacturers and suppliers of smart instrumentation and analyzers, working at the heart of industrial digital transformation. The Measurement & Analytics Division's portfolio consists of analyzers measuring compositions of gases and liquids; instrumentation measuring process variables such as temperature, pressure, flow, and level; force measurement solutions measuring parameters such as flatness, thickness, and tension; and advanced digital solutions for device management, device health check and predictive maintenance. The Measurement & Analytics Division serves key industries such as oil and gas, chemical, water and wastewater, power, hydrogen, batteries, as well as the marine industry. The Division enables the optimization of industrial processes by providing and analyzing data collected from sensing and smart measurement devices. Parameters such as emission levels and production inputs are measured by providing 'before' and 'after' values, enabling efficient operations and environmental sustainability through measurement.

Sales and Marketing

The Process Automation Business area's sales are primarily made through its direct sales force as well as third-party channel partners, such as distributors, system integrators and OEMs. The majority of revenues are derived through the Business area's own direct sales channels.

Competition

The Process Automation Business area's principal competitors vary by industry or product group. Competitors include: Emerson, Honeywell, Schneider Electric, Siemens, Siemens Energy, Yokogawa, Endress + Hauser, Kongsberg and Valmet.

Capital Expenditures

The Process Automation Business area's capital expenditures for property, plant and equipment totaled $62 million in 2024, compared to $66 million in 2023. Principal investments in 2024 primarily related to equipment replacement and upgrades, mainly in the Energy Industries Division and Measurement & Analytics Division. Geographically, in 2024, Europe represented 65 percent of the capital expenditures, followed by the Americas (20 percent) and Asia, Middle East and Africa (15 percent).

ROBOTICS & DISCRETE AUTOMATION BUSINESS AREA

Overview

The Robotics & Discrete Automation Business area provides robotics, and machine and factory automation including products, software, solutions and services. Revenues are generated both from direct sales to end-users as well as from indirect sales, mainly through system integrators and machine builders.

The Robotics & Discrete Automation Business area had approximately 10,800 employees as of December 31, 2024, and generated $3.2 billion of revenues in 2024.

Customers

The Robotics & Discrete Automation Business area serves a wide range of customers. The main customers are active in industries such as automotive, machine building, metalworking, electronics, food and beverage and logistics. They include end-users such as manufacturers, system integrators and machine builders.

Products and Services

The Robotics & Discrete Automation Business area's products and services are delivered through two operating divisions.

The Robotics Division offers a wide range of products, solutions and services including robots, autonomous mobile robots, robotics application cells and smart systems, field services, spare parts, digital services, engineering and operations software. This offering provides customers with increased productivity, quality, flexibility and simplicity for operations, e.g. to meet the challenge of making smaller lots of a larger number of specific products in shorter cycles for today's dynamic global markets and coping with increasing uncertainty. Robots are also used in activities or environments which may be hazardous to employee health and safety, such as repetitive or strenuous lifting, dusty, hot or cold rooms, or painting booths and can help customers address labor shortages. Robotics solutions are used in a wide range of segments from automotive OEMs, automotive suppliers, electronics, general industry, consumer goods, food and beverage, and warehouse/logistics center automation. They are increasingly deployed in service applications for life sciences care, restaurants and retail. Typical robotic applications include welding, material handling, machine tending, machining, painting, picking, packing, palletizing and assembly.

The Machine Automation Division offers integrated automation solutions based on programmable logical controllers, industrial PCs, servo motion, industrial transport systems and machine vision. It also provides software for engineering and optimization. The range of solutions are mainly used by machine builders for various types of series machines, e.g. for plastics, metals, printing and packaging.

Sales and Marketing

Sales are made both through direct sales as well as through third-party channel partners, such as system integrators and machine builders. The proportion of direct sales compared to channel partner sales varies among the different industries, product technologies and geographic markets.

Competition

Competitors of the Robotics & Discrete Automation Business area vary by offering and include companies such as Fanuc, Kuka, Yaskawa, Epson, Dürr, Stäubli, Universal Robots, Rockwell Automation, Siemens, Mitsubishi Electric and Beckhoff.

Capital Expenditures

The Robotics & Discrete Automation Business area's capital expenditures for property, plant and equipment totaled $81 million in 2024, compared to $71 million in 2023. Principal investments in 2024 were primarily related to production enhancements in China and Sweden in the Robotics Division and Austria in the Machine Automation Division. In 2024, Europe represented 65 percent of capital expenditures, followed by Asia, Middle East and Africa (20 percent) and the Americas (15 percent).

CORPORATE AND OTHER

Corporate includes core headquarter functions, real estate activities, Corporate Treasury, functional shared services for human resources, finance and information services and other minor business activities while Other includes the E-mobility Division, which is a separate operating segment, other non-core operating activities, as well as the remaining activities of certain EPC projects which we are completing and are in a wind-down phase. Retained obligations from certain divested businesses are also included in Other including the high-voltage cables business, steel structures and certain EPC contracts relating to the oil and gas industry. Certain strategic investments managed by ABB Technology Ventures are also included in Corporate and Other.

Corporate headquarters and stewardship activities include the operations of our corporate headquarters in Zurich, Switzerland, as well as limited corporate-related activities in certain countries. These activities cover staff functions with group-wide responsibilities, such as accounting and financial reporting, corporate finance and corporate treasury, taxes, internal audit, legal and integrity, compliance, risk management and insurance, corporate communications, human resources, information systems and investor relations.

We operate shared service centers globally through a network of hubs which consist of services in the areas of human resources, finance and information services. We also staff and maintain front offices in various countries. The costs of these shared services are incurred primarily for the benefit of the Business areas, which are charged for their use of such services and the related number of employees are allocated to the Business areas. Similarly, a significant portion of the shared corporate overhead costs are charged to the operating businesses. In some cases, we also provide services to third parties under transitional service agreements in relation to certain divested businesses.

ABB E-mobility enables a more sustainable and efficient mobility future as a global leader in electric vehicle (EV) charging solutions. ABB E-mobility is a partner of choice for the world's leading EV OEMs, EV charging network operators and fleet companies. It offers the widest portfolio of EV charging solutions from high-power chargers for destination charging to the highway stations of the future, solutions for the electrification of fleets and charging for electric buses and trucks.

Corporate and Other had approximately 2,500 employees at December 31, 2024, of which approximately 1,700 pertain to the E-mobility Division and our other non-core businesses.

DISCONTINUED OPERATIONS

In 2020, we completed the divestment of our Power Grids business to Hitachi Ltd (Hitachi). As a result, the Power Grids business was reported as discontinued operations in the Consolidated Financial Statements. See "Note 3 - Discontinued operations" to our Consolidated Financial Statements.

CAPITAL EXPENDITURES

Total capital expenditures for property, plant and equipment and intangible assets (excluding intangibles acquired through business combinations) amounted to $845 million, $770 million and $762 million in 2024, 2023 and 2022, respectively. In 2024 and 2023, capital expenditures were 5 percent higher and 1 percent lower, respectively, than depreciation and amortization. Excluding acquisition-related amortization, capital expenditures were 41 percent higher in 2024 and 37 percent higher in 2023, respectively, than depreciation and amortization.

Capital expenditures in 2024 primarily focused in mature markets, reflecting the geographic distribution of our existing production facilities. Capital expenditures in Europe and the Americas in 2024 were driven primarily by upgrades of existing production facilities and capacity expansion, mainly in the U.S., Germany, Switzerland, Sweden, Finland, and Italy. In Asia, Middle East and Africa, capital expenditures were made primarily to increase production capacity by investing in new or expanded facilities, the highest of which were in China and India. The share of emerging markets capital expenditures as a percentage of total capital expenditures in 2024 and 2023 was 25 percent and 23 percent, respectively.

At December 31, 2024, construction in progress for property, plant and equipment was $690 million, mainly in the U.S., Germany, Switzerland and Sweden, while at December 31, 2023, construction in progress for property, plant and equipment was $713 million, mainly in the U.S., Germany, Switzerland, and Finland.

Our capital expenditures relate primarily to property, plant and equipment and are funded primarily through cash flows from operating activities. For 2025, we estimate the expenditures for property, plant and equipment will be higher than our annual depreciation and amortization charge, excluding acquisition-related amortization.

SUPPLIES AND RAW MATERIALS

We purchase a variety of supplies and products which contain raw materials for use in our production and project execution processes. The primary materials used in our products, by weight, are copper, steel, aluminum, mineral oil and various plastics. We also purchase a wide variety of fabricated products, electronic components and systems. We operate a worldwide supply chain management network with employees dedicated to this function in our Business areas, divisions and in key countries. Our supply chain operations consist of a number of teams, each focusing on different product categories. These category teams are tasked with taking advantage of opportunities to leverage the scale of ABB on a global, Business area and/or division level, as appropriate, to optimize the efficiency of our supply networks in a sustainable manner.

Our supply chain management organization’s activities and objectives include:

- pool and leverage procurement of materials and services,
- provide transparency of ABB’s global spending through a comprehensive performance and reporting system linked to our enterprise resource planning (ERP) systems,
- strengthen ABB’s supply chain network by implementing an effective product category management structure and extensive competency-based training, and
- monitor and develop our supply base to ensure sustainability, both in terms of materials and processes used.

We buy many categories of products which contain copper, steel, aluminum, crude oil and other commodities. Continuing global economic growth in many emerging economies, coupled with the volatility in foreign currency exchange rates, has led to significant fluctuations in these raw material costs over the last few years. While we expect global commodity prices to remain highly volatile, we expect to offset some market volatility through the use of long-term contracts and global sourcing.

We seek to mitigate the majority of our exposure to commodity price risk by entering into derivative contracts. For example, we manage copper, steel, aluminum, and silver price risk using principally swap contracts based on prices for these commodities quoted on leading exchanges. ABB's hedging policy is designed to safeguard margins by minimizing price volatility and providing a stable cost base during order execution. In addition to using derivatives to reduce our exposure to fluctuations in raw materials prices, in some cases we can reduce this risk by incorporating changes in raw materials prices into the prices of our end products (through price escalation clauses).

Throughout 2024, we continued to optimize our value chain in all aspects of our business, while ensuring high standards of quality and delivery. Despite some continuing global supply chain challenges such as rising costs, port congestion, material access issues and some geopolitical uncertainty, we were able to mitigate these difficulties with efforts from our dedicated category teams, supply chain management personnel and Business area task forces. We also enhanced our rigorous supplier onboarding process involving comprehensive integrity due diligence and competitive bidding for our potential and existing vendors. This helps in reducing the risk of fraud, corruption and noncompliance as well as in securing the best value and quality for our products and services. The involvement of the supply chain is also crucial in monitoring HSE (Health, Safety, and Environment) risks. By implementing a contractor qualification process, we can ensure that only assessed suppliers and contractors are selected for on-site activities. This approach helps to keep incidents as low as possible by working with qualified and reliable partners. All these supply chain activities are embedded in a continuous monitoring process that includes supplier performance evaluation, supplier audits, and risk monitoring. This ensures that we can identify problems in time and provide corrective actions as safeguards. As a result, we were able to minimize the impact of supply chain disruptions, maintain a high level of customer satisfaction and support our business growth.

Through our Sustainable Supply Base Management (SSBM) approach, we assess environment, social and governance (ESG) risks, compliance, and the performance of our suppliers in these areas to make sure they meet our expectations. These expectations are detailed in the ABB Code of Conduct and the ABB Supplier Code of Conduct. The SSBM program includes both supplier self-assessments and on-site assessments/audits, covering both new supplier on-boarding and existing supplier monitoring. In 2024, we continued to work closely with our suppliers to ensure compliance with these standards and to drive improvements in sustainability practices across our supply chain.

We initiated conflict mineral processes in 2013 and have continuously aimed at improving and tailoring the processes to our value chain, continuing to work with our suppliers and customers. In 2024, we continued our cobalt due diligence process and have extended the program further to include mica. Further information on ABB's Conflict Minerals policy and supplier requirements can be found under "Responsible Minerals Sourcing" at https://global.abb/group/en/about/supplying/responsible-minerals.

Furthermore, ABB has developed a list of prohibited and restricted substances to ensure that the materials we use do not contribute to environmental degradation. We update this list regularly in line with international regulations, including the U.S. Toxic Substances Control Act (TSCA) regulations and California Proposition 65. More information on our Product Material Compliance program and supplier requirements can be found under "Material Compliance" at https://global.abb/group/en/about/supplying/material-compliance.

In November 2023, ABB announced its Net Zero emission targets, which were approved by the SBTi in 2024. For Scope 3, this means a reduction of 25 percent by 2030, compared to a 2022 baseline. As supply chain emissions form part of overall Scope 3 emissions, ABB continues to work closely with its most impactful suppliers to reduce GHG emissions along the supply chain. In 2024, we continued our partnership with EcoVadis, a leading service provider in the ESG domain, to engage with suppliers for GHG emission data collection and supplier education on this topic.

DESCRIPTION OF PROPERTY

As of December 31, 2024, we occupy real estate in around 100 countries throughout the world. The facilities consist mainly of manufacturing plants, office buildings, research centers and warehouses. A substantial portion of our production and development facilities is situated in China, the U.S., Germany, Finland, Sweden, Italy, Canada, Poland, India, Mexico and the Czech Republic. We also own or lease other properties, including office buildings, warehouses, research and development facilities and sales offices in many countries. We own substantially all of the machinery and equipment used in our manufacturing operations.

From time to time, we have a surplus of space arising from acquisitions, production efficiencies and/or restructuring of operations. Normally, we seek to sell such surplus space which may involve leasing property to third parties for an interim period.

The net book value of our property, plant and equipment at December 31, 2024, was $4,177 million, of which machinery and equipment represented $1,388 million, land and buildings represented $2,006 million and construction in progress represented $783 million. We believe that our current facilities are in good condition and are adequate to meet the requirements of our present and foreseeable future operations.

MANAGEMENT OVERVIEW

In 2024, we strengthened our operations and increased results with broad improvements across the income statement. These improvements were supported by a strong underlying market, driven by electrification but also through improvements in operations, demonstrating that changes introduced through the ABB Way are making ABB a sustainable, well running company. After a period of transformation, all our businesses are now aligned with our purpose and are well-positioned at the center of key trends, such as electricity becoming the primary energy source and the increasing need for automation and digitalization to remain able to produce. We support our customers with high-quality, low-carbon solutions and energy efficient offerings, while also helping manufacturing companies automate for greater resource efficiency. This year we saw strong growth in our electrification offerings, driven by rapidly increasing demand for electricity, which is expected to grow nine times faster than other energy sources between 2023 and 2030. This strength more than offset softness in discrete automation. Although the fundamental long-term market drivers remain intact in this business segment, customer activity this year was tempered mainly by normalized ordering patterns after a period of pre-buys.

The ABB Way operating model is firmly established within our organization, supported by the fact that our new CEO, Morten Wierod, and two new Business area presidents, Giampiero Frisio and Brandon Spencer, are internal hires with proven track records of successfully managing within this framework. From this strong level we see opportunities to deepen the impact of the ABB Way by extending it further into the business lines. Our goal is to make the ABB Way second nature across all teams, incentivizing management with clear strategic mandates, as well as increasing accountability, transparency and speed of operations. By applying this framework at a more granular level, each division can tailor strategies to its specific needs, ensuring consistent and focused performance throughout the organization.

Active portfolio management remains a key part of our performance culture and is integrated into the responsibilities of divisional management teams. While we are committed to acquisitions as a growth driver, it is not yet fully ingrained in our ways of working and this will continue to be a focus area going forward. This includes identifying areas for inorganic growth through acquisitions related to new segments, new market access, better economies of scale or filling technology gaps. The divisions also assess, based on systematic portfolio reviews, whether, ultimately, their division is the best owner of their different businesses.

In 2024, we accelerated this activity with bolt-on acquisitions and strategic partnerships led by our divisions, completing seven acquisitions and nine new venture capital investments, as well as eight follow-on investments, moving us closer to our target range of 1 to 2 percent of revenue growth through acquisitions. The Service Division in the Electrification Business area acquired the SEAM Group, which adds energy asset management and advisory services to clients across industrial and commercial building markets while the Process Automation Business area completed three acquisitions, the largest being the acquisition of Födisch Group, in the Measurement & Analytics Division. The Motion Business area also completed the integration of two previously announced acquisitions and announced the acquisition of the power electronics business of Gamesa Electric in Spain from Siemens Gamesa which expected to close in the second half of 2025 and will strengthen ABB's position in the growing market for high-powered renewable power conversion technology. Electrification also announced another sizeable acquisition. We have agreed to acquire the Wiring & Accessories business of Siemens in China, led by our Smart Buildings Division, which will expand our market reach and enhance our regional customer offerings with a full range of safe and reliable smart building technologies.

Business progress

During 2024, underlying demand for ABB's offering remained resilient, improving still on the high level in the previous year. Throughout the year we saw strong customer activity in investments to strengthen electrical infrastructure, expand power generation and integrate renewables. Demand was strong in data centers, as well as in the marine, ports, and rail sectors. Investments in the buildings segments improved year-on-year driven mainly by investments in commercial buildings while residential buildings stabilized outside of China. In the robotics-related segments, orders declined in automotive but improved in general industry and consumer-related segments. The machine builder segment declined as customers normalized order patterns after earlier pre-buys and a softer underlying market. In total, orders were flat year-on-year (increased 1 percent in local currencies) and continued to exceed revenues in three out of four Business areas.

Revenues in 2024 improved 2 percent (3 percent comparable) to $32,850 million, driven primarily by volume with some additional support from price. The positive developments in the Electrification and Process Automation Business areas were partially offset by sharp declines in the Robotics & Discrete Automation Business area and the E-mobility business, where the markets were weak and order backlog in Robotics & Discrete Automation normalized. The Motion Business area, meanwhile, remained broadly stable while growth from backlog execution in the long-cycle businesses, as well as positive price impacts were offset by declines in the short-cycle business.

Group profitability showed strong improvement during 2024 with improvements recorded in three out of four Business areas. The result was driven by the positive impacts from higher volumes and pricing which more than offset some inflation related to commodities and labor. The result also reflects the impacts from operational efficiency measures which outweighed some additional expenses related to research and development and selling, general and administrative activities.

The profitability improvement and our ability to reduce net working capital allowed us to achieve strong operating cashflows and deliver in line with our ambition of reaching a free cash flow of at least last year's level. Cash flows from operating activities improved to $4.7 billion in 2024, an increase of $0.4 billion compared to 2023.

Financial targets confirmed

Under the new leadership of Morten Wierod as CEO, we reconfirmed our commitment to achieving our financial targets set during 2023.

We target growth of 5 to 7 percent for comparable average revenue growth through an economic cycle which is a constant currency measure and excludes impacts from acquisitions and divestments. In addition, we continue to target 1 to 2 percent acquired revenue growth through the economic cycle, net of acquisitions and divestments.

For the Operational EBITA margin, our target is to be in the range of 16 to 19 percent on an annual basis. As a result of our higher growth and Operational EBITA margin targets and increasing focus on capital returns, our Return on Capital Employed (ROCE) target remains to be above 18 percent excluding transformative deals (defined as being larger than 3 percent of annual consolidated revenues).

Additionally, we have sharpened our EPS growth target to be at least in the high single-digits through the economic cycle, reflecting our confidence in our ability to sustainably reduce the gap between Operational EBITA and Income from operations. Lastly, we maintain our target to achieve a free cash flow conversion of approximately 100 percent on an annual basis.

Capital allocation

Our capital allocation priorities are unchanged. Our goal is profitable growth. Our top priority is to fund organic growth through strategic investments in research and development and production capacity. In 2024, we allocated $1.5 billion to non-order related research and development, representing 4.5 percent of revenues, and increased our capital expenditure by 10 percent to $845 million. Beyond that, our policy is to maintain a rising, sustainable dividend per share over time. With the remaining free cash flow, we plan to increase our business acquisition activity to achieve our target of adding 1 to 2 percent growth through acquisitions. Lastly, share buybacks will continue to be part of our strategy; however, the extent of these programs will ultimately depend on the level committed to acquisitions.

We expect our strong cash generation to continue on the back of the ABB Way operating model, which will allow us to invest in both organic growth and bolt-on acquisitions, while providing attractive returns to shareholders.

At the 2025 Annual General Meeting, the Board of Directors is proposing a dividend of 0.90 Swiss francs per share. Under the various share buyback programs we repurchased $1 billion of shares in 2024.

Sustainability Agenda

With our Sustainability Agenda, we are actively contributing to a more sustainable world, leading by example in our own operations and partnering with customers and suppliers to enable a low-carbon society, preserve resources and promote social progress. All three pillars of our sustainability agenda are underpinned by our commitment to create a culture of integrity and transparency across our value chain. In 2024, we obtained approval from the Science Based Targets initiative (SBTi) for our updated net-zero targets. We have raised our Scope 3 emissions reduction target to 25 percent by 2030. By 2050, we aim to achieve a 100 percent reduction in Scope 1 and 2 emissions from our 2019 baseline, and a 90 percent reduction in Scope 3 emissions from our 2022 baseline. Furthermore, we are making good progress towards our sustainability targets and have embedded sustainability even further into our divisions. For a detailed discussion of our Sustainability Strategy 2030 and our progress in 2024, see our “Sustainability Statement” available as part of our annual reporting suite on our website at https://global.abb/group/en/investors/annual-reporting-suite.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

GENERAL

We prepare our Consolidated Financial Statements in accordance with U.S. GAAP and present these in U.S. dollars unless otherwise stated.

The preparation of our financial statements requires us to make assumptions and estimates that affect the reported amounts of assets, liabilities, revenues and expenses and the related disclosure of contingent assets and liabilities. We evaluate our estimates on an ongoing basis (see “Note 2 - Significant accounting policies” to our Consolidated Financial Statements for a listing of our most significant accounting estimates). Where appropriate, we base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from our estimates and assumptions.

We deem an accounting policy to be critical if it requires an accounting estimate to be made based on assumptions about matters that are highly uncertain at the time the estimate is made and if different estimates that reasonably could have been used, or if changes in the accounting estimates that are reasonably likely to occur periodically, could materially impact our Consolidated Financial Statements. We also deem an accounting policy to be critical when the application of such policy is essential to our ongoing operations. We believe the following critical accounting policies require us to make subjective judgments, often as a result of the need to make estimates regarding matters that are inherently uncertain and material to our Consolidated Financial Statements. These policies should be considered when reading our Consolidated Financial Statements.

REVENUE RECOGNITION

A customer contract exists if collectability under the contract is considered probable, the contract has commercial substance, contains payment terms, the rights and commitments of both parties, and has been approved. By analyzing the type, terms and conditions of each contract or arrangement with a customer, we determine which revenue recognition method applies.

We recognize revenues when control of goods or services is transferred to customers in an amount that reflects the consideration we expect to be entitled to in exchange for these goods or services. Control is transferred when the customer has the ability to direct the use and obtain the benefits from the goods or services.

The percentage-of-completion method of accounting is generally used when recognizing revenue on an over time basis and involves the use of assumptions and projections, principally relating to future material, labor, subcontractor and project-related overhead costs as well as estimates of the amount of variable consideration to which we expect to be entitled. As a consequence, there is a risk that total contract costs or the amount of variable consideration will, respectively, either exceed or be lower than those we originally estimated (based on all information reasonably available to us) and the margin will decrease or the contract may become unprofitable. This risk increases if the duration of a contract increases because there is a higher probability that the circumstances upon which we originally developed our estimates will change, resulting in increased costs that we may not recover. Factors that could cause costs to increase include:

- unanticipated technical problems with equipment supplied or developed by us which may require us to incur additional costs to remedy,
- changes in the cost of components, materials or labor,
- difficulties in obtaining required governmental permits or approvals,
- project modifications creating unanticipated costs,
- suppliers' or subcontractors' failure to perform, and
- delays caused by unexpected conditions or events.

Changes in our initial assumptions, which we review on a regular basis between balance sheet dates, may result in revisions to estimated costs, current earnings and anticipated earnings. We recognize these changes in the period in which the changes in estimates are determined. By recognizing changes in estimates cumulatively, recorded revenue and costs to date reflect the current estimates of the stage of completion of each project. Additionally, losses on such contracts are recognized in the period when they are identified and are based upon the anticipated excess of contract costs over the related contract revenues.

PENSION AND OTHER POSTRETIREMENT BENEFITS

As more fully described in "Note 18 - Employee benefits" to our Consolidated Financial Statements, we have a number of defined benefit pension and other postretirement plans and recognize an asset for a plan's overfunded status or a liability for a plan's underfunded status in our Consolidated Balance Sheets. We measure such a plan's assets and obligations that determine its funded status as of the end of the year.

Significant differences between assumptions and actual experience, or significant changes in assumptions, may materially affect the pension obligations. The effects of actual results differing from assumptions and the changing of assumptions are included in net actuarial loss within Accumulated other comprehensive loss.

We recognize actuarial gains and losses gradually over time. Any cumulative unrecognized actuarial gain or loss that exceeds 10 percent of the greater of the present value of the projected benefit obligation (PBO) and the fair value of plan assets is recognized in earnings over the expected average remaining working lives of the employees participating in the plan, or the expected average remaining lifetime of the inactive plan participants if the plan is comprised of all or almost all inactive participants. Otherwise, the actuarial gain or loss is not recognized in the Consolidated Income Statements.

We use actuarial valuations to determine our pension costs and credits. The amounts calculated depend on a variety of key assumptions, including discount rates, mortality rates and expected return on plan assets. Under U.S. GAAP, we are required to consider current market conditions in making these assumptions. In particular, the discount rates are reviewed annually based on changes in long-term, highly-rated corporate bond yields. Decreases in the discount rates result in an increase in the PBO and a decrease in pension costs. Conversely, an increase in the discount rates results in a decrease in the PBO and an increase in pension costs. The mortality assumptions are reviewed annually by management. Decreases in mortality rates result in an increase in the PBO and in pension costs. Conversely, an increase in mortality rates results in a decrease in the PBO and in pension costs.

Holding all other assumptions constant, a 0.25 percentage-point decrease in the discount rate would have increased the PBO related to our defined benefit pension plans by $146 million while a 0.25 percentage-point increase in the discount rate would have decreased the PBO related to our defined benefit pension plans by $142 million.

The expected return on plan assets is reviewed regularly and considered for adjustment annually based upon the target asset allocations and represents the long-term return expected to be achieved. Decreases in the expected return on plan assets result in an increase to pension costs. Holding all other assumptions constant, an increase or decrease of 0.25 percentage points in the expected long-term rate of asset return would have decreased or increased, respectively, the net periodic benefit cost in 2024 by $16 million.

The funded status, which can increase or decrease based on the performance of the financial markets or changes in our assumptions, does not represent a mandatory short-term cash obligation. Instead, the funded status of a defined benefit pension plan is the difference between the PBO and the fair value of the plan assets. Our defined benefit pension plans were overfunded by $246 million and $212 million at December 31, 2024 and 2023, respectively.

INCOME TAXES

In preparing our Consolidated Financial Statements, we are required to estimate income taxes in each of the jurisdictions in which we operate. Tax expense from continuing operations is reconciled from the weighted-average global tax rate (rather than from the Swiss domestic statutory tax rate). As the parent company of the ABB Group, ABB Ltd, is domiciled in Switzerland, income which has been generated in jurisdictions outside of Switzerland (hereafter “foreign jurisdictions”) and has already been subject to corporate income tax in those foreign jurisdictions is, to a large extent, tax exempt in Switzerland. Therefore, generally no or only limited Swiss income tax has to be provided for on the repatriated earnings of foreign subsidiaries. There is no requirement in Switzerland for a parent company of a group to file a tax return of the group determining domestic and foreign pre-tax income and as our consolidated income from continuing operations is predominantly earned outside of Switzerland, corporate income tax in foreign jurisdictions largely determines our global weighted-average tax rate.

We account for deferred taxes by using the asset and liability method. Under this method, we determine deferred tax assets and liabilities based on temporary differences between the financial reporting and the tax bases of assets and liabilities. Deferred tax assets and liabilities are measured using the enacted tax rates and laws that are expected to be in effect when the differences are expected to reverse. We recognize a deferred tax asset when it is more likely than not that the asset will be realized. We regularly review our deferred tax assets for recoverability and establish a valuation allowance based upon historical losses, projected future taxable income and the expected timing of the reversals of existing temporary differences. To the extent we increase or decrease this allowance in a period, we recognize the change in the allowance within Income tax expense in the Consolidated Income Statements unless the change relates to discontinued operations, in which case the change is recorded in Loss from discontinued operations, net of tax. Unforeseen changes in tax rates and tax laws, as well as differences in the projected taxable income as compared to the actual taxable income, may affect these estimates.

Certain countries levy withholding taxes, dividend distribution taxes or additional corporate income taxes (hereafter “withholding taxes”) on dividend distributions. Such taxes cannot always be fully reclaimed by the shareholder, although they have to be declared and withheld by the subsidiary. Switzerland has concluded double taxation treaties with many countries in which we operate. These treaties either eliminate or reduce such withholding taxes on dividend distributions. It is our policy to distribute retained earnings of subsidiaries, insofar as such earnings are not permanently reinvested or no other reasons exist that would prevent the subsidiary from distributing them. No deferred tax liability is set up if retained earnings are considered as indefinitely reinvested and used for financing current operations as well as business growth through working capital and capital expenditure in those countries.

We operate in numerous tax jurisdictions and, as a result, are regularly subject to audit by tax authorities, including for transfer pricing. We provide for tax contingencies whenever it is deemed more likely than not that a tax asset has been impaired or a tax liability has been incurred for events such as tax claims or changes in tax laws. Contingency provisions are recorded based on the technical merits of our filing position, considering the applicable tax laws and OECD guidelines and are based on our evaluations of the facts and circumstances as of the end of each reporting period. Changes in the facts and circumstances could result in a material change to the tax accruals. Although we believe that our tax estimates are reasonable and that appropriate tax reserves have been made, the final determination of tax audits and any related litigation could be different than that which is reflected in our income tax provisions and accruals.

An estimated loss from a tax contingency must be accrued as a charge to income if it is more likely than not that a tax asset has been impaired or a tax liability has been incurred and the amount of the loss can be reasonably estimated. We apply a two-step approach to recognize and measure uncertainty in income taxes. The first step is to evaluate the tax position for recognition by determining if the weight of available evidence indicates that it is more likely than not that the position will be sustained on audit, including resolution of related appeals or litigation processes, if any. The second step is to measure the tax benefit as the largest amount which is more than 50 percent likely of being realized upon ultimate settlement. The required amount of provisions for contingencies of any type may change in the future due to new developments.

GOODWILL AND INTANGIBLE ASSETS

We review goodwill for impairment annually as of October 1, or more frequently if events or circumstances indicate that the carrying value may not be recoverable. We use either a qualitative or quantitative assessment method for each reporting unit.

As each of our divisions have full ownership and accountability for their respective strategies, performance and resources, we have determined our reporting units to be at the division level, which is generally one level below our reportable segments of Electrification, Motion, Process Automation and Robotics & Discrete Automation.

When performing the qualitative assessment, we first determine, for a reporting unit, factors which would affect the fair value of the reporting unit including: (i) macroeconomic conditions related to the business, (ii) industry and market trends, and (iii) the overall future financial performance and future opportunities in the markets in which the business operates. We then consider how these factors would impact the most recent quantitative analysis of the reporting unit’s fair value. Key assumptions in determining the fair value of the reporting unit include the projected level of business operations including future expected profit margins, the reporting unit’s weighted-average cost of capital and the terminal growth rate.

In 2024, we reduced our ownership interest in InCharge Energy, Inc. which was part of our E-mobility operating segment (included within Corporate and Other), see Note 4 Acquisitions, divestments and equity-accounted companies. Apart from the aforementioned, there were no other changes to our divisions. Where a change in reporting unit arises during the course of the financial year, an interim impairment test is conducted before and after the change. In both the ‘before’ and ‘after’ tests, it was concluded that the fair value of the reporting units exceeded the carrying value by a significant amount.

We periodically select certain divisions for quantitative assessment based on a number of factors including but not limited to duration between valuation assessments, frequency and magnitude of acquisitions and divestments, internal organization changes and other external market factors, as well as underlying division performance. In 2024, we elected to perform quantitative assessments for six divisions: Smart Buildings, Drive Products, System Drives, Measurement & Analytics, Robotics and Machine Automation, and our two E-mobility reporting units. For each of these divisions the fair value was determined using a discounted cash flow fair value estimate based on objective information available at the measurement date. The significant assumptions used to develop the estimates of fair value for each division included management's best estimates of the expected future results, as well as discount and terminal growth rates specific to the reporting unit. The fair value estimates were based on assumptions that a market participant would expect to use, but which are inherently uncertain and thus, actual results may differ from those estimates. The fair values for each of the individual reporting units and their associated goodwill were determined using Level 3 measurements. In each of the above quantitative assessments, it was concluded that the fair value of the reporting unit exceeded its carrying value by more than 100 percent. For the remaining divisions, we performed qualitative assessments and determined that it was not more likely than not that the fair value for each of these reporting units was below the carrying value.

Intangible assets are reviewed for recoverability upon the occurrence of certain triggering events (such as a decision to divest a business or projected losses of an entity) or whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. We record impairment charges other than impairments of goodwill in Other income (expense), in our Consolidated Income Statements, unless they relate to a discontinued operation, in which case the charges are recorded in Loss from discontinued operations, net of tax.

NEW ACCOUNTING PRONOUNCEMENTS

For a description of accounting changes and recent accounting pronouncements, including the expected dates of adoption and estimated effects, if any, on our Consolidated Financial Statements, see "Note 2 - Significant accounting policies" to our Consolidated Financial Statements.

ACQUISITIONS AND DIVESTMENTS

ACQUISITIONS

During 2024, 2023, and 2022, ABB paid $583 million, $175 million and $195 million to purchase seven, seven and five businesses, respectively.

The largest of our acquisitions in 2024 was the Födisch Group, a worldwide provider of advanced measurement and analytical solutions for the energy and industrial sectors, resulting in net cash outflows of $287 million and enhancing Process Automation's offering in continuous emission monitoring systems (CEMS).

The principal acquisition in 2022 was InCharge Energy, Inc. (In-Charge), where, at the time, we increased our ownership to a 60 percent controlling interest, expanding the market presence of our E-mobility business, particularly in the North American market. In-Charge is headquartered in Santa Monica, United States, and is a provider of turn-key commercial electric vehicle charging hardware and software solutions.

There were no significant acquisitions in 2023.

See “Note 4 - Acquisitions, divestments and equity-accounted companies” to our Consolidated Financial Statements.

DIVESTMENTS AND SPIN-OFFS

In 2024, together with the Niedax Group, we formed a new joint venture company, Abnex Inc. (Abnex) and contributed our North American cable tray business to Abnex in return for a 50 percent ownership interest. The transaction resulted in a gain of $72 million from the effective sale of our North American cable tray business and a separate acquisition at fair value of 50 percent of Abnex amounting to $124 million and accounted for using the equity method. Prior to its transfer to Abnex the North American cable tray business was part of Electrification Business area.

During 2024 we and the noncontrolling shareholders of In-Charge, mutually agreed to terminate our respective put and call options by settling these contracts on a net basis. This agreement resulted in the reduction of our direct ownership in In-Charge to approximately 46 percent. This transaction was treated similar to that of a business divestment, resulting in a loss of $88 million in connection with the loss of control, and a separate acquisition at fair value of the 46 percent investment (amounting to $69 million) accounted for using the equity method.

In July 2023, we completed the sale of our Power Conversion Division to AcBel Polytech Inc. for cash proceeds of $496 million, net of transaction costs and cash disposed, and recognized a net gain on sale of $59 million. Prior to its disposal, the Power Conversion Division was part of our Electrification Business area.

In connection with the divestment of our Power Grids business (Hitachi Energy) to Hitachi Ltd in 2020 (see “Note 3 - Discontinued operations”), ABB initially retained a 19.9 percent interest in the business until 2022, when we agreed with Hitachi that we would sell our remaining investment in Hitachi Energy and concurrently settle certain outstanding contractual obligations relating to the initial sale of the business, including certain indemnification guarantees (see Note “15 - Commitments and contingencies”). The transaction was completed in December 2022, and we received proceeds of $1,552 million.

Spin-off of the Turbocharging Division

In 2022, the shareholders approved the spin-off of our Turbocharging Division into an independent, publicly traded company, Accelleron Industries AG (Accelleron), which was completed through the distribution of common stock of Accelleron to the stockholders of ABB on October 3, 2022. As a result of the spin-off of this Division, we distributed net assets of $272 million, net of amounts attributable to noncontrolling interests of $12 million, which was reflected as a reduction in Retained earnings. In addition, total accumulated comprehensive income of $95 million, including the cumulative translation adjustment, was reclassified to Retained earnings. Cash and cash equivalents distributed with Accelleron was $172 million. Prior to being spun-off, the Turbocharging Division was part of our Process Automation Business area.

For more information on the above transactions, see “Note 4 - Acquisitions, divestments and equity-accounted companies” to our Consolidated Financial Statements.

EXCHANGE RATES

We report our financial results in U.S. dollars. Due to our global operations, a significant amount of our revenues, expenses, assets and liabilities are denominated in other currencies. As a consequence, movements in exchange rates between currencies may affect: (i) our profitability, (ii) the comparability of our results between periods and (iii) the reported carrying value of our assets and liabilities.

We translate non-USD denominated results of operations, assets and liabilities to USD in our Consolidated Financial Statements. Balance sheet items are translated to USD using year-end currency exchange rates. Income statement and cash flow items are translated to USD using the relevant monthly average currency exchange rate.

Increases and decreases in the value of the USD against other currencies will affect the reported results of operations in our Consolidated Income Statements and the value of certain of our assets and liabilities in our Consolidated Balance Sheets, even if our results of operations or the value of those assets and liabilities have not changed in their original currency. As foreign exchange rates impact our reported results of operations and the reported value of our assets and liabilities, changes in foreign exchange rates could significantly affect the comparability of our reported results of operations between periods and result in significant changes to the reported value of our assets, liabilities and stockholders' equity.

While we operate globally and report our financial results in USD, exchange rate movements between the USD and the EUR, the CNY and the CHF are of particular importance to us due to (i) the location of our significant operations and (ii) our corporate headquarters being in Switzerland.

The exchange rates between the USD and the EUR, the USD and the CHF and the USD and the CNY at December 31, 2024, 2023 and 2022, were as follows:

Exchange rates into $	**2024**	2023	2022
EUR 1.00	1.04	1.11	1.07
CHF 1.00	1.10	1.20	1.08
CNY 1.00	0.14	0.14	0.14

The average exchange rates between the USD and the EUR, the USD and the CHF and the USD and the CNY for the years ended December 31, 2024, 2023 and 2022, were as follows:

Exchange rates into $	**2024**	2023	2022
EUR 1.00	1.08	1.08	1.05
CHF 1.00	1.14	1.11	1.05
CNY 1.00	0.14	0.14	0.15

When we incur expenses that are not denominated in the same currency as the related revenues, foreign exchange rate fluctuations could affect our profitability. To mitigate the impact of exchange rate movements on our profitability, it is our policy to enter into forward foreign exchange contracts to manage the foreign exchange transaction risk of our operations.

In 2024, approximately 72 percent of our consolidated revenues were reported in currencies other than the USD. The following percentages of consolidated revenues were reported in the following currencies:

- Euro, approximately 23 percent, and
- Chinese renminbi, approximately 13 percent.

In 2024, approximately 72 percent of our cost of sales and selling, general and administrative expenses were reported in currencies other than the USD. The following percentages of consolidated cost of sales and selling, general and administrative expenses were reported in the following currencies:

- Euro, approximately 21 percent, and
- Chinese renminbi, approximately 11 percent.

We also incur expenses other than cost of sales and selling, general and administrative expenses in various currencies.

The results of operations and financial position of our subsidiaries outside of the U.S. are generally accounted for in the currencies of the countries in which those subsidiaries are located. We refer to these currencies as "local currencies". Local currency financial information is then translated into USD at applicable exchange rates for inclusion in our Consolidated Financial Statements.

The discussion of our results of operations below provides certain information with respect to orders, revenues, income from operations and other measures as reported in USD (as well as in local currencies). We measure period-to-period variations in local currency results by using a constant foreign exchange rate for all periods under comparison. Differences in our results of operations in local currencies as compared to our results of operations in USD are caused exclusively by changes in currency exchange rates.

While we consider our results of operations as measured in local currencies to be a significant indicator of business performance, local currency information should not be relied upon to the exclusion of U.S. GAAP financial measures. Instead, local currencies reflect an additional measure of comparability and provide a means of viewing aspects of our operations that, when viewed together with the U.S. GAAP results, provide a more complete understanding of factors and trends affecting the business. As local currency information is not standardized, it may not be possible to compare our local currency information to other companies' financial measures that have the same or a similar title. We encourage investors to review our financial statements and publicly filed reports in their entirety and not to rely on any single financial measure.

ORDERS

Our policy is to book and report an order when a binding contractual agreement has been concluded with a customer covering, at a minimum, the price and scope of products or services to be supplied, the delivery schedule and the payment terms. The reported value of an order corresponds to the undiscounted value of revenues that we expect to recognize following delivery of the goods or services subject to the order, less any trade discounts and excluding any value added or sales tax. The value of orders received during a given period of time represents the sum of the value of all orders received during the period, adjusted to reflect the aggregate value of any changes to the value of orders received during the period and orders existing at the beginning of the period. These adjustments, which may in the aggregate increase or decrease the orders reported during the period, may include changes in the estimated order price up to the date of contractual performance, changes in the scope of products or services ordered and cancellations of orders. The undiscounted value of future revenues we expect to generate from our orders at any point in time is represented by our order backlog.

The level of orders fluctuates from year to year. Portions of our business involve orders for long-term projects that can take months or years to complete and many larger orders result in revenues in periods after the order is booked. Consequently, the level of orders generally cannot be used to accurately predict future revenues or operating performance. Orders that have been placed can often be cancelled, delayed or modified by the customer. These actions can reduce or delay any future revenues from the order or may result in the elimination of the order.

PERFORMANCE MEASURES

We evaluate the performance of our operating segments based on orders received, revenues and Operational EBITA.

Operational EBITA represents income from operations excluding:

- amortization expense on intangibles arising upon acquisitions (acquisition-related amortization),
- restructuring, related and implementation costs,
- changes in the amount recorded for obligations related to divested businesses occurring after the divestment date (changes in obligations related to divested businesses),
- gains and losses from sale of businesses (including fair value adjustment on assets and liabilities held for sale, if any),
- acquisition- and divestment-related expenses and integration costs,
- certain other non-operational items, as well as
- foreign exchange/commodity timing differences in income from operations consisting of: (a) unrealized gains and losses on derivatives (foreign exchange, commodities, embedded derivatives), (b) realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized, and (c) unrealized foreign exchange movements on receivables/payables (and related assets/liabilities).

Certain other non-operational items generally includes: certain regulatory, compliance and legal costs, certain asset write downs/impairments and certain other fair value changes, as well as other items which are determined by management on a case-by-case basis.

See “Note 24 - Operating segment and geographic data” to our Consolidated Financial Statements for a reconciliation of the total Operational EBITA to income from continuing operations before taxes.

TRANSACTIONS WITH AFFILIATES AND ASSOCIATES

In the normal course of our business, we purchase products from, sell products to and engage in other transactions with entities in which we hold an equity interest. The amounts involved in these transactions are not material to ABB Ltd. Prior to its sale in December 2022, our most significant equity method investment was in Hitachi Energy Ltd (see “Note 4 - Acquisitions, divestments and equity-accounted companies” for details). Also, in the normal course of our business, we engage in transactions with businesses that we have divested. We believe that the terms of the transactions we conduct with these companies are negotiated on an arm’s length basis.

ANALYSIS OF RESULTS OF OPERATIONS

The discussion in the following sections below provides a comparative analysis between 2024 and 2023. See the sections under “Operating and Financial Review and Prospects” in our Financial Report 2023 for a comparative discussion and analysis between 2023 and 2022.

Our consolidated results from operations were as follows:

INCOME STATEMENT DATA:

($ in millions, except per share data in $)	2024	2023	2022
Revenues	32,850	32,235	29,446
Cost of sales	(20,576)	(21,021)	(19,736)
Gross profit	**12,274**	**11,214**	**9,710**
Selling, general and administrative expenses	(5,708)	(5,543)	(5,132)
Non-order related research and development expenses	(1,469)	(1,317)	(1,166)
Other income (expense), net	(26)	517	(75)
Income from operations	**5,071**	**4,871**	**3,337**
Interest and dividend income	206	165	72
Interest and other finance expense	(99)	(275)	(130)
Non-operational pension (cost) credit	55	17	115
Income tax expense	(1,278)	(930)	(757)
Income from continuing operations, net of tax	**3,955**	**3,848**	**2,637**
Loss from discontinued operations, net of tax	(3)	(24)	(43)
Net income	**3,952**	**3,824**	**2,594**
Net income attributable to noncontrolling interests and redeemable noncontrolling interests	(17)	(79)	(119)
Net income attributable to ABB	**3,935**	**3,745**	**2,475**
Amounts attributable to ABB shareholders:			
Income from continuing operations, net of tax	3,937	3,769	2,517
Loss from discontinued operations, net of tax	(2)	(24)	(42)
Net income	3,935	3,745	2,475
Basic earnings per share attributable to ABB shareholders:			
Income from continuing operations, net of tax	2.14	2.03	1.33
Loss from discontinued operations, net of tax	—	(0.01)	(0.02)
Net income	2.13	2.02	1.30
Diluted earnings per share attributable to ABB shareholders:			
Income from continuing operations, net of tax	2.13	2.02	1.32
Loss from discontinued operations, net of tax	—	(0.01)	(0.02)
Net income	2.13	2.01	1.30

A more detailed discussion of the orders, revenues, income from operations and Operational EBITA for our Business areas follows in the sections of “Business analysis” below for Electrification, Motion, Process Automation, Robotics & Discrete Automation, and Corporate and Other. Orders and revenues of our businesses include intersegment transactions which are eliminated in the “Corporate and Other” line in the tables below.

ORDERS

($ in millions)	2024	2023	2022	% Change 2024	% Change 2023
Electrification	16,422	15,189	15,182	8%	0%
Motion	7,989	8,222	7,896	(3)%	4%
Process Automation	7,106	7,535	6,825	(6)%	10%
Robotics & Discrete Automation	2,596	3,066	4,116	(15)%	(26)%
Total Business areas	**34,113**	**34,012**	**34,019**	**0%**	**0%**
Corporate and Other					
E-mobility, Non-core and divested businesses	503	720	787	(30)%	(9)%
Intersegment eliminations	(926)	(914)	(818)	n.a.	n.a.
Total	**33,690**	**33,818**	**33,988**	**0%**	**(1)%**

In 2024, total orders remained stable compared to the previous year (increasing 1 percent in local currencies). The Electrification Business area saw strong order growth across most consumer segments, with particularly high demand from data centers and utilities. Orders in the Motion Business area decreased slightly as orders in long-cycle businesses declined against a high comparable while orders from short-cycle businesses were flat. Orders in the Process Automation Business area decreased compared to 2023, which included a significant amount for large orders. However, underlying order demand in 2024 was strong in the marine and ports consumer segments as well as in low-carbon segments. Orders in the Robotics & Discrete Automation Business area declined sharply, led by the Machine Automation Division, as customers continued to adjust their order patterns after a period of pre-buys in response to weakened demand, particularly in industrial automation. For additional information about individual Business area order performance, refer to the relevant sections of "Business analysis" below.

We determine the geographic distribution of our orders based on the location of the ultimate destination of the products' end-use, if known, or the location of the customer. The geographic distribution of our consolidated orders was as follows:

($ in millions)	2024	2023	2022	% Change 2024	% Change 2023
Europe	11,454	11,458	11,778	0%	(3)%
The Americas	12,110	12,437	11,825	(3)%	5%
of which: United States	8,978	9,204	8,920	(2)%	3%
Asia, Middle East and Africa	10,126	9,923	10,385	2%	(4)%
of which: China	3,952	4,488	5,087	(12)%	(12)%
Total	**33,690**	**33,818**	**33,988**	**0%**	**(1)%**

In 2024, orders decreased 3 percent in the Americas (2 percent in local currencies), driven mainly by the recording of two large orders in the U.S. totaling $435 million in 2023. Despite this impact, underlying demand in 2024 remained strong in the United States. Orders also decreased in Canada and Mexico, partially offset by strong growth in Brazil. In Europe, orders were flat (flat in local currencies). Orders were higher in Germany, Sweden, Finland and the Netherlands while they declined in Italy, Norway and the United Kingdom. In Asia, Middle East and Africa, orders increased 2 percent (5 percent in local currencies). Orders declined in China but were more than offset by strong order growth in markets such as Australia, Japan and the United Arab Emirates.

ORDER BACKLOG

				% Change	
December 31, ($ in millions)	**2024**	2023	2022	**2024**	2023
Electrification	7,506	6,808	6,404	10%	6%
Motion	5,239	5,343	4,726	(2)%	13%
Process Automation	7,437	7,519	6,229	(1)%	21%
Robotics & Discrete Automation	1,447	2,141	2,679	(32)%	(20)%
Total Business areas	**21,629**	**21,811**	**20,038**	**(1)%**	**9%**
Corporate and Other					
E-mobility, Non-core and divested businesses	359	508	552	(29)%	(8)%
Intersegment eliminations	(767)	(752)	(723)	n.a.	n.a.
Total	**21,221**	**21,567**	**19,867**	**(2)%**	**9%**

At December 31, 2024, consolidated order backlog was 2 percent lower (4 percent higher in local currencies) compared to December 31, 2023. The order backlog declined primarily due to movements in foreign currencies. In local currencies, order backlog increased in all Business areas except Robotics & Discrete Automation. The order backlog in the Electrification Business area was driven by order growth in the Smart Power and Service Divisions while the order backlog in the Motion Business area increased in the Traction and IEC LV Motors Divisions. The increase in the order backlog in the Process Automation Business area was driven by the Marine & Ports and Energy Industries Divisions, where orders continued to outpace revenues. This was partially offset by the decrease in order backlog in the Robotics & Discrete Automation Business area which was a result of the decline in orders in both divisions, as well as the negative impact of a customer outreach performed to confirm the existing order backlog following a period of significant customer pre-ordering.

REVENUES

				% Change	
($ in millions)	**2024**	2023	2022	**2024**	2023
Electrification	15,448	14,584	13,619	6%	7%
Motion	7,787	7,814	6,745	0%	16%
Process Automation	6,756	6,270	6,044	8%	4%
Robotics & Discrete Automation	3,213	3,640	3,181	(12)%	14%
Total Business areas	**33,204**	**32,308**	**29,589**	**3%**	**9%**
Corporate and Other					
E-mobility, Non-core and divested businesses	558	769	653	(27)%	18%
Intersegment eliminations	(912)	(842)	(796)	n.a.	n.a.
Total	**32,850**	**32,235**	**29,446**	**2%**	**9%**

In 2024, revenues increased by 2 percent (3 percent in local currencies), primarily driven by volume growth, with additional support from pricing adjustments. Strong execution of our order backlog into revenue supported growth, driven by the Process Automation and Electrification Business areas, with the latter also positively impacted by increased short-cycle demand. Revenue was broadly stable in the Motion Business area with positive impacts from pricing offset by volume declines in the short-cycle businesses. In the Robotics & Discrete Automation Business area, as well as the E-mobility Division, revenues declined sharply as underlying markets remained weak, consistent with the with the slowdown in orders. For additional analysis of revenues for each of the Business areas, refer to the relevant sections of “Business analysis” below.

We determine the geographic distribution of our revenues based on the location of the ultimate destination of the products' end use, if known, or the location of the customer. The geographic distribution of our consolidated revenues was as follows:

				% Change	
($ in millions)	**2024**	2023	2022	**2024**	2023
Europe	11,119	11,568	10,285	(4)%	12%
The Americas	11,805	11,090	9,573	6%	16%
of which: United States	8,879	8,248	7,023	8%	17%
Asia, Middle East and Africa	9,926	9,577	9,588	4%	0%
of which: China	4,296	4,468	4,696	(4)%	(5)%
Total	**32,850**	**32,235**	**29,446**	**2%**	**9%**

In 2024, revenues increased 6 percent in the Americas (7 percent in local currencies), where revenues in the United States increased 8 percent (8 percent in local currencies). Revenues in the Americas also experienced strong growth in Canada and Chile. In Europe, revenues declined 4 percent (4 percent in local currencies). Revenues were higher in Switzerland, Norway, Spain and the United Kingdom while they declined in Germany, Italy and Sweden. In Asia, Middle East and Africa, revenues increased 4 percent (7 percent in local currencies) compared to 2023. Revenues grew in India, Saudi Arabia, Australia and Singapore, partially offset by a decline in China of 4 percent (2 percent in local currencies).

COST OF SALES

Cost of sales consists primarily of labor, raw materials and component costs but also includes indirect production costs, expenses for warranties, contract and project charges, as well as order-related development expenses incurred in connection with projects for which corresponding revenues have been recognized.

In 2024, costs of sales decreased 2 percent (1 percent in local currencies) to $20,576 million. Cost of sales as a percentage of revenues decreased to 62.6 percent from 65.2 percent in 2023. In 2024, the gross margin increased in three out of four Business areas, led by the Electrification Business area. The increase in the gross margin was primarily due to improved operational efficiency from cost mitigation actions taken as well as positive impact from pricing. In the Motion Business area, there was strong growth mainly due to structural improvements in the long-cycle businesses. The Process Automation Business area also improved, driven primarily by the execution of the order backlog, which had a more favorable gross margin. The gross margin in the Robotics & Discrete Automation Business area was broadly stable compared to 2023, negatively impacted by lower volumes driving under absorption of fixed costs in the latter half of the year, primarily in the Machine Automation Division.

SELLING, GENERAL AND ADMINISTRATIVE EXPENSES

The components of selling, general and administrative expenses were as follows:

($ in millions)	**2024**	2023	2022
Selling expenses	3,554	3,415	3,248
General and administrative expenses	2,154	2,128	1,884
Total	**5,708**	**5,543**	**5,132**

In 2024, general and administrative expenses increased 1 percent (2 percent in local currencies) compared to 2023, in line with the increase in revenues. As a percentage of revenues, general and administrative expenses remained stable at 6.6 percent compared to 2023. General and administrative expenses in 2024 also includes the ongoing costs required to deliver services to Hitachi Energy Ltd under transition services agreements for which we are compensated. We have recorded $45 million in Other income (expense), net, during 2024 compared to $121 million in 2023 related to these agreements with Hitachi Energy.

In 2024, selling expenses increased 4 percent (5 percent in local currencies) compared to 2023 and was higher in all Business areas except for Robotics & Discrete Automation. Selling expenses as a percentage of orders increased from 10.1 percent in 2023 to 10.5 percent in 2024.

NON-ORDER RELATED RESEARCH AND DEVELOPMENT EXPENSES

In 2024, non-order related research and development expenses increased 12 percent (13 percent in local currencies) compared to 2023. In 2024, non-order related research and development expenses as a percentage of revenues increased (4.5 percent in 2024 compared to 4.1 percent in 2023) as we continued to execute on the plan to further invest in research and development. All four Business areas contributed to the increase in non-order related research and development expenses, led by the Motion and Process Automation Business areas.

OTHER INCOME (EXPENSE), NET

($ in millions)	2024	2023	2022
Income from provision of services under transition services agreements	77	175	221
Net gain from sale of property, plant and equipment	60	116	84
Gain (loss) from change in fair value of investments in equity securities	(95)	3	52
Brand income from Hitachi Energy	17	39	57
Fair value adjustments on assets and liabilities held for sale	(113)	—	—
Net gain from sale of businesses and equity-accounted investments(1)	57	101	36
Asset impairments	(27)	(49)	(55)
Income (loss) from equity-accounted companies	(21)	(16)	(102)
Restructuring and restructuring-related expenses(2)	(56)	(20)	(227)
Regulatory penalties in connection with Kusile project	—	—	(313)
Other income (expense)	75	168	172
Total	**(26)**	**517**	**(75)**

(1) 2022 includes gain on sale of the remaining 19.9 percent investment in Hitachi Energy Ltd.
(2) Excluding asset impairments

In 2024, Other income (expense), net, was a loss of $26 million compared to a gain of $517 million in 2023. A key reason for the change was that, in 2024, we recorded fair value adjustments of $113 million relating to various businesses held for sale, the largest of which was for In-Charge. We also recorded higher losses for fair value changes in various equity investments compared to gains in 2023. In addition, the conclusion and winding down of a number of transition services agreements in 2024 resulted in a decrease in the income arising from the provision of these services compared to 2023. In 2024, we also had lower gains from sale of property, plant and equipment.

INCOME FROM OPERATIONS

				% Change	
($ in millions)	2024	2023	2022	2024	2023
Electrification	3,362	2,800	2,140	20%	31%
Motion	1,400	1,390	1,092	1%	27%
Process Automation	974	947	663	3%	43%
Robotics & Discrete Automation	183	446	247	(59)%	81%
Total Business areas	**5,919**	**5,583**	**4,142**	**6%**	**35%**
Corporate and Other	(846)	(711)	(804)	n.a.	n.a.
Intersegment elimination	(2)	(1)	(1)	n.a.	n.a.
Total	**5,071**	**4,871**	**3,337**	**4%**	**46%**

In 2024 and 2023, changes in income from operations were a result of the factors discussed above and in “Business analysis” below.

FINANCIAL INCOME AND EXPENSES

Financial income and expenses include Interest and dividend income and Interest and other finance expense.

Interest and other finance expense includes interest expense on our debt, the amortization of upfront transaction costs associated with long-term debt and committed credit facilities, commitment fees on credit facilities, foreign exchange gains and losses on financial items, and gains and losses on marketable securities. In addition, interest costs relating to uncertain tax positions are included within interest expense.

($ in millions)	**2024**	2023	2022
Interest and dividend income	206	165	72
Interest and other finance expense	(99)	(275)	(130)

In 2024, Interest and other finance expense decreased significantly while Interest and dividend income increased modestly. A higher average U.S. dollar interest rate during 2024 generated higher interest income on cash deposits (which are largely in U.S. dollars) and also higher gains on investments in money market investment funds (included in Interest and other finance expense). We realized considerable foreign exchange losses in 2023 while we only had insignificant amounts in 2024. In addition, due to our internal funding structure and the resulting currency hedging requirements, our Interest and other finance expense reflects more the short-term Swiss franc interest rates than the direct underlying interest costs incurred in the currencies of our external debt, especially the euro, reducing the amount of Interest and other finance expense reported in 2024 by more than half. Our exposure to Swiss franc interest rates (with an offsetting exposure to U.S. dollar and euro rates) increased during 2024 and this change, combined with an increased average spread during the year between Swiss franc and U.S. dollar short-term interest rates, has reduced our Interest and other finance expense compared to 2023.

NON-OPERATIONAL PENSION (COST) CREDIT

A non-operational pension credit of $55 million was recorded in 2024 compared to a $17 million credit in 2023. The increase in the non-operational pension credit compared to 2023 is primarily due to lower curtailment and settlement costs and lower interest costs on the benefit obligations (see “Note 18 - Employee benefits” to our Consolidated Financial Statements).

INCOME TAX EXPENSE

($ in millions)	**2024**	2023	2022
Income from continuing operations before taxes	5,233	4,778	3,394
Income tax expense	(1,278)	(930)	(757)
Effective tax rate for the year	24.4%	19.5%	22.3%

In 2024, the effective tax rate increased to 24.4 percent from 19.5 percent in 2023. In 2024, the increase in the effective tax rate was primarily driven by the geographical mix of earnings, resulting in a negative impact of approximately 2 percentage points. The effective tax rate was also positively impacted by favorable reassessments of uncertain tax provisions of approximately 3 percentage points, while in 2023 the respective benefit was approximately 4 percentage points.

See “Note 17 - Income taxes” to our Consolidated Financial Statements for additional information.

INCOME FROM CONTINUING OPERATIONS, NET OF TAX

As a result of the factors discussed above, compared to 2023, Income from continuing operations, net of tax, increased by $107 million to $3,955 million in 2024.

LOSS FROM DISCONTINUED OPERATIONS, NET OF TAX

In 2020, we completed the divestment of 80.1 percent of our former Power Grids business to Hitachi. As a result of the sale, substantially all Power Grids related assets and liabilities have been sold. As this divestment represented a strategic shift that would have a major effect on our operations and financial results, the results of operations for this business were presented as discontinued operations. In addition, we also have retained obligations (primarily for environmental and taxes) related to other businesses disposed or otherwise exited that qualified as discontinued operations. Changes to these retained obligations are also included in Loss from discontinued operations, net of tax.

For additional information on the divestment and discontinued operations, see “Note 3 - Discontinued operations” to our Consolidated Financial Statements.

NET INCOME ATTRIBUTABLE TO ABB

As a result of the factors discussed above, compared to 2023, Net income attributable to ABB increased by $190 million to $3,935 million in 2024.

EARNINGS PER SHARE ATTRIBUTABLE TO ABB SHAREHOLDERS

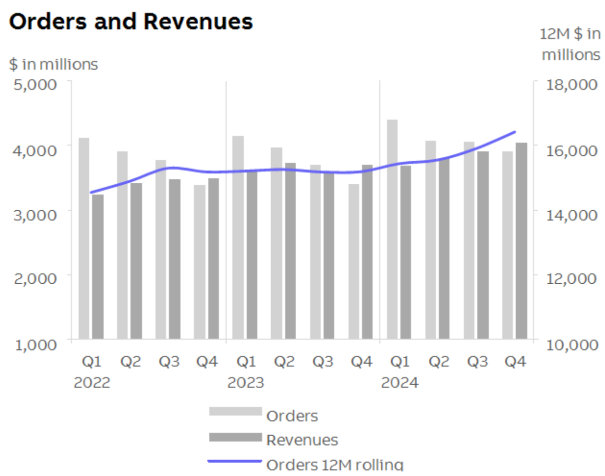
(in $)	2024	2023	2022
Basic earnings per share attributable to ABB shareholders:			
Income from continuing operations, net of tax	2.14	2.03	1.33
Loss from discontinued operations, net of tax	—	(0.01)	(0.02)
Net income	2.13	2.02	1.30
Diluted earnings per share attributable to ABB shareholders:			
Income from continuing operations, net of tax	2.13	2.02	1.32
Loss from discontinued operations, net of tax	—	(0.01)	(0.02)
Net income	2.13	2.01	1.30

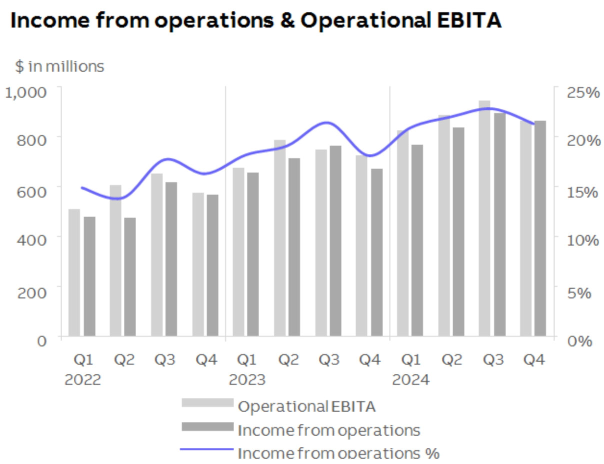
Basic earnings per share is calculated by dividing income by the weighted-average number of shares outstanding during the year. Diluted earnings per share is calculated by dividing income by the weighted-average number of shares outstanding during the year, assuming that all potentially dilutive securities were exercised, if dilutive. Potentially dilutive securities comprise outstanding written call options and outstanding options and shares granted subject to certain conditions under our share-based payment arrangements. See “Note 21 - Earnings per share” to our Consolidated Financial Statements.

BUSINESS ANALYSIS

ELECTRIFICATION BUSINESS AREA

The financial results of our Electrification Business area were as follows:





				% Change	
($ in millions)	**2024**	2023	2022	**2024**	2023
Orders	16,422	15,189	15,182	8%	0%
Order backlog at December 31,	7,506	6,808	6,404	10%	6%
Revenues	15,448	14,584	13,619	6%	7%
Income from operations	3,362	2,800	2,140	20%	31%
Operational EBITA	3,520	2,937	2,343	20%	25%

Orders

Approximately two-thirds of the Business area's orders are for products with short lead times or for service orders; these orders are usually recorded and delivered within a three-month period and thus are generally considered as short-cycle. The remainder is comprised of smaller project orders that require longer lead times, as well as larger solutions requiring engineering and installation. Approximately half of the Business area's orders are received via third-party distributors. As a consequence, end-customer market data and analysis is based partially on management estimates.

In 2024, orders increased 8 percent (9 percent in local currencies) compared to 2023. Order growth was somewhat offset by a negative net impact of 1 percent from acquisitions and divestments, primarily from the divestment of the Power Conversion Division in July 2023, partly offset by the acquisition of the SEAM Group in August 2024. Order growth was strongest in the Smart Power and Service Divisions. From a customer segment perspective, order growth was particularly strong in data centers and utilities. Demand in the buildings segment, the Electrification Business area's largest end-user segment, also improved, supported by a positive development in the commercial area while the residential market stabilized at a low level. Short-cycle businesses grew faster than project- and systems-related businesses.

The geographic distribution of orders for our Electrification Business area was as follows:

($ in millions)	2024	2023	2022
Europe	4,926	4,629	4,595
The Americas	7,032	6,567	6,509
of which: United States	5,486	5,001	5,062
Asia, Middle East and Africa	4,464	3,993	4,078
of which: China	1,744	1,815	1,992
Total	**16,422**	**15,189**	**15,182**

In 2024, orders increased in all regions. Orders increased 12 percent in Asia, Middle East and Africa (16 percent in local currencies) as strong growth in markets such as India, Australia and the United Arab Emirates more than offset a lower level of orders in China and South Korea. Orders in Europe increased 6 percent (6 percent in local currencies) with growth in markets such as Germany, Belgium, the Netherlands and Sweden. Orders in the Americas increased 7 percent (8 percent in local currencies) with strong growth in the United States.

Order backlog

In 2024, the order backlog increased 10 percent (15 percent in local currencies). The order backlog growth was led by the Smart Power Division and mainly reflected an increase in the Division's long-cycle businesses.

Revenues

In 2024, revenues increased 6 percent (7 percent in local currencies) compared to 2023. The revenue growth was offset partially by a negative net impact of 2 percent from acquisitions and divestments mentioned above. Revenues grew in four out of our five divisions, led by the Smart Power Division, supported by strong order backlog execution combined with high demand, particularly in the data centers and utilities customer segments. Additionally, expanded capacity for medium-voltage switchgear and the resulting lead time reductions contributed to the revenue increase in the Distribution Solution Division. Overall, pricing actions taken to mitigate increasing material and labor costs also had a positive impact on the revenue growth in 2024.

The geographic distribution of revenues for our Electrification Business area was as follows:

($ in millions)	2024	2023	2022
Europe	4,665	4,641	4,318
The Americas	6,622	5,968	5,181
of which: United States	5,150	4,480	3,791
Asia, Middle East and Africa	4,161	3,975	4,120
of which: China	1,795	1,797	1,969
Total	**15,448**	**14,584**	**13,619**

In 2024, revenues in the Americas increased 11 percent (12 percent in local currencies) despite the divestment of the Power Conversion Division, which had a large market presence in the Americas and negatively impacted growth in the region by 3 percent. This was only partly offset by the newly acquired SEAM Group, which contributed less than half a percentage point to the Americas region growth. Revenues increased 5 percent (8 percent in local currencies) in Asia, Middle East and Africa as strong growth in markets such as India, Australia and Singapore more than offset a lower level of revenues in markets such as South Korea and Egypt, while revenues in China were stable. Revenues in Europe increased 1 percent (flat in local currencies) with a mixed picture across countries, as strength in markets like the United Kingdom and Ireland was offset by weakness in markets such as the Netherlands and Türkiye.

Income from operations

In 2024, Income from operations increased 20 percent, mainly driven by higher volumes and higher operating margins. Restructuring-related expenses and implementation costs were lower than the previous year as right-sizing actions commencing in 2023 neared completion. Benefits of savings realized from these ongoing restructuring and cost savings programs also positively influenced income from operations. Additionally, pricing actions helped to partly offset the adverse impact of inflation, primarily in salary and labor costs. The positive effects were dampened by higher personnel expenses to support business growth. The level of non-order related research and development spending was higher in 2024 in line with our commitment to ensure a stable investment level relative to revenues. Our increased research and development spend focused on growth initiatives, including data center offerings, an enhanced service portfolio, market localization, as well as investments in sustainable products and renewable energy solutions. Changes in foreign currencies, including the impacts from FX/commodity timing differences summarized in the table below, negatively impacted income from operations in 2024 by 2 percent.

Operational EBITA

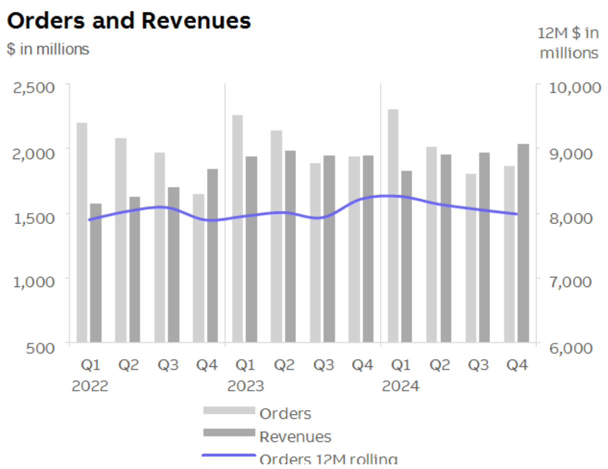
The reconciliation of Income from operations to Operational EBITA for the Electrification Business area was as follows:

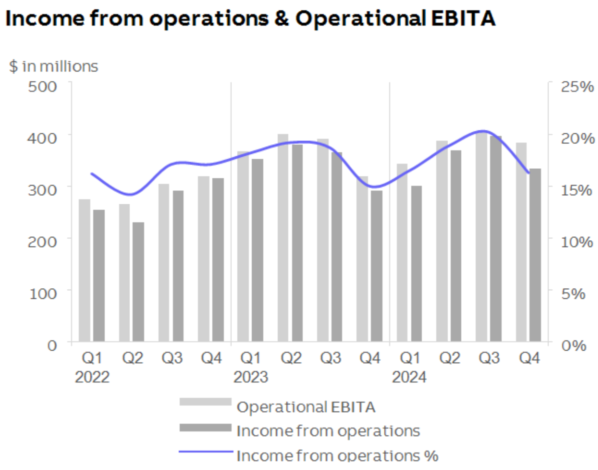
($ in millions)	2024	2023	2022
Income from operations	**3,362**	**2,800**	**2,140**
Acquisition-related amortization	94	88	104
Restructuring, related and implementation costs	27	76	28
Changes in obligations related to divested businesses	—	1	1
Gains and losses from sale of businesses	(73)	(75)	(1)
Fair value adjustment on assets and liabilities held for sale	25	—	—
Acquisition- and divestment-related expenses and integration costs	38	30	36
Certain other non-operational items	7	16	41
FX/commodity timing differences in income from operations	40	1	(6)
Operational EBITA	**3,520**	**2,937**	**2,343**

In 2024, Operational EBITA increased 20 percent (21 percent excluding the impact from changes in foreign currency exchange rates) compared to 2023, primarily due to the reasons described under “Income from operations”, excluding the explanations related to the reconciling items in the table above.

MOTION BUSINESS AREA

The financial results of our Motion Business area were as follows:





				% Change	
($ in millions)	**2024**	**2023**	**2022**	**2024**	**2023**
Orders	7,989	8,222	7,896	(3)%	4%
Order backlog at December 31,	5,239	5,343	4,726	(2)%	13%
Revenues	7,787	7,814	6,745	0%	16%
Income from operations	1,400	1,390	1,092	1%	27%
Operational EBITA	1,518	1,475	1,163	3%	27%

Orders

In 2024, orders were slightly lower from last year's high level, decreasing 3 percent (2 percent in local currencies) compared to 2023. The decline in orders was driven by the System Drives Division, partly offset by order growth in the Service Division. Long-cycle orders declined from last year's elevated levels, which included a significant share of large orders. Orders in short-cycle businesses were flat, with positive momentum in heating, ventilation, air conditioning and refrigeration (HVACR) related sub-segments, despite challenges in the China market. Strong performance in the power generation segment was offset by third-party order decreases in heavy, process-related industries such as chemical, oil & gas, metals, pulp and paper, cement and mining.

The geographic distribution of orders for our Motion Business area was as follows:

($ in millions)	**2024**	**2023**	**2022**
Europe	2,688	2,797	2,710
The Americas	2,545	2,715	2,583
of which: United States	2,010	2,186	2,128
Asia, Middle East and Africa	2,756	2,710	2,603
of which: China	1,217	1,300	1,314
Total	**7,989**	**8,222**	**7,896**

In 2024, orders decreased 4 percent (5 percent in local currencies) in Europe. Volume dropped particularly in Germany, Norway, the United Kingdom and Spain, partly offset by order growth in Finland, Sweden, Austria and Italy. In Asia, Middle East and Africa, orders increased 2 percent (4 percent in local currencies) supported by large orders in Australia and the United Arab Emirates, while orders in China and India declined. In the Americas, orders decreased 6 percent (6 percent in local currencies) driven by the United States, which declined versus last year's high comparable that included a significant share of large orders. This was partly offset by order growth in Canada.

Order backlog

Order backlog of $5.2 billion at the end of 2024 decreased 2 percent (increased 4 percent in local currencies) compared to 2023.

In local currencies, the order backlog increased in the Traction and IEC LV Motors Divisions, partially offset by a decline in the System Drives Division due to strong order backlog execution.

Revenues

In 2024, revenues remained flat (increased 1 percent in local currencies) compared to 2023. The positive impact from pricing was largely offset by volume declines in the short-cycle divisions. Revenue growth was strong in the Service Division, as well as in the System Drives and Large Motors & Generators Divisions which were able to effectively execute on the high order backlog. This was mostly offset by a decline in the Drive Products Division.

The geographic distribution of revenues for our Motion Business area was as follows:

($ in millions)	2024	2023	2022
Europe	2,514	2,704	2,271
The Americas	2,699	2,650	2,208
of which: United States	2,173	2,176	1,823
Asia, Middle East and Africa	2,574	2,460	2,266
of which: China	1,238	1,256	1,245
Total	**7,787**	**7,814**	**6,745**

In 2024, revenues in Europe decreased 7 percent (8 percent in local currencies) compared to 2023. The revenue decrease was driven by Germany, Italy, Türkiye and France, partly offset by revenue growth in Switzerland, Spain and Austria. In Asia, Middle East and Africa, revenues increased 5 percent (8 percent in local currencies) supported by strong growth in India and the United Arab Emirates, while China decreased by 1 percent (flat in local currencies). In the Americas, revenues increased 2 percent (2 percent in local currencies) driven by revenue increases in Mexico and Canada, while the United States remained flat.

Income from operations

In 2024, income from operations increased 1 percent (2 percent in local currencies) supported by stable revenues and continued cost discipline. The decline in the short-cycle business and higher research and development and selling, general, and administrative expenses, primarily due to the increased cost of labor, were more than offset by structural profitability improvements in the long-cycle business. The profitability improvement was driven by the Service Division as a result of both increased revenues and margin. Changes in foreign currencies, including the impacts from FX/commodity timing differences summarized in the table below, negatively impacted income from operations by approximately 4 percent.

Operational EBITA

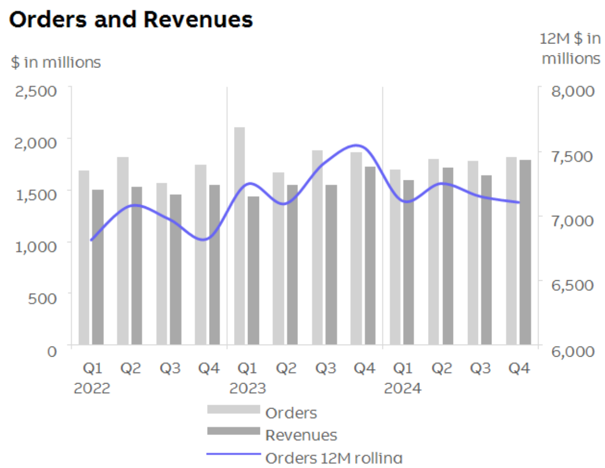
The reconciliation of Income from operations to Operational EBITA for the Motion Business area was as follows:

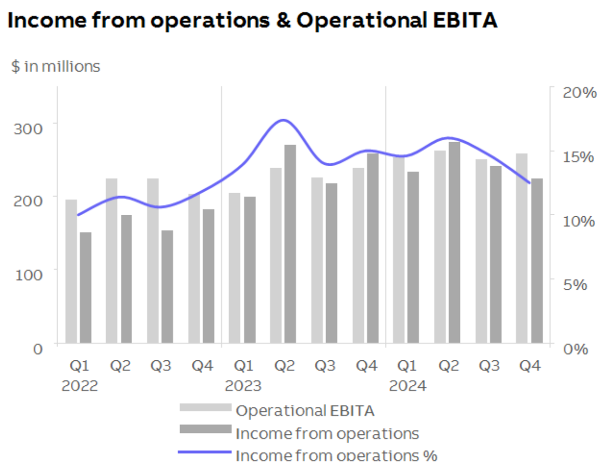
($ in millions)	2024	2023	2022
Income from operations	**1,400**	**1,390**	**1,092**
Acquisition-related amortization	35	35	31
Restructuring, related and implementation costs	39	46	16
Gains and losses from sale of businesses	—	—	8
Acquisition- and divestment-related expenses and integration costs	5	17	15
Certain other non-operational items	7	6	—
FX/commodity timing differences in income from operations	32	(19)	1
Operational EBITA	**1,518**	**1,475**	**1,163**

In 2024, Operational EBITA increased 3 percent (3 percent excluding the impact from changes in foreign currency exchange rates) compared to 2023, primarily due to the reasons described under “Income from operations”, excluding the explanations related to the reconciling items in the table above.

PROCESS AUTOMATION BUSINESS AREA

The financial results of our Process Automation Business area were as follows:





				% Change	
($ in millions)	**2024**	**2023**	**2022**	**2024**	**2023**
Orders	7,106	7,535	6,825	(6)%	10%
Order backlog at December 31,	7,437	7,519	6,229	(1)%	21%
Revenues	6,756	6,270	6,044	8%	4%
Income from operations	974	947	663	3%	43%
Operational EBITA	1,025	909	848	13%	7%

Orders

In 2024, orders decreased by 6 percent (5 percent in local currencies) compared to 2023 as the previous year reflected certain large orders while in the current year, underlying demand remained robust. The Marine & Ports Division recorded two large orders in 2023 totaling $435 million leading to a decline in 2024, however, underlying demand in the Division continues to be strong. Orders also declined in the Process Industries Division. The Measurement & Analytics Division experienced growth in orders as short-cycle demand strengthened throughout the year. Positive trends were observed in low-carbon segments such as nuclear, carbon capture and hydrogen. However, orders were lower in large process-related segments including oil & gas, pulp and paper, and mining.

The geographic distribution of orders for our Process Automation Business area was as follows:

($ in millions)	**2024**	**2023**	**2022**
Europe	2,879	2,662	2,361
The Americas	1,876	2,441	1,994
of which: United States	1,079	1,506	1,201
Asia, Middle East and Africa	2,351	2,432	2,470
of which: China	620	729	748
Total	**7,106**	**7,535**	**6,825**

Orders in Europe increased 8 percent (8 percent in local currencies). Orders increased in Germany, Finland and the Netherlands. Orders in Asia, Middle East and Africa decreased 3 percent (1 percent in local currencies). Higher orders in Australia and the United Arab Emirates were more than offset by lower order volumes in China, India and Saudi Arabia. In the Americas, orders decreased 23 percent (22 percent in local currencies) driven by a decrease in the U.S and Canada, with the former impacted by the two large orders referred to above. This was partially offset by higher orders in Mexico and Brazil.

Order backlog

In 2024, order backlog decreased 1 percent (increased 5 percent in local currencies) compared to 2023, due to movements in foreign currencies. In local currencies, the increase in order backlog is driven by increases in the Energy Industries and Marine & Ports Divisions, where orders continue to outpace revenues.

Revenues

In 2024, revenues increased 8 percent (9 percent in local currencies) compared to 2023. Revenues increased in all divisions, reflecting strong execution of the order backlog, as well as positive developments in the service business, led by the Marine & Ports Division.

The geographic distribution of revenues for our Process Automation Business area was as follows:

($ in millions)	2024	2023	2022
Europe	2,460	2,311	2,266
The Americas	1,879	1,741	1,569
of which: United States	1,160	1,077	943
Asia, Middle East and Africa	2,417	2,218	2,209
of which: China	698	696	680
Total	**6,756**	**6,270**	**6,044**

Revenues in 2024 were 8 percent higher (9 percent in local currencies) in the Americas, 9 percent higher (11 percent in local currencies) in Asia, Middle East and Africa and 6 percent higher (7 percent in local currencies) in Europe compared to 2023. In the Americas, revenue growth was driven by the U.S. and Canada. In Asia, Middle East and Africa, revenues increased in India, Singapore and Saudi Arabia and revenues declined in Japan, while revenues in China were stable. In Europe, growth was reported in key markets including Norway, Italy and the United Kingdom, partially offset by lower revenues in Sweden and Germany.

Income from operations

In 2024, income from operations increased 3 percent compared to 2023, driven by strong business performance in most divisions. Growth was driven primarily by higher revenues on the execution of the order backlog, which has a more favorable gross margin. This more than offset the impact of higher selling, general and administrative and non-order related research and development expenses. Changes in foreign currencies, including the effect from changes in the FX/commodity timing differences summarized in the table below, negatively impacted income from operations by approximately 3 percent.

Operational EBITA

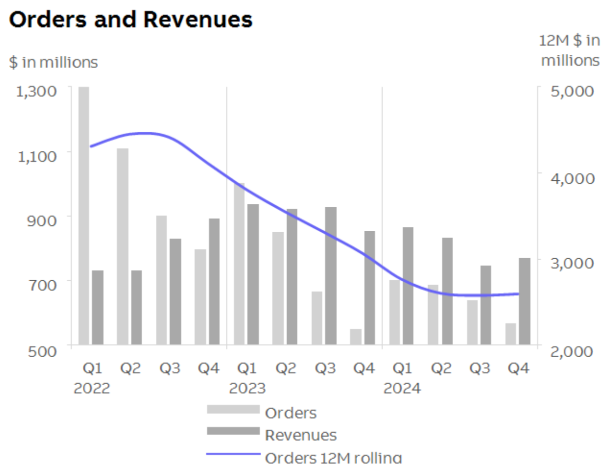
The reconciliation of Income from operations to Operational EBITA for the Process Automation Business area was as follows:

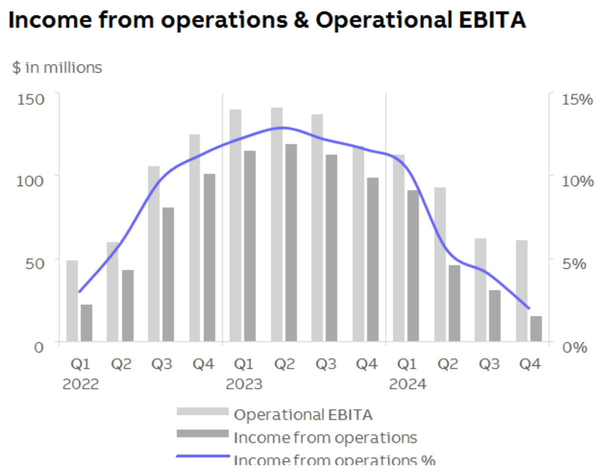
($ in millions)	2024	2023	2022
Income from operations	**974**	**947**	**663**
Acquisition-related amortization	10	5	4
Restructuring, related and implementation costs	30	3	29
Gains and losses from sale of businesses	—	(26)	—
Acquisition- and divestment-related expenses and integration costs	5	(7)	134
FX/commodity timing differences in income from operations	6	(13)	18
Operational EBITA	**1,025**	**909**	**848**

In 2024, Operational EBITA increased 13 percent (14 percent excluding the impact from changes in foreign currency exchange rates) compared to 2023, primarily due to the reasons described under “Income from operations”, excluding the explanations related to the reconciling items in the table above.

ROBOTICS & DISCRETE AUTOMATION BUSINESS AREA

The financial results of our Robotics & Discrete Automation Business area were as follows:





				% Change	
($ in millions)	**2024**	2023	2022	**2024**	2023
Orders	2,596	3,066	4,116	(15)%	(26)%
Order backlog at December 31,	1,447	2,141	2,679	(32)%	(20)%
Revenues	3,213	3,640	3,181	(12)%	14%
Income from operations	183	446	247	(59)%	81%
Operational EBITA	329	536	340	(39)%	58%

Orders

In 2024, orders decreased 15 percent (15 percent in local currencies) with diverging market environments between the two divisions. In the Machine Automation Division, orders declined as a slowdown in industrial automation demand extended the ongoing alignment of order patterns by machine builders following a period of significant pre-ordering during supply chain disruptions in recent years. The decline in orders further reflects the results of a customer outreach performed to confirm the existing order backlog following the period of significant pre-ordering, accounting for 4 percent of the decrease. Orders also declined in the Robotics Division, with more pronounced declines early in the year, driven by negative developments in electronics and in automotive, with the latter impacted by a slower pace in the EV-related market which outweighed increasing activities linked to hybrids. The overall decline in orders in the Robotics Division was partially offset by growth in the general industry and warehouse logistics segments, linked to consumer industries, during the latter part of the year.

The geographic distribution of orders for our Robotics & Discrete Automation Business area was as follows:

($ in millions)	**2024**	2023	2022
Europe	1,207	1,481	2,043
The Americas	592	544	609
of which: United States	369	335	404
Asia, Middle East and Africa	797	1,041	1,464
of which: China	515	752	1,147
Total	**2,596**	**3,066**	**4,116**

In 2024, orders in Europe decreased 19 percent (19 percent in local currencies) mainly driven by decreased demand in Germany, Italy, Austria and the United Kingdom. Orders in the Americas increased 9 percent (10 percent in local currencies) compared to 2023, driven by strong order growth in the U.S. as well as in both Canada and Brazil, offsetting declines in smaller markets. Orders in Asia, Middle East and Africa decreased 23 percent (21 percent in local currencies) with lower demand mainly in China. The completed customer outreach negatively impacted orders in Asia, Middle East and Africa by 9 percent.

Order backlog

In 2024, order backlog decreased 32 percent (29 percent in local currencies) compared to 2023. Order backlog decreased in both divisions primarily due to lower order intake and the impact of the customer outreach order confirmation, along with the continued order backlog execution.

Revenues

In 2024, revenues decreased 12 percent (11 percent in local currencies) compared to 2023. Revenues decreased in both divisions. The decline was primarily driven by a sharp volume decline in the Machine Automation Division due to the slowdown in industrial automation demand. The revenue decline in the Robotics Division was less pronounced as service revenues continued to increase in 2024, mainly linked to the automotive segment.

The geographic distribution of revenues for our Robotics & Discrete Automation Business area was as follows:

($ in millions)	**2024**	2023	2022
Europe	1,656	1,942	1,498
The Americas	536	577	525
of which: United States	330	361	374
Asia, Middle East and Africa	1,021	1,121	1,158
of which: China	705	805	895
Total	**3,213**	**3,640**	**3,181**

Revenues from Asia, Middle East and Africa decreased 9 percent (7 percent in local currencies) compared to 2023 due to lower volumes in China. Revenues in Europe decreased 15 percent (15 percent in local currencies) driven by lower volumes in the short-cycle business, mainly in Austria, Germany, France and the United Kingdom. In the Americas, revenues decreased 7 percent (6 percent in local currencies) due mainly to lower volumes in the United States.

Income from operations

In 2024, the Business area recorded income from operations of $183 million compared to $446 million in 2023, with both divisions contributing to the lower income level. The operational performance in 2024 reflected lower sales volumes, price pressures and an unfavorable change in the revenue mix, despite the benefit of cost reduction measures put in place in the second half of 2024. The Business area also had higher restructuring costs and costs for certain non-operational items in 2024. Continued inflationary cost pressures, as well as lower production volumes, triggered under absorption of fixed costs, primarily in the Machine Automation Division. Changes in foreign currencies, including the impacts from FX/commodity timing differences summarized in the table below, negatively impacted income from operations by approximately 2 percent.

Operational EBITA

The reconciliation of Income from operations to Operational EBITA for the Robotics & Discrete Automation Business area was as follows:

($ in millions)	**2024**	2023	2022
Income from operations	**183**	**446**	**247**
Acquisition-related amortization	54	79	78
Restructuring, related and implementation costs	59	6	11
Acquisition- and divestment-related expenses and integration costs	16	14	6
Certain other non-operational items	14	(10)	(8)
FX/commodity timing differences in income from operations	3	1	6
Operational EBITA	**329**	**536**	**340**

In 2024, Operational EBITA decreased 39 percent (38 percent excluding the impact from changes in foreign currency exchange rates) compared to 2023, primarily due to the reasons described under “Income from operations”, excluding the explanations related to the reconciling items in the table above.

CORPORATE AND OTHER

Net loss from operations for Corporate and Other was as follows:

($ in millions)	2024	2023	2022
Corporate headquarters and stewardship	(413)	(557)	(430)
Fair value adjustment on equity securities	(80)	(2)	(4)
Loss from equity-accounted companies	(7)	(6)	(101)
Other corporate costs	(4)	(18)	(25)
Regulatory penalty in connection with Kusile project	—	—	(313)
Net gain from sale of businesses(1)	—	—	43
Corporate brand income from Hitachi Energy	17	39	57
Corporate real estate	55	103	66
E-mobility Division	(445)	(234)	19
Divested businesses and other non-core activities	29	(37)	(117)
Total Corporate and Other	**(848)**	**(712)**	**(805)**

(1) 2022 includes gain on sale of the remaining 19.9 percent investment in Hitachi Energy Ltd.

In 2024, the net loss from operations within Corporate and Other increased by $136 million to $848 million compared to 2023. The increase is primarily driven by an increase in the net loss from operations in the E-mobility Division as well as a fair value adjustment of an equity investment, partially offset by a decrease in Corporate headquarters and stewardship costs.

Corporate

In 2024, Corporate headquarters and stewardship costs decreased by $144 million compared to 2023, mainly due to a reduction in estimated self-insurance reserves in 2024.

Corporate brand income results from granting the use of the ABB Brand to Hitachi Energy, the fair value of which was initially determined on the date of the divestment of the former Power Grids business in 2020. A portion of the proceeds received for the sale was allocated to the fair value of the granting of the use of the brand and is being amortized over the expected period of benefit received by Hitachi Energy.

Corporate real estate primarily includes income and expenses from property rentals and gains from the sale of real estate properties. In 2024, income from operations in corporate real estate included gains from the sale of real estate properties of approximately $55 million compared to $103 million in 2023.

Other corporate costs consists of operational costs of Corporate Treasury and other minor items.

Other - E-mobility

In 2024, the E-mobility Division reported a net loss from operations of $445 million compared to a net loss from operations of $234 million in 2023. The increase is driven by a fair value adjustment on assets held for sale of $88 million related to InCharge Energy, Inc. and combined charges in connection with excess and obsolete components of inventory of $55 million. Additionally, the net loss from operations was further impacted by a significant decrease in revenues of 30 percent (30 percent in local currencies) compared to 2023, primarily driven by a decline in volumes, also resulting in the under absorption of fixed costs and further deterioration of the Division’s gross margin. Despite the decrease in volumes, Selling, general and administrative and Non-order related research and development costs increased, each impacted by a higher cost of labor and the ongoing reorganization to ensure a more focused portfolio.

Other - Divested businesses and other non-core activities

The results of operations for certain divested businesses and other non-core activities are presented in Corporate and Other. Divested businesses include the high-voltage cables business, steel structures business and the oil & gas EPC business. Other continuing non-core activities include the execution and wind-down of certain legacy EPC and other contracts.

In 2024 and 2023, the amounts represent charges and losses relating to divested businesses and the winding down of the remaining EPC projects. We recorded profit of $29 million in 2024, improved from 2023, in which we recorded losses of $37 million, primarily due to the reversal of a provision related to one of our divested businesses based on the favorable resolution of a legal claim.

At December 31, 2024, our remaining non-core activities primarily include the completion of the remaining EPC contracts for substations and oil & gas.

LIQUIDITY AND CAPITAL RESOURCES

PRINCIPAL SOURCES OF FUNDING

We meet our liquidity needs principally using cash from operations, proceeds from the issuance of debt instruments (bonds and commercial paper), and short-term bank borrowings.

Our net debt is shown in the table below:

December 31, ($ in millions)	2024	2023
Short-term debt and current maturities of long-term debt	293	2,607
Long-term debt	6,652	5,221
Cash and equivalents	(4,311)	(3,891)
Restricted cash - current	(15)	(18)
Marketable securities and short-term investments	(1,334)	(1,928)
Net debt (defined as the sum of the above lines)	**1,285**	**1,991**

During 2024, although we continued to return high amounts of cash to shareholders in the form of dividends and purchases of treasury stock, we reduced our net debt (as presented in the table above) driven by continued strong cash from operating activities.

During 2024, our net debt decreased $706 million to a net debt position of $1,285 million at December 31, 2024. The effect of exchange rate movements decreased net debt by approximately $200 million. In 2024, we generated cash flows from operating activities of $4,675 million and delivered treasury stock in relation to our employee share plans for $451 million. These items were mostly offset by amounts for purchases of treasury shares of $1,247 million, including $998 million relating to the announced buybacks of our shares, as well as $1,769 million for the payment of the dividend to our shareholders. We made net purchases of property, plant and equipment and intangible assets of $738 million and made payments of dividends to noncontrolling shareholders totaling $103 million. See “Financial position”, “Investing activities” and “Financing activities” for further details.

Our Corporate Treasury is responsible for providing a range of treasury management services to our Group companies, including investing cash in excess of current business requirements. At December 31, 2024 and 2023, the proportion of our aggregate Cash and equivalents (including Restricted cash) and Marketable securities and short-term investments managed by Corporate Treasury amounted to approximately 62 percent and 59 percent, respectively.

Our investment strategy for cash (in excess of current business requirements) has generally been to invest in short-term time deposits with maturities of less than 3 months, supplemented at times by investments in money market funds and in some cases, government securities. We actively monitor credit risk in our investment and derivative portfolios. Credit risk exposures are controlled in accordance with policies approved by our senior management to identify, measure, monitor and control credit risks. We have minimum rating requirements for our counterparts and closely monitor developments in the credit markets making appropriate changes to our investment policy as deemed necessary. In addition to minimum rating criteria, we have strict investment parameters and specific approved instruments as well as restrictions on the types of investments we make. These parameters are closely monitored on an ongoing basis and amended as we consider necessary.

Our cash is held in various currencies around the world. Approximately 55 percent of our cash and equivalents held at December 31, 2024, was in U.S. dollars, while the most significant foreign currency in which cash and equivalents was held was euros (25 percent).

We believe the ongoing cash flows generated from our business, supplemented, when necessary, through access to the capital markets (including short-term commercial paper) and our credit facilities are sufficient to support business operations, capital expenditures, business acquisitions, the payment of dividends to shareholders and contributions to pension plans. Consequently, we believe that our ability to obtain funding from these sources will continue to provide the cash flows necessary to satisfy our working capital and capital expenditure requirements, as well as meet our debt repayments and other financial commitments for the next 12 months. See “Contractual obligations and commitments”.

Due to the nature of our operations, including the timing of annual incentive payments to employees, our cash flow from operations generally tends to be weaker in the first half of the year than in the second half of the year.

DEBT AND INTEREST RATES

Total outstanding debt was as follows:

December 31, ($ in millions)	**2024**	**2023**
Short-term debt and current maturities of long-term debt	293	2,607
Long-term debt:		
Bonds	5,939	5,051
EIB R&D Loan	539	—
Other long-term debt	174	170
Total debt	**6,945**	**7,828**

In 2024, we repaid bonds having a book value at the end of 2023 of $2,476 million. As the amount of bonds due in 2025 is lower at $166 million, this has significantly reduced the amount of short-term debt.

At December 31, 2024, Long-term debt was $1,431 million higher compared to the end of 2023. We issued two new instruments in 2024 which remain classified as Long-term debt at December 31, 2024 (EUR 500 million of 3.125% Instruments due 2029 and EUR 750 million of 3.375% Instruments due 2034). This was only partially offset by the reclassification to current of the CHF 150 million 2.1% Instruments due 2025. Decreases in interest rates also resulted in an increase in our long-term debt of approximately $41 million due to the application of fair value hedge accounting on certain outstanding instruments. We also borrowed the full amount available under our financing arrangement with the European Investment Bank obtaining a 7-year floating-rate term loan of USD 539 million due 2031.

Our debt has been obtained in a range of currencies and maturities and with various interest rate terms. For certain of our debt obligations, we use derivatives to manage the fixed interest rate exposure. For example, we use interest rate swaps and cross-currency interest rate swaps to effectively convert fixed rate debt into floating rate liabilities. After considering the effects of interest rate swaps and cross-currency interest rate swaps, at December 31, 2024, the effective average interest rate on our floating rate long-term debt (including current maturities) of $1,807 million and our fixed rate long-term debt (including current maturities) of $5,055 million was 5.0 percent and 2.8 percent, respectively. This compares with an effective rate of 4.8 percent for floating rate long-term debt of $2,907 million and 2.7 percent for fixed rate long-term debt of $4,834 million at December 31, 2023.

For a discussion of our use of derivatives to modify the interest characteristics of certain of our individual bond issuances, see “Note 13 - Debt” to our Consolidated Financial Statements.

CREDIT FACILITY

In December 2019, we replaced our previous multicurrency revolving credit facility with a new $2 billion multicurrency revolving credit facility, maturing in 2024. In 2021, we exercised our option to extend the maturity of this facility to December 2026. No amount was drawn under the facility at December 31, 2024 and 2023. The facility is available for general corporate purposes and contains cross-default clauses whereby an event of default would occur if we were to default on indebtedness, as defined in the facility, at or above a specified threshold. In February 2023, we amended and restated our facility for the purpose of addressing the discontinuation of LIBOR. Under the amended and restated credit facility, the margin is unchanged, but advances in USD are referenced to CME Term SOFR, whilst advances in CHF and GBP are referenced to overnight SARON and SONIA, respectively, and subject to applicable credit adjustment spreads.

The credit facility does not contain financial covenants that would restrict our ability to pay dividends or raise additional funds in the capital markets. For further details of the credit facility, see “Note 13 - Debt” to our Consolidated Financial Statements.

COMMERCIAL PAPER

At December 31, 2024, we had two commercial paper programs in place:

- a $2 billion commercial paper program for the private placement of U.S. dollar denominated commercial paper in the United States, and
- a $2 billion Euro-commercial paper program for the issuance of commercial paper in a variety of currencies.

At December 31, 2024 and 2023, there were no amounts outstanding under either of these two programs.

EUROPEAN PROGRAM FOR THE ISSUANCE OF DEBT

The European program for the issuance of debt allows the issuance of up to the equivalent of $8 billion in certain debt instruments. The terms of the program do not obligate any third party to extend credit to us and the terms and possibility of issuing any debt under the program are determined with respect to, and as of the date of issuance of, each debt instrument. At December 31, 2024, five bonds (principal amount of EUR 500 million due in 2027, principal amount of EUR 500 million due in 2029, principal amount of EUR 800 million due in 2030, principal amount of EUR 750 million due in 2031, and principal amount of EUR 750 million due in 2034) having a combined carrying amount of $3,318 million were outstanding under the program. The carrying amount of the six bonds outstanding under the program at December 31, 2023, was $4,259 million.

CREDIT RATINGS

Credit ratings are assessments by the rating agencies of the credit risk associated with ABB and are based on information provided by us or other sources that the rating agencies consider reliable. Higher ratings generally result in lower borrowing costs and increased access to capital markets. Our ratings are of ‘investment grade’ which is defined as Baa3 (or above) from Moody’s and BBB− (or above) from Standard & Poor’s.

At December 31, 2024, our long-term debt was rated A2 by Moody’s (with a Stable outlook), compared to A3 at December 31, 2023. At December 31, 2024 our long-term debt was rated A by Standard & Poor’s (with a Stable outlook), compared to A- at December 31, 2023.

LIMITATIONS ON TRANSFERS OF FUNDS

Currency and other local regulatory limitations related to the transfer of funds exist in a number of countries where we operate or otherwise have bank deposits, including: Argentina, Egypt, India, Indonesia, Malaysia, the Russian Federation, South Africa, South Korea, Thailand, Turkiye and Vietnam. Funds, other than regular dividends, fees or loan repayments, cannot be readily transferred offshore from these countries and are therefore deposited and used for working capital needs in those countries. In addition, there are certain countries where, for tax reasons, it is not considered optimal to transfer the cash offshore. Consequently, these funds are not available within Corporate Treasury to meet short-term cash obligations outside the relevant country. The above-described funds are reported as cash in our Consolidated Balance Sheets, but we do not consider these funds immediately available for the repayment of debt outside the respective countries where the cash is situated, including those described above. At December 31, 2024 and 2023, the balance of Cash and equivalents and Marketable securities and other short-term investments under such limitations (either regulatory or sub-optimal from a tax perspective) totaled $1,578 million and $1,479 million, respectively.

During 2024, we continued to direct our subsidiaries in countries with restrictions to place such cash with our core banks or investment grade banks, where possible, in order to minimize credit risk on such cash positions. We continue to closely monitor the situation to ensure bank counterparty risks are minimized.

FINANCIAL POSITION

BALANCE SHEETS

December 31, ($ in millions)	2024	2023	% Change
Current assets			
Cash and equivalents	4,311	3,891	11%
Restricted cash	15	18	(17)%
Marketable securities and short-term investments	1,334	1,928	(31)%
Receivables, net	7,388	7,446	(1)%
Contract assets	1,115	1,090	2%
Inventories, net	5,859	6,149	(5)%
Prepaid expenses	287	235	22%
Other current assets	541	520	4%
Total current assets	**20,850**	**21,277**	**(2)%**

For a discussion on Cash and equivalents, see sections “Liquidity and Capital Resources—Principal sources of funding” and “Cash flows” for further details.

Marketable securities and short-term investments decreased in 2024. The change primarily reflects lower amounts placed in money market funds classified as equity securities (see “Note 5 - Cash and equivalents, marketable securities and short-term investments” to our Consolidated Financial Statements).

Receivables decreased 1 percent (increased 5 percent in local currencies). In local currencies, the increase in Receivables primarily reflects higher revenues (primarily due to higher business volumes) at the end of 2024 compared to 2023.

Contract assets increased 2 percent (9 percent in local currencies), primarily due to the higher level of business activity as well as timing of invoices issued. In local currencies, the increase reflects higher levels in all Business areas.

Inventories decreased 5 percent primarily due to movements in foreign currencies. In local currencies, Inventories increased 1 percent, reflecting higher business activity and increased inventory levels in order to fulfill the higher order backlog at the end of 2024 compared to 2023, primarily in the Electrification Business area.

December 31, ($ in millions)	2024	2023	% Change
Current liabilities			
Accounts payable, trade	5,036	4,847	4%
Contract liabilities	2,969	2,844	4%
Short-term debt and current maturities of long-term debt	293	2,607	(89)%
Current operating leases	235	249	(6)%
Provisions for warranties	1,248	1,210	3%
Other provisions	853	1,201	(29)%
Other current liabilities	4,582	5,046	(9)%
Total current liabilities	**15,216**	**18,004**	**(15)%**

Accounts payable, trade, increased 4 percent (10 percent in local currencies) reflecting some increase in average days payable in 2024 compared to 2023, as well as both the increase and timing of inventory purchases late in the year. The increase is driven by the Electrification Business area.

Contract liabilities increased 4 percent (11 percent in local currency) primarily due to higher levels of business activity, including progress billings and advances at the end of 2024 compared to 2023. The increase reflects higher levels in all Business areas except Robotics & Discrete Automation.

The decrease in short-term debt and current maturities of long-term debt in 2024 reflects the reclassification to current of the CHF 150 million 2.1% Bonds due 2025, being more than offset by the repayment at maturity of the EUR 700 million 0.625% Instruments due 2024, EUR 500 million Floating Rate Instruments due 2024, EUR 750 million 0.75% Instruments due 2024 and the CHF 280 million 0.3% Bonds due 2024, in 2024.

Current operating leases includes the portion of the operating lease liabilities that are due to be paid in the next 12 months. For a summary of operating lease liabilities, see “Note 16 - Leases” to our Consolidated Financial Statements.

Provisions for warranties increased 3 percent (9 percent in local currencies). The increase primarily reflects the higher provisioning in 2024 on increased revenues. For details on the change in the Provisions for warranties, see “Note 15 - Commitments and contingencies” to our Consolidated Financial Statements.

For a breakdown of Other provisions and Other current liabilities, see “Note 13 - Other provisions, other current liabilities and other non-current liabilities” to our Consolidated Financial Statements.

December 31, ($ in millions)	2024	2023	% Change
Non-current assets			
Property, plant and equipment, net	4,177	4,142	1%
Operating lease right-of-use assets	840	893	(6)%
Investments in equity-accounted companies	368	187	97%
Prepaid pension and other employee benefits	689	780	(12)%
Intangible assets, net	1,048	1,223	(14)%
Goodwill	10,555	10,561	0%
Deferred taxes	1,341	1,381	(3)%
Other non-current assets	489	496	(1)%
Total non-current assets	**19,507**	**19,663**	**(1)%**

Property, plant and equipment increased 1 percent (6 percent in local currencies) as capital expenditures exceeded the annual depreciation expense.

For details on Investments in equity method companies see “Note 4 - Acquisitions, divestments and equity-accounted companies” to our Consolidated Financial Statements.

Prepaid pension and other employee benefits decreased 12 percent (5 percent in local currencies). For additional information on Pension and employee benefits see “Note 18 - Employee benefits” to our Consolidated Financial Statements.

Intangible assets decreased 14 percent (11 percent in local currencies). The decrease primarily represents the amortization recorded during the year, partially offset by the net impact of acquisitions and divestments, which increased Intangible assets by 6 percent.

Goodwill remained flat (increased 2 percent in local currencies) due to the net impact of acquisitions and divestments during the year. For additional information on goodwill and intangible assets see “Note 11 - Goodwill and intangible assets” to our Consolidated Financial Statements.

For details on deferred tax assets see “Note 17 - Income taxes” to our Consolidated Financial Statements.

December 31, ($ in millions)	2024	2023	% Change
Non-current liabilities			
Long-term debt	6,652	5,221	27%
Non-current operating leases	631	666	(5)%
Pension and other employee benefits	569	686	(17)%
Deferred taxes	675	669	1%
Other non-current liabilities	1,554	1,548	0%
Total non-current liabilities	**10,081**	**8,790**	**15%**

Long-term debt increased 27 percent (31 percent in local currencies). The balance at December 31, 2024, includes instruments newly issued in 2024: (i) EUR 500 million of 3.125% Instruments due 2029, and (ii) EUR 750 million of 3.375% Instruments due 2034, as well as the receipt of a USD 539 million Floating rate EIB R&D loan due 2031, pursuant to a financing agreement entered into in 2023 with the European Investment Bank (EIB). The increase was partially offset by the reclassification to current of the CHF 150 million 2.1% Bonds due 2025. For additional information on Long-term debt, see "Liquidity and Capital Resources—Debt and interest rates" as well as "Note 13 - Debt" to our Consolidated Financial Statements.

Non-current operating leases includes the portion of the operating lease liabilities that are due to be paid in more than 12 months.

Pension and employee benefits decreased 17 percent (12 percent in local currencies). For additional information on Pension and employee benefits see "Note 18 - Employee benefits" to our Consolidated Financial Statements.

For a breakdown of Other non-current liabilities, see "Note 14 - Other provisions, other current liabilities and other non-current liabilities" to our Consolidated Financial Statements.

CASH FLOWS

Effective January 1, 2024, we changed the presentation of discontinued operations in the statements of cash flows to an alternate allowable presentation. As a result, the total cash flows for operating, investing and financing activities from discontinued operations are no longer shown separately but instead all cash flows in discontinued operations are presented within each line item as appropriate in the Consolidated Statements of Cash Flows. All prior periods presented have been reclassified to conform to the current period presentation. The most significant impact was that cash outflows of $23 million and $226 million in 2023 and 2022, respectively, related to the repayments of proceeds from the sale of our former Power Grids business are included within Proceeds from sales of businesses in the Consolidated Statements of Cash Flows.

The Consolidated Statements of Cash Flows can be summarized as follows:

($ in millions)	**2024**	2023	2022
Net cash provided by operating activities	4,675	4,290	1,287
Net cash provided by (used in) investing activities	(725)	(1,615)	981
Net cash used in financing activities	(3,326)	(2,897)	(2,394)
Effects of exchange rate changes on cash and equivalents and restricted cash	(207)	(43)	(189)
Net change in cash and equivalents and restricted cash	**417**	**(265)**	**(315)**

Operating activities

($ in millions)	**2024**	2023	2022
Net income	3,952	3,824	2,594
Depreciation and amortization	802	780	814
Total adjustments to reconcile net income to net cash provided by operating activities (excluding depreciation and amortization)	64	(201)	(423)
Total changes in operating assets and liabilities	(143)	(113)	(1,698)
Net cash provided by operating activities	**4,675**	**4,290**	**1,287**

Cash flows from operating activities in 2024 provided net cash of $4,675 million, an increase of 9 percent compared to 2023. In 2024, we had higher cash effective net income (i.e. net income from continuing operations adjusted for depreciation, amortization and other non-cash items) reflecting the continued increase in revenue volumes and operating margins. However, the timing of payments of accrued liabilities and provisions negatively impacted our improvement in operating cash flows.

Our cash flows in 2024 also improved on continued strong working capital management with improvements in both cash collections from customers and an improvement from trade payables; thus, in 2024, we reduced our overall working capital even while realizing higher business volumes.

Investing activities

($ in millions)	2024	2023	2022
Purchases of investments	(1,563)	(1,957)	(321)
Purchases of property, plant and equipment and intangible assets	(845)	(770)	(762)
Acquisition of businesses (net of cash acquired) and increases in cost- and equity-accounted companies	(622)	(225)	(288)
Proceeds from sales of investments	2,170	610	697
Proceeds from maturity of investments	—	149	73
Proceeds from sales of property, plant and equipment	107	147	127
Proceeds from sales of businesses (net of transaction costs and cash disposed) and cost- and equity-accounted companies	(43)	530	1,315
Net cash from settlement of foreign currency derivatives	87	(109)	(166)
Changes in loans receivable, net	(13)	3	320
Other investing activities	(3)	7	(14)
Net cash provided by (used in) investing activities	**(725)**	**(1,615)**	**981**

Net cash used in investing activities in 2024 was $725 million compared to $1,615 million in 2023, a reduction of $890 million. We significantly reduced the amount invested in marketable securities and other short-term investments over the year while we had increased the amount in the previous year. In the current year, we also had higher Net cash from settlement of foreign currency derivatives compared to 2023. This was offset by changes in cash related to business acquisitions and divestments. In 2024, we increased our cash allocated to acquisitions and did not generate cash from divestments, while, in 2023, we generated cash from divestments, primarily from the sale of our Power Conversion Division.

The following presents purchases of property, plant and equipment and intangible assets by significant asset category:

($ in millions)	2024	2023	2022
Construction in progress	609	532	540
Purchase of machinery and equipment	155	176	127
Purchase of land and buildings	28	11	26
Purchase of intangible assets	53	51	69
Purchases of property, plant and equipment and intangible assets	**845**	**770**	**762**

Financing activities

($ in millions)	2024	2023	2022
Net changes in debt with original maturities of 90 days or less	(15)	(1,365)	1,366
Increase in debt	1,914	2,586	3,849
Repayment of debt	(2,488)	(1,567)	(2,703)
Delivery of shares	451	154	394
Purchase of treasury stock	(1,247)	(1,258)	(3,553)
Dividends paid	(1,769)	(1,713)	(1,698)
Cash associated with the spin-off of the Turbocharging Division	—	—	(172)
Dividends paid to noncontrolling shareholders	(103)	(93)	(99)
Proceeds from issuance of subsidiary shares	—	328	216
Other financing activities	(69)	31	6
Net cash used in financing activities	**(3,326)**	**(2,897)**	**(2,394)**

Our financing cash flow activities primarily include debt transactions (both the issuance of debt securities and borrowings directly from banks), share transactions (including share transactions in consolidated subsidiaries) and payments of distributions to controlling and noncontrolling shareholders.

In 2024, the net outflow for debt with maturities of 90 days or less related to various local country borrowings.

In 2024, “Increase in debt” primarily represents borrowings under the following long-term debt transactions (total cashflow amount at date of borrowings of approximately $1,899 million):

- EUR 500 million of 3.125% Instruments due 2029
- EUR 750 million of 3.375% Instruments due 2034
- USD 539 million floating-rate term loan due 2031

In 2024, “Repayment of debt” includes primarily the repayment at maturity of the EUR 500 million Floating Rate Instruments, EUR 700 million 0.625% Instruments, EUR 750 million 0.75% Instruments and CHF 280 million 0.3% Bonds.

“Delivery of shares” in 2024 primarily reflects cash received from the exercise of options in connection with our Management Incentive Plan (resulting in a delivery of 17 million shares). All shares were delivered out of Treasury stock.

In 2024, “Purchase of treasury stock” reflects $998 million of cash payments to purchase 19 million of our own shares in connection with the announced share buyback programs. It also reflects $248 million paid to purchase 5 million shares on the open market during the year.

CONTRACTUAL OBLIGATIONS AND COMMITMENTS

The contractual obligations presented in the table below represent our estimates of future payments under fixed contractual obligations and commitments. These amounts may differ from those reported in our Consolidated Balance Sheet at December 31, 2024. Changes in our business needs, cancellation provisions and changes in interest rates, as well as actions by third parties and other factors, may cause these estimates to change. Therefore, our actual payments in future periods may vary from those presented below. The table below summarizes certain of our cash requirements for known contractual obligations and principal and interest payments under our debt instruments and purchase obligations at December 31, 2024, and the timing thereof. For details of future operating and finance lease payments, see “Note 14 - Leases” to our Consolidated Financial Statements.

At December 31, 2024 ($ in millions)	**Current**	**Non-current**	**Total**
Long-term debt obligations	183	6,623	**6,806**
Interest payments related to long-term debt obligations	227	1,379	**1,606**
Purchase obligations	3,082	816	**3,898**
Total	**3,492**	**8,818**	**12,310**

In the table above, the “Long-term debt obligations” reflect the cash amounts to be repaid upon maturity of those debt obligations. The cash obligations above will differ from Long-term debt due to the impacts of fair value hedge accounting adjustments and premiums or discounts on certain debt.

We have determined the interest payments related to long-term debt obligations by reference to the payments due under the terms of our debt obligations at the time such obligations were incurred. However, we use interest rate swaps to modify the interest characteristics of certain of our debt obligations. The net effect of these swaps may increase or decrease the actual amount of our cash interest payment obligations, which may differ from those stated in the above table. For further details on our debt obligations and the related hedges, see “Note 13 - Debt” to our Consolidated Financial Statements.

Purchase obligations are defined as agreements to purchase goods and services that are enforceable and legally binding and that specify all significant terms, including the quantities to be purchased, price provisions and the approximate timing of the transactions. Purchase obligations include procurement contracts for raw materials, sub-contracted work, supplies and services. Purchase obligations include amounts recorded as well as amounts that are not recorded in the Consolidated Balance Sheet.

OFF-BALANCE SHEET ARRANGEMENTS

Commercial commitments

We disclose the maximum potential exposure of certain guarantees, as well as possible recourse provisions that may allow us to recover from third parties amounts paid out under such guarantees. The maximum potential exposure does not allow any discounting of our assessment of actual exposure under the guarantees. The information below reflects our maximum potential exposure under the guarantees, which is higher than our assessment of the expected exposure.

Guarantees

The following table provides quantitative data regarding our third-party guarantees. The maximum potential payments represent a worst-case scenario and do not reflect our expected outcomes.

	Maximum potential payments	
December 31, ($ in millions)	**2024**	**2023**
Performance guarantees	2,299	3,451
Financial guarantees	22	94
Total	**2,321**	**3,545**

The carrying amount of liabilities recorded in the Consolidated Balance Sheets reflects our best estimate of future payments, which we may incur as part of fulfilling our guarantee obligations. In respect of the above guarantees, the carrying amounts of liabilities at December 31, 2024 and 2023, were not significant.

In addition, in the normal course of bidding for and executing certain projects, we have entered into standby letters of credit, bid/performance bonds and surety bonds (collectively “performance bonds”) with various financial institutions. Customers can draw on such performance bonds in the event that we do not fulfill our contractual obligations. We would then have an obligation to reimburse the financial institution for amounts paid under the performance bonds. At December 31, 2024 and 2023, the total outstanding performance bonds aggregated to $3.2 billion and $3.1 billion, respectively. There have been no significant amounts reimbursed to financial institutions under these types of arrangements in 2024 and 2023.

For additional descriptions of our performance, financial and indemnification guarantees see “Note 15 - Commitments and contingencies” to our Consolidated Financial Statements.

FINANCIAL RISK

The continuously evolving financial markets and the dynamic business environment expose us to changes in foreign exchange, interest rate and other market price risks. We have developed and implemented comprehensive policies, procedures, and controls to identify, mitigate, and monitor financial risk on a company-wide basis. To efficiently aggregate and manage financial risks that could impact our financial performance, we operate a Corporate Treasury function. Corporate Treasury provides an efficient source of liquidity, financing, risk management and other global financial services to the ABB Group companies. Our policies do not allow Corporate Treasury or ABB Group companies to perform speculative trading. Market risk management activities are focused on mitigating material financial risks resulting from our global operating and financing activities.

Corporate Treasury maintains risk management control systems to monitor foreign exchange and interest rate risks and exposures arising from our underlying business, as well as the associated hedge positions. Our written policies govern how such exposures are managed. Financial risks are monitored using a number of analytical techniques including market value and sensitivity analysis. The following quantitative analyses are based on sensitivity analysis tests, which assume parallel shifts of interest rate yield curves and foreign exchange rates.

Currency fluctuations and foreign exchange risk

It is our policy to systematically identify and manage all transactional foreign exchange exposures to ensure effective risk control. With the exception of certain financing subsidiaries and to the extent certain operating subsidiaries are domiciled in high inflation environments, the functional currency of each of our companies is considered to be its local currency. Our policies require our subsidiaries to hedge contracted foreign exchange exposures, or a portion of their forecast exposures, against their local currency. These transactions are undertaken mainly with Corporate Treasury.

We have foreign exchange transaction exposures related to our global operating and financing activities in currencies other than the functional currency in which our entities operate. Specifically, we are exposed to foreign exchange risk related to future earnings, assets or liabilities denominated in foreign currencies. The most significant currency exposures relate to operations in the Eurozone area, Sweden, China and Switzerland. In addition, we are exposed to currency risk associated with translating our functional currency financial statements into our reporting currency, which is the U.S. dollar.

Our operating companies are responsible for identifying their foreign currency exposures and entering into intercompany derivative contracts with Corporate Treasury, where legally possible, to hedge their exposures. Where local laws restrict our operating companies from entering into intercompany derivatives with Corporate Treasury, derivative contracts are entered into locally with third-party financial institutions. The intercompany transactions have the effect of transferring the operating companies' currency risk to Corporate Treasury, but create no additional market risks on a consolidated basis. Corporate Treasury then manages this risk by entering into offsetting transactions with third-party financial institutions. According to our policy, material net currency exposures are required to be hedged and are primarily hedged with forward foreign exchange contracts. The majority of the foreign exchange hedge instruments have, on average, a maturity of less than twelve months. Corporate Treasury also hedges currency risks arising from monetary intercompany balances.

At December 31, 2024, the net fair value of financial instruments with exposure to foreign currency rate movements was an asset of $311 million. The potential loss in fair value of such financial instruments from a hypothetical 10 percent move in foreign exchange rates against our position would be approximately $603 million for December 31, 2024. The analysis reflects the aggregate adverse foreign exchange impact associated with transaction exposures, as well as translation exposures where appropriate. Our sensitivity analysis assumes a simultaneous shift in exchange rates against our positions exposed to foreign exchange risk and as such assumes an unlikely adverse case scenario. The assumption of a simultaneous shift may overstate the impact of changing rates on assets and liabilities denominated in foreign currencies. The underlying trade-related transaction exposures of our operating subsidiaries are not included in the quantitative analysis. If these underlying transaction exposures were included, they would tend to have a directionally offsetting effect on the potential loss in fair value detailed above.

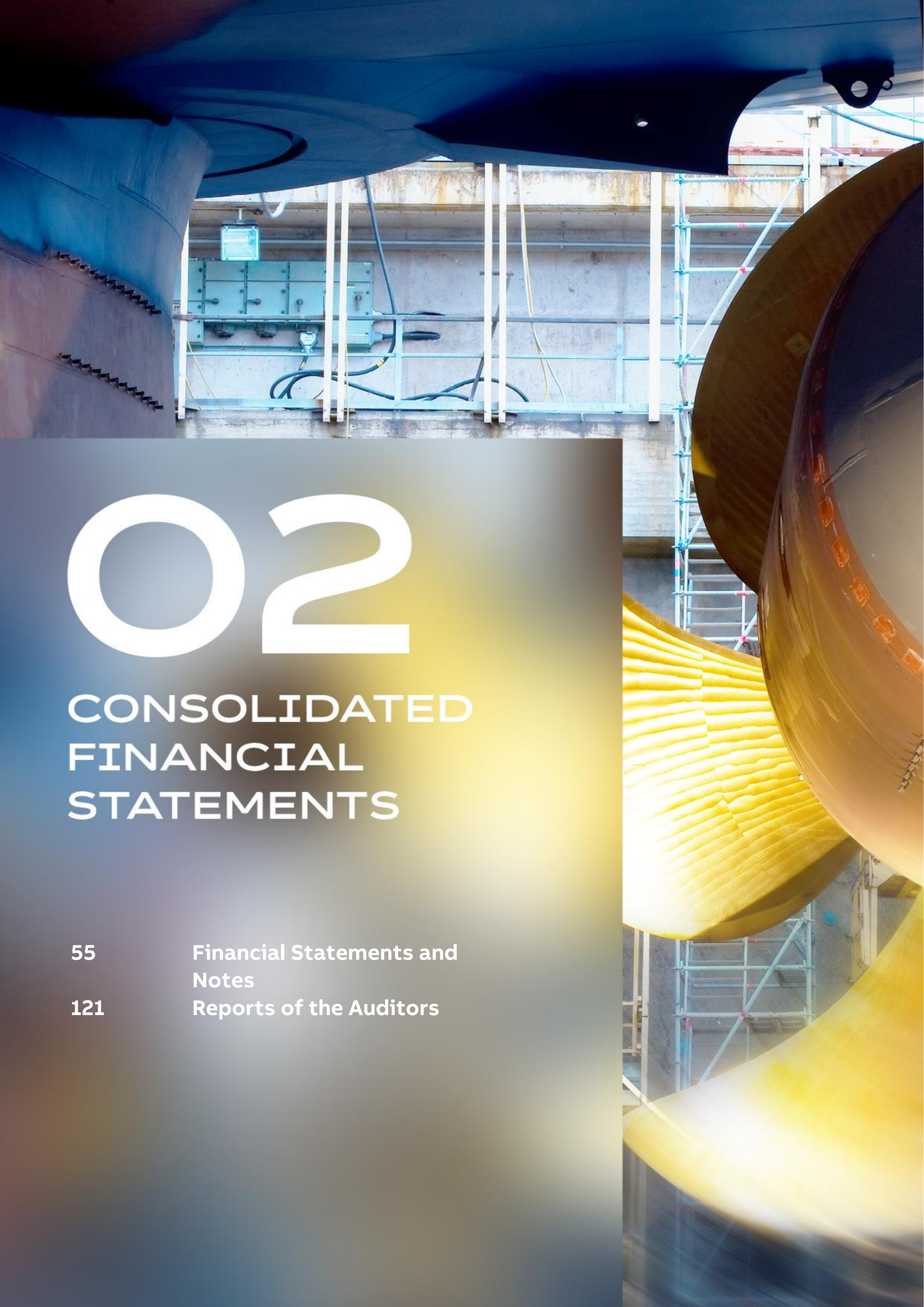
Interest rate risk

We are exposed to interest rate risk due to our financing, investing, and liquidity management activities. Our operating companies primarily invest excess cash with, and receive funding from, Corporate Treasury on an arm's length basis. It is our policy that the primary third-party funding and investing activities, as well as the monitoring and management of the resulting interest rate risk, are the responsibility of Corporate Treasury. Corporate Treasury adjusts the duration of the overall funding portfolio through derivative instruments in order to better match underlying assets and liabilities, as well as minimize the cost of capital.

At December 31, 2024, the net fair value of instruments subject to interest rate risk was a liability of $2,313 million. The potential loss in fair value for such instruments from a hypothetical 100 basis points parallel shift in interest rates against our position (or a multiple of 100 basis points where 100 basis points is less than 10 percent of the interest rate) would be approximately $368 million for December 31, 2024.

Commodity risk

We enter into commodity derivatives to hedge certain of our raw material exposures. Based on exposures at December 31, 2024, the potential loss in fair value for such commodity hedging derivatives from a hypothetical adverse 10 percent move against our position in the underlying commodity prices would not be significant for December 31, 2024. A portion of our commodity derivatives are denominated in euro. The foreign exchange risk arising on such contracts has been excluded from the calculation of the potential loss in fair value from a hypothetical 10 percent move in the underlying commodity prices as discussed above.



02

CONSOLIDATED FINANCIAL STATEMENTS

ABB LTD CONSOLIDATED INCOME STATEMENTS

Year ended December 31 ($ in millions, except per share data in $)	2024	2023	2022
Sales of products	27,217	27,010	24,471
Sales of services and other	5,633	5,225	4,975
Total revenues	**32,850**	**32,235**	**29,446**
Cost of sales of products	(17,347)	(17,938)	(16,804)
Cost of services and other	(3,229)	(3,083)	(2,932)
Total cost of sales	**(20,576)**	**(21,021)**	**(19,736)**
Gross profit	**12,274**	**11,214**	**9,710**
Selling, general and administrative expenses	(5,708)	(5,543)	(5,132)
Non-order related research and development expenses	(1,469)	(1,317)	(1,166)
Other income (expense), net	(26)	517	(75)
Income from operations	**5,071**	**4,871**	**3,337**
Interest and dividend income	206	165	72
Interest and other finance expense	(99)	(275)	(130)
Non-operational pension (cost) credit	55	17	115
Income from continuing operations before taxes	**5,233**	**4,778**	**3,394**
Income tax expense	(1,278)	(930)	(757)
Income from continuing operations, net of tax	**3,955**	**3,848**	**2,637**
Loss from discontinued operations, net of tax	(3)	(24)	(43)
Net income	**3,952**	**3,824**	**2,594**
Net income attributable to noncontrolling interests and redeemable noncontrolling interests	(17)	(79)	(119)
Net income attributable to ABB	**3,935**	**3,745**	**2,475**
Amounts attributable to ABB shareholders:			
Income from continuing operations, net of tax	3,937	3,769	2,517
Loss from discontinued operations, net of tax	(2)	(24)	(42)
Net income	3,935	3,745	2,475
Basic earnings per share attributable to ABB shareholders:			
Income from continuing operations, net of tax	2.14	2.03	1.33
Loss from discontinued operations, net of tax	—	(0.01)	(0.02)
Net income	2.13	2.02	1.30
Diluted earnings per share attributable to ABB shareholders:			
Income from continuing operations, net of tax	2.13	2.02	1.32
Loss from discontinued operations, net of tax	—	(0.01)	(0.02)
Net income	2.13	2.01	1.30
Weighted-average number of shares outstanding (in millions) used to compute:			
Basic earnings per share attributable to ABB shareholders	1,844	1,855	1,899
Diluted earnings per share attributable to ABB shareholders	1,851	1,867	1,910

Due to rounding, numbers presented may not add to the totals provided.

See accompanying Notes to the Consolidated Financial Statements

ABB LTD CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

Year ended December 31 ($ in millions)	2024	2023	2022
Net income	**3,952**	**3,824**	**2,594**
Other comprehensive income (loss), net of tax:			
Foreign currency translation adjustments:			
Foreign currency translation adjustments	(319)	(290)	(685)
Net loss on complete or substantially complete liquidations of foreign subsidiaries	14	—	5
Changes attributable to divestments	9	9	41
Foreign currency translation adjustments	**(296)**	**(281)**	**(639)**
Available-for-sale securities:			
Net unrealized gains (losses) arising during the year	1	5	(23)
Reclassification adjustments for net losses included in net income	4	6	2
Unrealized gains (losses) on available-for-sale securities	**5**	**11**	**(21)**
Pension and other postretirement plans:			
Prior service (costs) credits arising during the year	(10)	(1)	—
Net actuarial gains (losses) arising during the year	(37)	(282)	226
Amortization of prior service credit included in net income	(10)	(9)	(16)
Amortization of net actuarial loss included in net income	47	38	44
Net (gains) losses from settlements and curtailments included in net income	(6)	14	9
Changes attributable to divestments	—	3	(8)
Pension and other postretirement plan adjustments	**(16)**	**(237)**	**255**
Derivative instruments and hedges:			
Net unrealized losses arising during the year	(8)	(10)	(12)
Reclassification adjustments for net losses included in net income	10	8	12
Changes in derivative instruments and hedges	**2**	**(2)**	**—**
Total other comprehensive income (loss), net of tax	**(305)**	**(509)**	**(405)**
Total comprehensive income, net of tax	**3,647**	**3,315**	**2,189**
Total comprehensive (income) loss attributable to noncontrolling interests and redeemable noncontrolling interests, net of tax	8	(84)	(87)
Total comprehensive income attributable to ABB, net of tax	**3,655**	**3,231**	**2,102**

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See accompanying Notes to the Consolidated Financial Statements

ABB LTD CONSOLIDATED BALANCE SHEETS

December 31 ($ in millions, except share data)	2024	2023
Cash and equivalents	4,311	3,891
Restricted cash	15	18
Marketable securities and short-term investments	1,334	1,928
Receivables, net	7,388	7,446
Contract assets	1,115	1,090
Inventories, net	5,859	6,149
Prepaid expenses	287	235
Other current assets	541	520
Total current assets	**20,850**	**21,277**
Property, plant and equipment, net	4,177	4,142
Operating lease right-of-use assets	840	893
Investments in equity-accounted companies	368	187
Prepaid pension and other employee benefits	689	780
Intangible assets, net	1,048	1,223
Goodwill	10,555	10,561
Deferred taxes	1,341	1,381
Other non-current assets	489	496
Total assets	**40,357**	**40,940**
Accounts payable, trade	5,036	4,847
Contract liabilities	2,969	2,844
Short-term debt and current maturities of long-term debt	293	2,607
Current operating leases	235	249
Provisions for warranties	1,248	1,210
Other provisions	853	1,201
Other current liabilities	4,582	5,046
Total current liabilities	**15,216**	**18,004**
Long-term debt	6,652	5,221
Non-current operating leases	631	666
Pension and other employee benefits	569	686
Deferred taxes	675	669
Other non-current liabilities	1,554	1,548
Total liabilities	**25,297**	**26,794**
Commitments and contingencies		
Redeemable noncontrolling interest	—	89
Stockholders' equity:		
Common stock, CHF 0.12 par value (1,861 million and 1,882 million shares issued at December 31, 2024 and 2023, respectively)	162	163
Additional paid-in capital	50	7
Retained earnings	20,717	19,724
Accumulated other comprehensive loss	(5,350)	(5,070)
Treasury stock, at cost (22 million and 40 million shares at December 31, 2024 and 2023, respectively)	(1,091)	(1,414)
Total ABB stockholders' equity	**14,488**	**13,410**
Noncontrolling interests	572	647
Total stockholders' equity	**15,060**	**14,057**
Total liabilities and stockholders' equity	**40,357**	**40,940**

Due to rounding, numbers presented may not add to the totals provided.
See accompanying Notes to the Consolidated Financial Statements

ABB LTD CONSOLIDATED STATEMENTS OF CASH FLOWS

Year ended December 31 ($ in millions)	2024	2023	2022
Operating activities:			
Net income	3,952	3,824	2,594
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	802	780	814
Changes in fair values of investments	65	(29)	(33)
Pension and other employee benefits	(92)	(48)	(125)
Deferred taxes	(2)	(28)	(344)
Loss from equity-accounted companies	21	16	102
Net gain from derivatives and foreign exchange	(52)	(54)	(22)
Net gain from sale of property, plant and equipment	(60)	(116)	(84)
Net loss (gain) from sale of businesses	(67)	(100)	17
Fair value adjustment on assets and liabilities held for sale	113	—	—
Other	138	158	66
Changes in operating assets and liabilities:			
Trade receivables, net	(179)	(633)	(811)
Contract assets and liabilities	203	412	419
Inventories, net	(101)	(3)	(1,602)
Accounts payable, trade	189	(129)	369
Accrued liabilities	(8)	252	137
Provisions, net	(29)	212	(67)
Income taxes payable and receivable	(123)	(190)	(95)
Other assets and liabilities, net	(95)	(34)	(48)
Net cash provided by operating activities	**4,675**	**4,290**	**1,287**
Investing activities:			
Purchases of investments	(1,563)	(1,957)	(321)
Purchases of property, plant and equipment and intangible assets	(845)	(770)	(762)
Acquisition of businesses (net of cash acquired) and increases in cost- and equity-accounted	(622)	(225)	(288)
Proceeds from sales of investments	2,170	610	697
Proceeds from maturity of investments	—	149	73
Proceeds from sales of property, plant and equipment	107	147	127
Proceeds from sales of businesses (net of transaction costs and cash disposed) and cost- and equity-accounted companies	(43)	530	1,315
Net cash from settlement of foreign currency derivatives	87	(109)	(166)
Changes in loans receivable, net	(13)	3	320
Other investing activities	(3)	7	(14)
Net cash provided by (used in) investing activities	**(725)**	**(1,615)**	**981**
Financing activities:			
Net changes in debt with original maturities of 90 days or less	(15)	(1,365)	1,366
Increase in debt	1,914	2,586	3,849
Repayment of debt	(2,488)	(1,567)	(2,703)
Delivery of shares	451	154	394
Purchase of treasury stock	(1,247)	(1,258)	(3,553)
Dividends paid	(1,769)	(1,713)	(1,698)
Cash associated with the spin-off of the Turbocharging Division	—	—	(172)
Dividends paid to noncontrolling shareholders	(103)	(93)	(99)
Proceeds from issuance of subsidiary shares	—	328	216
Other financing activities	(69)	31	6
Net cash used in financing activities	**(3,326)**	**(2,897)**	**(2,394)**
Effects of exchange rate changes on cash and equivalents and restricted cash	(207)	(43)	(189)
Net change in cash and equivalents and restricted cash	**417**	**(265)**	**(315)**
Cash and equivalents and restricted cash, beginning of period	3,909	4,174	4,489
Cash and equivalents and restricted cash, end of period	**4,326**	**3,909**	**4,174**
Supplementary disclosure of cash flow information:			
Interest paid	241	250	90
Income taxes paid	1,382	1,147	1,188

Due to rounding, numbers presented may not add to the totals provided.

See accompanying Notes to the Consolidated Financial Statements

ABB LTD CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY

Years ended December 31, 2024, 2023 and 2022 ($ in millions)	Common stock	Additional paid-in capital	Retained earnings	Accumulated other comprehensive loss	Treasury stock	Total ABB stockholders' equity	Non-controlling interests	Total stockholders' equity
Balance at January 1, 2022	**178**	**22**	**22,477**	**(4,088)**	**(3,010)**	**15,579**	**378**	**15,957**
Net income(1)			2,475			**2,475**	124	**2,599**
Foreign currency translation adjustments, net of tax				(608)		**(608)**	(31)	**(639)**
Effect of change in fair value of available-for-sale securities, net of tax				(21)		**(21)**		**(21)**
Unrecognized income (expense) related to pensions and other postretirement plans, net of tax				256		**256**	(1)	**255**
Change in derivative instruments and hedges, net of tax				—		**—**		**—**
Issuance of subsidiary shares		120				**120**	86	**206**
Other changes in noncontrolling interests		10				**10**	(34)	**(24)**
Dividends to noncontrolling shareholders						**—**	(100)	**(100)**
Dividends to shareholders			(1,700)			**(1,700)**		**(1,700)**
Spin-off of the Turbocharging Division			(177)	(95)		**(272)**	(12)	**(284)**
Cancellation of treasury shares	(8)	(4)	(2,864)		2,876	**—**		**—**
Share-based payment arrangements		42				**42**		**42**
Purchase of treasury stock					(3,502)	**(3,502)**		**(3,502)**
Delivery of shares		(51)	(130)		575	**394**		**394**
Other		2				**2**		**2**
Balance at December 31, 2022	**171**	**141**	**20,082**	**(4,556)**	**(3,061)**	**12,777**	**410**	**13,187**
Net income(1)			3,745			**3,745**	83	**3,828**
Foreign currency translation adjustments, net of tax				(286)		**(286)**	5	**(281)**
Effect of change in fair value of available-for-sale securities, net of tax				11		**11**		**11**
Unrecognized income (expense) related to pensions and other postretirement plans, net of tax				(237)		**(237)**		**(237)**
Change in derivative instruments and hedges, net of tax				(2)		**(2)**		**(2)**
Issuance of subsidiary shares		170				**170**	168	**338**
Other changes in noncontrolling interests		(31)	(37)			**(68)**	67	**(1)**
Dividends to noncontrolling shareholders						**—**	(93)	**(93)**
Dividends to shareholders			(1,706)			**(1,706)**		**(1,706)**
Cancellation of treasury shares	(7)	(201)	(2,359)		2,567	**—**		**—**
Share-based payment arrangements		101				**101**	2	**103**
Purchase of treasury stock					(1,247)	**(1,247)**		**(1,247)**
Delivery of shares		(173)			327	**154**		**154**
Other		(2)				**(2)**	5	**3**
Balance at December 31, 2023	**163**	**7**	**19,724**	**(5,070)**	**(1,414)**	**13,410**	**647**	**14,057**
Net income(1)			3,935			**3,935**	19	**3,954**
Foreign currency translation adjustments, net of tax				(271)		**(271)**	(25)	**(296)**
Effect of change in fair value of available-for-sale securities, net of tax				5		**5**		**5**
Unrecognized income (expense) related to pensions and other postretirement plans, net of tax				(16)		**(16)**		**(16)**
Change in derivative instruments and hedges, net of tax				2		**2**		**2**
Changes in noncontrolling interests		(10)	(62)			**(72)**	30	**(42)**
Dividends to noncontrolling shareholders						**—**	(104)	**(104)**
Dividends to shareholders			(1,804)			**(1,804)**		**(1,804)**
Cancellation of treasury shares	(2)	(2)	(828)		832	**—**		**—**
Share-based payment arrangements		97				**97**	5	**102**
Purchase of treasury stock					(1,251)	**(1,251)**		**(1,251)**
Delivery of shares		(40)	(249)		740	**451**		**451**
Other		(1)				**(1)**		**(1)**
Balance at December 31, 2024	**162**	**50**	**20,717**	**(5,350)**	**(1,091)**	**14,488**	**572**	**15,060**

(1) Amounts attributable to noncontrolling interests in 2024, 2023 and 2022 exclude net losses of $2 million, $4 million and $5 million, respectively, related to redeemable noncontrolling interests, which are reported in the mezzanine equity section on the Consolidated Balance Sheets. See Note 4 for details.

Due to rounding, numbers presented may not add to the totals provided.

See accompanying Notes to the Consolidated Financial Statements

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

Note 1
The Company

ABB Ltd and its subsidiaries (collectively, the Company) together form a global technology leader in electrification and automation, enabling a more sustainable and resource-efficient future. By connecting its engineering and digitalization expertise, ABB helps industries run at high performance, while becoming more efficient, productive and sustainable so they outperform.

Note 2
Significant accounting policies

The following is a summary of significant accounting policies followed in the preparation of these Consolidated Financial Statements.

Basis of presentation

The Consolidated Financial Statements are prepared in accordance with United States of America (United States or U.S.) generally accepted accounting principles (U.S. GAAP) and are presented in United States dollars ($ or USD) unless otherwise stated. Due to rounding, numbers presented may not add to the totals provided. The par value of capital stock is denominated in Swiss francs.

Reclassifications and presentation changes

Certain amounts reported for prior years in the Consolidated Financial Statements and the accompanying Notes have been reclassified to conform to the current year's presentation.

Effective January 1, 2024, the Company changed the presentation of discontinued operations in its statement of cash flows to an alternate allowable presentation. As a result, the total cash flows for operating, investing and financing activities from discontinued operations are no longer shown separately but instead all cash flows in discontinued operations are presented within each line item as appropriate in the statement of cash flows. All prior periods presented have been reclassified to conform to the current period presentation primarily resulting in a decrease of $23 million and $226 million in Proceeds from sales of businesses (net of transaction costs and cash disposed) and cost- and equity-accounted companies for 2023 and 2022, respectively.

Scope of consolidation

The Consolidated Financial Statements include the accounts of ABB Ltd and companies which are directly or indirectly controlled by ABB Ltd. Additionally, the Company consolidates variable interest entities if it has determined that it is the primary beneficiary. Intercompany accounts and transactions are eliminated. Investments in joint ventures and affiliated companies in which the Company has the ability to exercise significant influence over operating and financial policies (generally through direct or indirect ownership of 20 percent to 50 percent of the voting rights and/or board of director representation) are recorded in the Consolidated Financial Statements using the equity method of accounting.

Translation of foreign currencies and foreign exchange transactions

The functional currency for most of the Company's subsidiaries is the applicable local currency. The translation from the applicable functional currencies into the Company's reporting currency is performed for balance sheet accounts using exchange rates in effect at the balance sheet date and for income statement accounts using average exchange rates prevailing during the year. The resulting translation adjustments are excluded from the determination of earnings and are recognized in Accumulated other comprehensive loss until the subsidiary is sold, substantially liquidated or evaluated for impairment in anticipation of disposal.

Foreign currency exchange gains and losses, such as those resulting from foreign currency denominated receivables or payables, are included in the determination of earnings, except as they relate to intercompany loans that are equity-like in nature with no reasonable expectation of repayment, which are recognized in Accumulated other comprehensive loss. Exchange gains and losses are recognized in earnings and classified in the line item consistent with the underlying transaction or item.

Operating cycle

For classification of certain current assets and liabilities, the Company has elected to use the duration of individual contracts as its operating cycle. Accordingly, there are contract assets and liabilities, accounts receivable, inventories and provisions related to these contracts which will not be realized within one year that have been classified as current. Long-term system integration activities comprise the majority of the Company's activities which have an operating cycle in excess of one year that have been classified as current.

Use of estimates

The preparation of financial statements in conformity with U.S. GAAP requires management to make assumptions and estimates that directly affect the amounts reported in the Consolidated Financial Statements and the accompanying Notes. These accounting assumptions and estimates include:

- estimates to determine valuation allowances for deferred tax assets and amounts recorded for unrecognized tax benefits,
- estimates related to credit losses expected to occur over the remaining life of financial assets such as trade and other receivables, loans and other instruments,
- estimates of loss contingencies associated with litigation or threatened litigation and other claims and inquiries, environmental damages, product warranties, self-insurance reserves, regulatory and other proceedings,
- assumptions and projections, principally related to future material, labor and project-related overhead costs, used in determining the percentage-of-completion on projects where revenue is recognized over time, as well as the amount of variable consideration the Company expects to be entitled to,
- assumptions used in the calculation of pension and postretirement benefits and the fair value of pension plan assets,
- estimates used to record expected costs for employee severance in connection with restructuring programs,
- assumptions used in determining inventory obsolescence and net realizable value,
- growth rates, discount rates and other assumptions used to determine impairment of long-lived assets and in testing goodwill for impairment,
- estimates and assumptions used in determining the fair values of assets and liabilities assumed in business combinations, and
- estimates and assumptions used in determining the initial fair value of retained noncontrolling interests and certain obligations in connection with divestments.

The actual results and outcomes may differ from the Company's estimates and assumptions.

Cash and equivalents

Cash and equivalents include highly liquid investments with maturities of three months or less at the date of acquisition.

Currency and other local regulatory limitations related to the transfer of funds exist in a number of countries where the Company operates. Funds, other than regular dividends, fees or loan repayments, cannot be readily transferred abroad from these countries and are therefore deposited and used for working capital needs locally. These funds are included in cash and equivalents as they are not considered restricted.

Cash and equivalents that are subject to contractual restrictions or other legal obligations and are not readily available are classified as Restricted cash.

Marketable securities and short-term investments

Management determines the appropriate classification of held-to-maturity and available-for-sale debt securities at the time of purchase. Debt securities are classified as held-to-maturity when the Company has the positive intent and ability to hold the securities to maturity. Held-to-maturity debt securities are carried at amortized cost, adjusted for accretion of discounts or amortization of premiums to maturity computed under the effective interest method. Such accretion or amortization is included in Interest and dividend income. Marketable debt securities not classified as held-to-maturity are classified as available-for-sale and reported at fair value.

Unrealized gains and losses on available-for-sale debt securities are excluded from the determination of earnings and are instead recognized in the Accumulated other comprehensive loss component of stockholders' equity, net of tax, until realized. Realized gains and losses on available-for-sale debt securities are computed based upon the historical cost of these securities, using the specific identification method.

Marketable debt securities are classified as either Cash and equivalents or Marketable securities and short-term investments according to their maturity at the time of acquisition.

Marketable equity securities are generally classified as Marketable securities and short-term investments, however, any marketable securities held as a long-term investment rather than as an investment of excess liquidity are classified as Other non-current assets. Marketable equity securities are measured at fair value with fair value changes reported in net income. Fair value changes for marketable equity securities are generally reported in Interest and other finance expense, however, fair value changes for certain marketable equity securities classified as long-term investments are reported in Other income (expense).

For debt securities classified as available-for-sale where fair value has declined below amortized cost due to credit losses, the Company records an allowance for expected credit losses and adjusts the allowance in subsequent periods in Interest and other finance expense. All fair value changes other than those related to credit risk are reported in Accumulated other comprehensive loss until the security is sold.

In addition, equity securities without readily determinable fair values are remeasured if there is an observable price change in an orderly transaction for the same investment, or if a qualitative assessment indicates that the investment is impaired and the fair value of the investment is less than its carrying amount. Similar to other fair value changes as described above, depending on the nature of the investment, this fair value change is either recorded in Other income (expense) or Interest and other finance expense.

Accounts receivable and allowance for expected credit losses

Accounts receivable are recorded at the invoiced amount. The Company has a group-wide policy on the management of credit risk. The policy includes a credit assessment methodology to assess the creditworthiness of customers and assign to those customers a risk category. Third-party agencies' ratings are considered, if available. For customers where agency ratings are not available, the customer's most recent financial statements, payment history and other relevant information are considered in the assignment to a risk category. Customers are assessed at least annually or more frequently when information on significant changes in the customer's financial position becomes known. In addition to the assignment to a risk category, a credit limit per customer is set.

The Company recognizes an allowance for credit losses to present the net amount of receivables expected to be collected at the balance sheet date. The allowance is based on the credit losses expected to arise over the asset's contractual term taking into account historical loss experience, customer-specific data as well as forward looking estimates. The Company's accounts receivable are first grouped by the individual legal entity which generally has a geographic concentration of receivables, resulting in different risk levels for different entities. Receivables are then further subdivided within the entity into pools based on similar risk characteristics to estimate expected credit losses. Expected credit losses are estimated individually when the related assets do not share similar risk characteristics.

Accounts receivable are written off when deemed uncollectible and are recognized as a deduction from the allowance for credit losses. Expected recoveries, which are not to exceed the amount previously written off, are considered in determining the allowance balance at the balance sheet date.

The Company, in its normal course of business, transfers receivables to third parties, generally without recourse. The transfer is accounted for as a sale when the Company has surrendered control over the receivables. Control is deemed to have been surrendered when (i) the transferred receivables have been put presumptively beyond the reach of the Company and its creditors, even in bankruptcy or other receivership, (ii) the third-party transferees have the right to pledge or exchange the transferred receivables, and (iii) the Company has relinquished effective control over the transferred receivables and does not retain the ability or obligation to repurchase or redeem the transferred receivables. At the time of sale, the sold receivables are removed from the Consolidated Balance Sheets and the related cash inflows are classified as operating activities in the Consolidated Statements of Cash Flows. Transfers of receivables that do not meet the requirements for treatment as sales are accounted for as secured borrowings and the related cash flows are classified as financing activities in the Consolidated Statements of Cash Flows.

Concentrations of credit risk

The Company sells a broad range of products, systems, services and software to a wide range of industrial, commercial and utility customers as well as various government agencies and quasi-governmental agencies throughout the world. Concentrations of credit risk with respect to accounts receivable are limited, as the Company's customer base is comprised of a large number of individual customers. Ongoing credit evaluations of customers' financial positions are performed to determine whether the use of credit support instruments such as guarantees, letters of credit or credit insurance are necessary; collateral is not generally required. The Company maintains an allowance for credit losses as discussed above in "Accounts receivable and allowance for expected credit losses". Such losses, in the aggregate, are in line with the Company's expectations.

It is the Company's policy to invest cash in deposits with banks throughout the world with certain minimum credit ratings and in high-quality, low-risk, liquid investments. The Company actively manages its credit risk by routinely reviewing the creditworthiness of the banks and the investments held. The Company has not incurred significant credit losses related to such investments.

The Company's exposure to credit risk on derivative financial instruments is the risk that the counterparty will fail to meet its obligations. To reduce this risk, the Company has credit policies that require the establishment and periodic review of credit limits for individual counterparties. In addition, the Company has entered into close-out netting agreements with most derivative counterparties. Close-out netting agreements provide for the termination, valuation and net settlement of some or all outstanding transactions between two counterparties on the occurrence of one or more pre-defined trigger events. Derivative instruments are presented on a gross basis in the Consolidated Financial Statements.

Revenue recognition

A customer contract exists if collectability under the contract is considered probable, the contract has commercial substance, contains payment terms, as well as the rights and commitments of both parties, and has been approved.

The Company offers arrangements with multiple performance obligations to meet its customers’ needs. These arrangements may involve the delivery of multiple products and/or performance of services (such as installation and training) and the delivery and/or performance may occur at different points in time or over different periods of time. Goods and services under such arrangements are evaluated to determine whether they form distinct performance obligations and should be accounted for as separate revenue transactions. The Company allocates the sales price to each distinct performance obligation based on the price of each item sold in separate transactions at the inception of the arrangement.

The Company generally recognizes revenues for the sale of non-customized products including circuit breakers, modular substation packages, control products, motors, generators, drives, robots, measurement and analytical instrumentation, and other goods which are manufactured on a standardized basis at a point in time. Revenues are recognized at the point in time that the customer obtains control of the goods, which is when it has taken title to the products and assumed the risks and rewards of ownership of the products specified in the purchase order or sales agreement. Generally, the transfer of title and risks and rewards of ownership are governed by the contractually defined shipping terms. The Company uses various International Commercial Terms (as promulgated by the International Chamber of Commerce) in its sales of products to third-party customers, such as Ex Works (EXW), Free Carrier (FCA) and Delivered Duty Paid (DDP).

Billing terms for these point in time contracts vary but generally coincide with delivery to the customer. Payment is generally due upon receipt of the invoice, payable within 90 days or less.

The Company generally recognizes revenues for the sale of customized products, including integrated automation and electrification systems and solutions, on an over time basis using the percentage-of-completion method of accounting. These systems are generally accounted for as a single performance obligation as the Company is required to integrate equipment and services into one deliverable for the customer. Revenues are recognized as the systems are customized during the manufacturing or integration process and as control is transferred to the customer as evidenced by the Company’s right to payment for work performed or by the customer’s ownership of the work in process. The Company principally uses the cost-to-cost method to measure progress towards completion on contracts. Under this method, progress of contracts is measured by actual costs incurred in relation to the Company’s best estimate of total costs based on the Company’s history of manufacturing or constructing similar assets for customers. Estimated costs are reviewed and updated routinely for contracts in progress to reflect changes in quantity or pricing of the inputs. The cumulative effect of any change in estimate is recorded in the period when the change in estimate is determined. Contract costs include all direct materials, labor and subcontract costs and indirect costs related to contract performance, such as indirect labor, supplies, tools and depreciation costs.

The nature of the Company’s contracts for the sale of customized products gives rise to several types of variable consideration, including claims, unpriced change orders, liquidated damages and penalties. These amounts are estimated based upon the most likely amount of consideration to which the customer or the Company will be entitled. The estimated amounts are included in the sales price to the extent it is probable that a significant reversal of cumulative revenues recognized will not occur when the uncertainty associated with the variable consideration is resolved. All estimates of variable consideration are reassessed periodically. Back charges to suppliers or subcontractors are recognized as a reduction of cost when it is determined that recovery of such cost is probable and the amounts can be reliably estimated.

Billing terms for these over-time contracts vary but are generally based on achieving specified milestones. The differences between the timing of revenues recognized and customer billings result in changes to contract assets and contract liabilities. Payment is generally due upon receipt of the invoice, payable within 90 days or less. Contractual retention amounts billed to customers are generally due upon expiration of the contractual warranty period.

Service revenues reflect revenues earned from the Company's activities in providing services to customers primarily subsequent to the sale and delivery of a product or complete system. Such revenues consist of maintenance type contracts, repair services, equipment upgrades, field service activities that include personnel and accompanying spare parts, training, and installation and commissioning of products as a stand-alone service or as part of a service contract. The Company generally recognizes revenues from service transactions as services are performed or at the point in time that the customer obtains control of the spare parts. For long-term service contracts including monitoring and maintenance services, revenues are recognized on a straight-line basis over the term of the contract consistent with the nature, timing and extent of the services or, if the performance pattern is other than straight line, as the services are provided based on costs incurred relative to total expected costs.

In limited circumstances the Company sells extended warranties that extend the warranty coverage beyond the standard coverage offered on specific products. Revenues for these warranties are recorded over the length of the warranty period based on their stand-alone selling price.

Billing terms for service contracts vary but are generally based on the occurrence of a service event. Payment is generally due upon receipt of the invoice, payable within 90 days or less.

Revenues are reported net of customer rebates, early settlement discounts, and similar incentives. Rebates are estimated based on sales terms, historical experience and trend analysis. The most common incentives relate to amounts paid or credited to customers for achieving defined volume levels.

Taxes assessed by a governmental authority that are directly imposed on revenue-producing transactions between the Company and its customers, such as sales, use, value added and some excise taxes, are excluded from revenues.

The Company does not adjust the contract price for the effects of a financing component if the Company expects, at contract inception, that the time between control transfer and cash receipt is less than 12 months.

Sales commissions are expensed immediately when the amortization period for the costs to obtain the contract is less than a year.

Contract loss provisions

Losses on contracts are recognized in the period when they are identified and are based upon the anticipated excess of contract costs over the related contract revenues.

Shipping and handling costs

Shipping and handling costs are recorded as a component of cost of sales.

Inventories

Inventories are stated at the lower of cost or net realizable value. Cost is determined using the first-in, first-out method, the weighted-average cost method, or the specific identification method. Inventoried costs are stated at acquisition cost or actual production cost, including direct material and labor and applicable manufacturing overheads. Adjustments to reduce the cost of inventory to its net realizable value are made, if required, for decreases in sales prices, obsolescence or similar reductions in value.

Impairment of long-lived assets

Long-lived assets that are held and used are evaluated for impairment for each of the Company's asset groups when events or circumstances indicate that the carrying amount of the long-lived asset or asset group may not be recoverable. If the asset group's net carrying value exceeds the asset group's net undiscounted cash flows expected to be generated over its remaining useful life including net proceeds expected from disposition of the asset group, if any, the carrying amount of the asset group is reduced to its estimated fair value. The estimated fair value is determined using a market, income and/or cost approach.

Property, plant and equipment

Property, plant and equipment is stated at cost, less accumulated depreciation and is depreciated using the straight-line method. The estimated useful lives of the assets are generally as follows:

- factories and office buildings: 30 to 40 years,
- other facilities: 15 years,
- machinery and equipment: 3 to 15 years,
- furniture and office equipment: 3 to 8 years, and
- leasehold improvements are depreciated over their estimated useful life or, for operating leases, over the lease term, if shorter.

Goodwill and intangible assets

Goodwill is reviewed for impairment annually as of October 1, or more frequently if events or circumstances indicate that the carrying value may not be recoverable.

Goodwill is evaluated for impairment at the reporting unit level. A reporting unit is an operating segment or one level below an operating segment. For the annual impairment reviews performed in 2024, the reporting units were determined to be one level below the operating segments.

When evaluating goodwill for impairment, the Company uses either a qualitative or quantitative assessment method for each reporting unit. The qualitative assessment involves determining, based on an evaluation of qualitative factors, if it is more likely than not that the fair value of a reporting unit is less than its carrying value. If, based on this qualitative assessment, it is determined to be more likely than not that the reporting unit's fair value is less than its carrying value, a quantitative impairment test is performed, otherwise no further analysis is required. If the Company elects not to perform the qualitative assessment for a reporting unit, then a quantitative impairment test is performed.

When performing a quantitative impairment test, the Company generally calculates the fair value of a reporting unit using an income approach based on the present value of future cash flows, applying a discount rate that represents the reporting unit's weighted-average cost of capital, and compares it to the reporting unit's carrying value. If the carrying value of the net assets of a reporting unit exceeds the fair value of the reporting unit then the Company records an impairment charge equal to the difference, provided that the loss recognized does not exceed the total amount of goodwill allocated to that reporting unit.

The cost of acquired intangible assets with a finite life is amortized using a method of amortization that reflects the pattern of intangible assets' expected contributions to future cash flows. If that pattern cannot be reliably determined, the straight-line method is used. The amortization periods range from 3 to 5 years for software and from 5 to 20 years for customer-, technology- and marketing-related intangibles. Intangible assets with a finite life are tested for impairment upon the occurrence of certain triggering events.

Derivative financial instruments and hedging activities

The Company uses derivative financial instruments to manage currency, commodity, interest rate and equity exposures, arising from its global operating, financing and investing activities (see Note 6).

The Company recognizes all derivatives, other than certain derivatives indexed to the Company's own stock, at fair value in the Consolidated Balance Sheets. Derivatives that are not designated as hedging instruments are reported at fair value with derivative gains and losses reported through earnings and classified consistent with the nature of the underlying transaction.

If the derivatives are designated as a hedge, depending on the nature of the hedge, changes in the fair value of the derivatives will either be offset against the change in fair value of the hedged item attributable to the risk being hedged through earnings (in the case of a fair value hedge) or recognized in Accumulated other comprehensive loss until the hedged item is recognized in earnings (in the case of a cash flow hedge). Where derivative financial instruments have been designated as cash flow hedges of forecasted transactions and such forecasted transactions are no longer probable of occurring, hedge accounting is discontinued and any derivative gain or loss previously included in Accumulated other comprehensive loss is reclassified into earnings consistent with the nature of the original forecasted transaction. Gains or losses from derivatives designated as hedging instruments in a fair value hedge are reported through earnings and classified consistent with the nature of the underlying hedged transaction.

Certain commercial contracts may grant rights to the Company or the counterparties, or contain other provisions that are considered to be derivatives. Such embedded derivatives are assessed at inception of the contract and depending on their characteristics, accounted for as separate derivative instruments and shown at their fair value in the Consolidated Balance Sheets with changes in their fair value reported in earnings consistent with the nature of the commercial contract to which they relate.

Derivatives are classified in the Consolidated Statements of Cash Flows in the same section as the underlying item. Cash flows from the settlement of undesignated derivatives used to manage the risks of different underlying items on a net basis are classified within Net cash provided by operating activities, as the underlying items are primarily operational in nature. Other cash flows on the settlement of derivatives are recorded within Net cash provided by (used in) investing activities.

Leases

The Company leases primarily real estate, vehicles, machinery and equipment.

The Company evaluates if a contract contains a lease at inception of the contract. A contract is or contains a lease if it conveys the right to control the use of identified property, plant, or equipment (an identified asset) for a period of time in exchange for consideration. To determine this, the Company assesses whether, throughout the period of use, it has both the right to obtain substantially all of the economic benefits from the use of the identified asset and the right to direct the use of the identified asset. Leases are classified as either finance or operating, with the classification determining the pattern of expense recognition in the Consolidated Income Statements. Lease expense for operating leases is recorded on a straight-line basis over the lease term. Lease expense for finance leases is separated between amortization of right-of-use assets and lease interest expense.

In many cases, the Company’s leases include one or more options to renew, with renewal terms that can extend up to 5 years. The exercise of lease renewal options is at the Company’s discretion. Renewal periods are included in the expected lease term if they are reasonably certain of being exercised by the Company. Certain leases also include options to purchase the leased property. None of the Company’s lease agreements contain material residual value guarantees or material restrictions or covenants.

Long-term leases (leases with terms greater than 12 months) are recorded in the Consolidated Balance Sheets at the commencement date of the lease based on the present value of the minimum lease payments. The present value of the lease payments is determined by using the interest rate implicit in the lease if available. As most of the Company’s leases do not provide an implicit rate, the Company’s incremental borrowing rate is used for most leases and is determined for portfolios of leases based on the remaining lease term, currency of the lease, and the internal credit rating of the subsidiary which entered into the lease.

Short-term leases (leases with an initial lease term of 12 months or less and where it is reasonably certain that the identified asset will not be leased for a term greater than 12 months) are not recorded in the Consolidated Balance Sheets and are expensed on a straight-line basis over the lease term. The majority of short-term leases relate to real estate and machinery.

Assets under operating lease are included in Operating lease right-of-use assets. Operating lease liabilities are reported both as current and non-current operating lease liabilities. Right-of-use assets represent the Company’s right to use an underlying asset for the lease term and lease liabilities represent its obligation to make lease payments arising from the lease.

Assets under finance lease are included in Property, plant and equipment while finance lease liabilities are included in Long-term debt (including Current maturities of long-term debt as applicable).

Lease and non-lease components for leases other than real estate are not accounted for separately.

Income taxes

The Company uses the asset and liability method to account for deferred taxes. Under this method, deferred tax assets and liabilities are determined based on temporary differences between the financial reporting and the tax bases of assets and liabilities. Deferred tax assets and liabilities are measured using enacted tax rates and laws that are expected to be in effect when the differences are expected to reverse. The Company records a deferred tax asset when it determines that it is more likely than not that the deduction will be sustained based upon the deduction's technical merit. Deferred tax assets and liabilities that can be offset against each other are reported on a net basis. A valuation allowance is recorded to reduce deferred tax assets to the amount that is more likely than not to be realized.

Deferred taxes are provided on unredeemed retained earnings of the Company's subsidiaries. However, deferred taxes are not provided on such unredeemed retained earnings to the extent it is expected that the earnings are permanently reinvested. Such earnings may become taxable upon the sale or liquidation of these subsidiaries or upon the remittance of dividends.

The Company operates in numerous tax jurisdictions and, as a result, is regularly subject to audit by tax authorities. The Company provides for tax contingencies whenever it is deemed more likely than not that a tax asset has been impaired or a tax liability has been incurred. Contingency provisions are recorded based on the technical merits of the Company's filing position, considering the applicable tax laws and Organisation for Economic Co-operation and Development (OECD) guidelines and are based on its evaluations of the facts and circumstances as of the end of each reporting period.

The Company applies a two-step approach to recognize and measure uncertainty in income taxes. The first step is to evaluate the tax position for recognition by determining if the weight of available evidence indicates that it is more likely than not that the position will be sustained on audit, including resolution of related appeals or litigation processes, if any. The second step is to measure the tax benefit as the largest amount which is more than 50 percent likely of being realized upon ultimate settlement. Uncertain tax positions that could be settled against existing loss carryforwards or income tax credits are reported net.

Expenses related to tax penalties are classified in the Consolidated Income Statements as Income tax expense while interest thereon is classified as Interest and other finance expense. Current income tax relating to certain items is recognized directly in Accumulated other comprehensive loss and not in earnings. In general, the Company applies the individual items approach when releasing income tax effects from Accumulated other comprehensive loss.

Research and development

Research and development costs not related to specific customer orders are generally expensed as incurred.

Earnings per share

Basic earnings per share is calculated by dividing income by the weighted-average number of shares outstanding during the year. Diluted earnings per share is calculated by dividing income by the weighted-average number of shares outstanding during the year, assuming that all potentially dilutive securities were exercised, if dilutive. Potentially dilutive securities comprise outstanding written call options, outstanding options and shares granted subject to certain conditions under the Company's share-based payment arrangements. See further discussion related to earnings per share in Note 21 and of potentially dilutive securities in Note 19.

Fair value measures

The Company uses fair value measurement principles to record certain financial assets and liabilities on a recurring basis and, when necessary, to record certain non-financial assets at fair value on a non-recurring basis, as well as to determine fair value disclosures for certain financial instruments carried at amortized cost in the financial statements. Financial assets and liabilities recorded at fair value on a recurring basis include foreign currency, commodity and interest rate derivatives, as well as available-for-sale securities. Non-financial assets recorded at fair value on a non-recurring basis include long-lived assets that are reduced to their estimated fair value due to impairments.

Fair value is the price that would be received when selling an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. In determining fair value, the Company uses various valuation techniques including the market approach (using observable market data for identical or similar assets and liabilities), the income approach (discounted cash flow method) and the cost approach (using costs a market participant would incur to develop a comparable asset). Inputs used to determine the fair value of assets and liabilities are defined by a three-level hierarchy, depending on the nature of those inputs. The Company has categorized its financial assets and liabilities and non-financial assets measured at fair value within this hierarchy based on whether the inputs to the valuation technique are observable or unobservable. An observable input is based on market data obtained from independent sources, while an unobservable input reflects the Company's assumptions about market data.

The levels of the fair value hierarchy are as follows:

Level 1: Valuation inputs consist of quoted prices in an active market for identical assets or liabilities (observable quoted prices). Assets and liabilities valued using Level 1 inputs include exchange-traded equity securities, listed derivatives which are actively traded such as commodity futures, interest rate futures and certain actively traded debt securities.

Level 2: Valuation inputs consist of observable inputs (other than Level 1 inputs) such as actively quoted prices for similar assets, quoted prices in inactive markets and inputs other than quoted prices such as interest rate yield curves, credit spreads, or inputs derived from other observable data by interpolation, correlation, regression or other means. The adjustments applied to quoted prices or the inputs used in valuation models may be both observable and unobservable. In these cases, the fair value measurement is classified as Level 2 unless the unobservable portion of the adjustment or the unobservable input to the valuation model is significant, in which case the fair value measurement would be classified as Level 3. Assets and liabilities valued or disclosed using Level 2 inputs include investments in certain funds, certain debt securities that are not actively traded, interest rate swaps, cross-currency interest rate swaps, commodity swaps, forward foreign exchange contracts, foreign exchange swaps and forward rate agreements, time deposits, as well as financing receivables and debt.

Level 3: Valuation inputs are based on the Company's assumptions of relevant market data (unobservable input). Assets valued or disclosed using Level 3 inputs include insurance contracts and certain private equity investments.

Investments in private equity, real estate and collective funds held within the Company's pension plans are generally valued using the net asset value (NAV) per share as a practical expedient for fair value, provided certain criteria are met. The NAVs are determined based on the fair values of the underlying investments in the funds. These assets are not classified in the fair value hierarchy but are separately disclosed.

Whenever quoted prices involve bid-ask spreads, the Company ordinarily determines fair values based on mid-market quotes.

When determining fair values based on quoted prices in an active market, the Company considers if the level of transaction activity for the financial instrument has significantly decreased, or would not be considered orderly. In such cases, the resulting changes in valuation techniques would be disclosed. If the market is considered disorderly or if quoted prices are not available, the Company is required to use another valuation technique, such as an income approach.

Disclosures about the Company's fair value measurements of assets and liabilities are included in Note 7.

Contingencies

The Company is subject to proceedings, litigation or threatened litigation and other claims and inquiries, related to environmental, labor, product, regulatory, tax (other than income tax) and other matters, and is required to assess the likelihood of any adverse judgments or outcomes to these matters, as well as potential ranges of probable losses. A determination of the provision required, if any, for these contingencies is made after analysis of each individual issue, often with assistance from both internal and external legal counsel and technical experts. The required amount of a provision for a contingency of any type may change in the future due to new developments in the particular matter, including changes in the approach to its resolution.

The Company records a provision for its contingent obligations when it is probable that a loss will be incurred and the amount can be reasonably estimated. Any such provision is generally recognized on an undiscounted basis using the Company's best estimate of the amount of loss incurred or at the lower end of an estimated range when a single best estimate is not determinable. In some cases, the Company may be able to recover a portion of the costs relating to these obligations from insurers or other third parties; however, the Company records such amounts only when it is probable that they will be collected.

The Company generally provides for anticipated costs for warranties when it delivers the related products. Warranty costs include calculated costs arising from imperfections in design, material and workmanship in the Company's products. The Company makes individual assessments on contracts with risks resulting from order-specific conditions or guarantees and assessments on an overall, statistical basis for similar products sold in larger quantities.

The Company may have legal obligations to perform environmental clean-up activities related to land and buildings as a result of the normal operations of its business. In some cases, the timing or the method of settlement, or both, are conditional upon a future event that may or may not be within the control of the Company, but the underlying obligation itself is unconditional and certain. The Company recognizes a provision for these obligations when it is probable that a liability for the clean-up activity has been incurred and a reasonable estimate of its fair value can be made. In some cases, a portion of the costs expected to be incurred to settle these matters may be recoverable. An asset is recorded when it is probable that such amounts are recoverable. Provisions for environmental obligations are not discounted to their present value when the timing of payments cannot be reasonably estimated.

Pensions and other postretirement benefits

The Company has a number of defined benefit pension plans, defined contribution pension plans and termination indemnity plans. For plans accounted for as a defined benefit pension plan, the Company recognizes an asset for such a plan's overfunded status or a liability for such a plan's underfunded status in its Consolidated Balance Sheets. Additionally, the Company measures such a plan's assets and obligations that determine its funded status as of the end of the year and recognizes the changes in the funded status in the year in which the changes occur. Those changes are reported in Accumulated other comprehensive loss.

The Company uses actuarial valuations to determine its pension and postretirement benefit costs and credits. The amounts calculated depend on a variety of key assumptions, including discount rates and expected return on plan assets. Current market conditions are considered in selecting these assumptions.

The Company's various pension plan assets are assigned to their respective levels in the fair value hierarchy in accordance with the valuation principles described in the "Fair value measures" section above.

See Note 18 for further discussion of the Company's employee benefit plans.

Business combinations

The Company accounts for assets acquired and liabilities assumed in business combinations using the acquisition method and records these at their respective fair values. Contingent consideration is recorded at fair value as an element of purchase price with subsequent adjustments recognized in income. Acquired contract assets and liabilities are valued and recorded in accordance with the principles for recognizing revenues from contracts with customers as outlined in the section entitled "Revenue recognition" above.

Identifiable intangibles consist of intellectual property such as trademarks and trade names, customer relationships, patented and unpatented technology, in-process research and development, order backlog and capitalized software; these are amortized over their estimated useful lives. Such intangibles are subsequently subject to evaluation for potential impairment if events or circumstances indicate the carrying amount may not be recoverable. See “Goodwill and intangible assets” above. Acquisition-related costs are recognized separately from the acquisition and expensed as incurred. Upon gaining control of an entity in which an equity method or cost basis investment was held by the Company, the carrying value of that investment is adjusted to fair value with the related gain or loss recorded in income.

Deferred tax assets and liabilities based on temporary differences between the financial reporting and the tax base of assets and liabilities, as well as uncertain tax positions and valuation allowances on acquired deferred tax assets assumed in connection with a business combination, are initially estimated as of the acquisition date based on facts and circumstances that existed at the acquisition date. Changes in deferred taxes, uncertain tax positions and valuation allowances on acquired deferred tax assets that occur after the measurement period are recognized in income.

Estimated fair values of acquired assets and liabilities are subject to change within the measurement period (a period of up to 12 months after the acquisition date during which the acquirer may adjust the provisional acquisition amounts) with any adjustments to the preliminary estimates being recorded to goodwill.

New accounting pronouncements

Applicable for current period

Improvements to reportable segment disclosures

In January 2024, the Company adopted an accounting standard update which requires the Company to disclose additional reportable segment information primarily through enhanced disclosures about significant segment expenses and extending certain annual disclosure requirements to a quarterly frequency. The Company applied this update retrospectively for all periods presented in its Consolidated Financial Statements (see Note 24 for details). Other than these additional disclosures, this update did not have a significant impact on the Company’s Consolidated Financial Statements.

Applicable for future periods

Improvements to income tax disclosures

In December 2023, an accounting standard update was issued which requires the Company to disclose additional information related to income taxes. Under the update, the Company is required to annually disclose by jurisdiction (i) additional disaggregated information within the tax rate reconciliation and (ii) income taxes paid. This update is effective for the Company prospectively, with retrospective adoption permitted, for annual periods beginning January 1, 2025. The Company is currently evaluating the impact of adopting this update on its Consolidated Financial Statements.

Disaggregation of Income Statement Expenses

In November 2024, an accounting standard update was issued which requires the Company to disclose additional information for certain types of expenses, including purchases of inventory, employee compensation, depreciation, and amortization, presented in each relevant income statement expense caption (such as cost of sales, selling, general and administrative expenses).This update is effective for the Company prospectively, with retrospective adoption permitted, for annual periods beginning January 1, 2027 and interim periods beginning January 1, 2028. The Company is currently evaluating the impact of adopting this update on its Consolidated Financial Statements.

Note 3
Discontinued operations

In 2020, the Company completed the divestment of its Power Grids business to Hitachi Ltd (Hitachi). As this divestment represented a strategic shift that would have a major effect on the Company's operations and financial results, the results of operations for this business were presented as discontinued operations. Certain of the business contracts in the Power Grids business continue to be executed by subsidiaries of the Company for the benefit/risk of Hitachi Energy Ltd (Hitachi Energy). The remaining business activities of the Power Grids business being executed by the Company are not significant.

Upon closing of the sale, the Company entered into various transition services agreements (TSAs), some of which continue to have services performed. Pursuant to these TSAs, the Company and Hitachi Energy provide to each other, on a transitional basis, various services. The services provided by the Company primarily include finance, information technology, human resources and certain other administrative services. The TSAs were to be performed for up to 3 years with the possibility to agree on extensions on an exceptional basis for business-critical services which are reasonably necessary to avoid a material adverse impact on the business. The TSA for information technology services was extended until mid-2025. In 2024, 2023 and 2022, the Company recognized, within its continuing operations, general and administrative expenses incurred to perform the TSAs, offset by $45 million, $121 million and $162 million, respectively, in TSA-related income for such services that is reported in Other income (expense).

In addition, the Company also has retained obligations (primarily for environmental and taxes) related to other businesses disposed or otherwise exited that qualified as discontinued operations. Changes to these retained obligations are also included in Loss from discontinued operations, net of tax.

Note 4
Acquisitions, divestments and equity-accounted companies

Acquisitions of controlling interests

Acquisitions of controlling interests were as follows:

($ in millions, except number of acquired businesses)	2024	2023	2022
Purchase price for acquisitions (net of cash acquired)(1)	583	175	195
Aggregate excess of purchase price over fair value of net assets acquired(2)	428	142	229
Number of acquired businesses	7	7	5

(1) Excluding changes in cost- and equity-accounted companies.
(2) Recorded as goodwill (see Note 11).

In the table above, the "Purchase price for acquisitions" and "Aggregate excess of purchase price over fair value of net assets acquired" amounts for 2024, relate primarily to the acquisition of the Födisch Group, the SEAM Group and DTN Europe B.V. In 2023, there were no significant acquisitions. Amounts for 2022 primarily relate to InCharge Energy, Inc. (In-Charge).

Acquisitions of controlling interests have been accounted for under the acquisition method and have been included in the Company's Consolidated Financial Statements since the date of acquisition.

On October 1, 2024, the Company acquired all the shares of the Födisch Group. The Födisch Group is a worldwide provider of advanced measurement and analytical solutions for the energy and industrial sectors. The cash outflows to complete the transaction amounted to $287 million (net of cash acquired). This acquisition enhances the Process Automation segment offering in continuous emission monitoring systems (CEMS) and bolsters its competitiveness in technology and innovation in this segment.

On January 26, 2022, the Company increased its ownership in In-Charge to a 60 percent controlling interest through a stock purchase agreement. In-Charge is headquartered in Santa Monica, United States, and is a provider of turn-key commercial electric vehicle charging hardware and software solutions. The resulting cash outflows for the Company amounted to $134 million (net of cash acquired of $4 million). The acquisition expanded the market presence of the E-mobility operating segment, particularly in the North American market. In connection with the acquisition, the Company's pre-existing 13.2 percent ownership of In-Charge was revalued to fair value and a gain of $32 million was recorded in Other income (expense), net in 2022. The Company entered into an agreement with the remaining noncontrolling shareholders allowing either party to put or call the remaining 40 percent of the shares until 2027. The amount for which either party could exercise their option was dependent on a formula based on revenues. As a result of this agreement, the noncontrolling interest was classified as Redeemable noncontrolling interest (i.e. mezzanine equity) in the Consolidated Balance Sheets and was initially recognized at fair value. In November 2024, the Company reduced its ownership below a controlling interest as both parties simultaneously settled their respective option rights (see "Business divestments and spin-offs" below).

While the Company uses its best estimates and assumptions as part of the purchase price allocation process to value assets acquired and liabilities assumed at the acquisition date, the purchase price allocation for acquisitions is preliminary for up to 12 months after the acquisition date and is subject to refinement as more detailed analyses are completed and additional information about the fair values of the acquired assets and liabilities becomes available.

Business divestments and spin-offs

In November 2024, the Company together with the Niedax Group formed Abnex Inc. (Abnex), a new joint venture company. Under the terms of the agreement, the Company contributed its North American cable tray business to Abnex, in return for a 50 percent ownership interest in the new joint venture. The transaction was executed through the sale of its North American cable tray business, for which the Company recorded a gain of $72 million, in Other income (expense), with a separate acquisition at fair value of the 50 percent investment in Abnex, amounting to $124 million and accounted for using the equity method. The results of operations of the North American cable tray business are included in the continuing operations of the Electrification operating segment for all periods presented through to the date of sale.

In September 2024, the Company and the noncontrolling shareholders of In-Charge came to a definitive agreement to terminate their respective put and call options by settling the contracts on a net basis. This agreement, completed in November 2024, resulted in the Company returning a portion of its shares to In-Charge, thereby reducing its direct ownership to approximately 46 percent and thus losing control. This transaction was treated similar to a business divestment and with a separate re-acquisition at fair value of the 46 percent investment (amounting to $69 million) accounted for using the equity method. The Company recorded a loss of $88 million, representing the excess of the carrying value over the estimated fair value of this business, in Other income (expense), in connection with the loss of control. The fair value adjustment on this business was determined using Level 3 inputs and based on a discounted cash flow model considering the expected future results of this business. The loss is based on the net assets of the business at the time of the deemed sale.

In 2023, the Company received proceeds (net of transaction costs and cash disposed) of $530 million, relating to divestments of consolidated businesses and recorded gains of $100 million, in Other income (expense), on the sale of such businesses. These are primarily due to the divestment of the Company's Power Conversion Division to AcBel Polytech Inc., which prior to its sale was part of the Electrification operating segment.

The spin-off of the Company's Turbocharging Division into an independent, publicly traded company, Accelleron Industries AG (Accelleron), was completed through the distribution of common stock of Accelleron to the stockholders of ABB on October 3, 2022. As a result of the spin-off of this Division, the Company distributed net assets of $272 million, net of amounts attributable to noncontrolling interests of $12 million, which was reflected as a reduction in Retained earnings. In addition, total accumulated comprehensive income of $95 million, including the cumulative translation adjustment, was reclassified to Retained earnings. Cash and cash equivalents distributed with Accelleron was $172 million. The results of operations of the Turbocharging Division are included in the continuing operations of the Process Automation operating segment for all periods presented through to the spin-off date. In 2022, Income from continuing operations before taxes included income of $134 million from this Division. In anticipation of the spin-off, the Company granted to a subsidiary of Accelleron access to funds in the form of a short-term intercompany loan. At the spin-off date, this loan, having a principal amount of 300 million Swiss francs ($306 million at the date of spin-off), was due to the Company and subsequently collected in October 2022.

Investments in equity-accounted companies

In connection with the establishment of the Joint Venture with the Niedax Group in November 2024, the Company obtained a 50 percent interest in Abnex, the resulting new joint venture entity. For accounting purposes, the acquisition of the 50 percent interest has a fair value at the transaction date of $124 million. The fair value was based on a discounted cash flow model considering the expected results of the future business operations of Abnex and using relevant market inputs including a risk-adjusted weighted-average cost of capital. As Abnex is jointly owned and controlled by ABB and the Niedax Group, the investment is accounted for using the equity method.

In November 2024, the reduction in the Company's share ownership and simultaneous loss of control of In-Charge resulted in, for accounting purposes, a separate acquisition of a 46 percent interest in this company. The fair value of this investment at the transaction date amounted to $69 million and is accounted for using the equity method.

In connection with the divestment of its Power Grids business to Hitachi in 2020 (see Note 3), the Company initially retained a 19.9 percent interest in the business until December 2022, when the retained investment was sold to Hitachi. During the Company's period of ownership of the retained 19.9 percent interest, based on its continuing involvement with the Power Grids business, including the membership in its governing board of directors, the Company concluded that it had significant influence over Hitachi Energy. As a result, the investment was accounted for using the equity method through to the date of its sale.

In September 2022, the Company and Hitachi agreed terms to sell the Company's remaining investment in Hitachi Energy to Hitachi and simultaneously settle certain outstanding contractual obligations relating to the initial sale of the Power Grids business, including certain indemnification guarantees (see Note 15). The sale of the remaining investment was completed in December 2022, resulting in cash proceeds of $1,552 million and a gain of $43 million which was recorded in Other income (expense).

In 2024, 2023 and 2022, the Company recorded its share of the earnings of investees accounted for under the equity method of accounting in Other income (expense), net, as follows:

($ in millions)	2024	2023	2022
Loss from equity-accounted companies, net of taxes	(21)	(16)	(22)
Basis difference amortization (net of deferred income tax benefit)	—	—	(80)
Loss from equity-accounted companies	**(21)**	**(16)**	**(102)**

Note 5
Cash and equivalents, marketable securities and short-term investments

Cash and equivalents and marketable securities and short-term investments consisted of the following:

December 31, 2024 ($ in millions)	Cost basis	Gross unrealized gains	Gross unrealized losses	Fair value	Cash and equivalents and restricted cash	Marketable securities and short-term investments
Changes in fair value recorded in net income						
Cash	1,328			**1,328**	1,328	
Time deposits	3,518			**3,518**	2,998	520
Equity securities	794	22	(2)	**814**		814
Total	**5,640**	**22**	**(2)**	**5,660**	**4,326**	**1,334**
Of which:						
—Restricted cash, current					15	

December 31, 2023 ($ in millions)	Cost basis	Gross unrealized gains	Gross unrealized losses	Fair value	Cash and equivalents and restricted cash	Marketable securities and short-term investments
Changes in fair value recorded in net income						
Cash	1,449			**1,449**	1,449	
Time deposits	2,923			**2,923**	2,460	463
Equity securities	1,250	32		**1,282**		1,282
	5,622	**32**	**—**	**5,654**	**3,909**	**1,745**
Changes in fair value recorded in other comprehensive income						
Debt securities available-for-sale:						
—U.S. government obligations	189	2	(8)	**183**		183
	189	**2**	**(8)**	**183**	**—**	**183**
Total	**5,811**	**34**	**(8)**	**5,837**	**3,909**	**1,928**
Of which:						
—Restricted cash, current					18	

At December 31, 2024 and 2023, the Company pledged $48 million and $48 million, respectively, of available-for-sale marketable securities as collateral for issued letters of credit and other security arrangements.

Note 6
Derivative financial instruments

The Company is exposed to certain currency, commodity and interest rate risks arising from its global operating, financing and investing activities. The Company uses derivative instruments to reduce and manage the economic impact of these exposures.

Currency risk

Due to the global nature of the Company's operations, many of its subsidiaries are exposed to currency risk in their operating activities from entering into transactions in currencies other than their functional currency. To manage such currency risks, the Company's policies require its subsidiaries to hedge their foreign currency exposures from binding sales and purchase contracts denominated in foreign currencies. For forecasted foreign currency denominated sales of standard products and the related foreign currency denominated purchases, the Company's policy is to hedge up to a maximum of 100 percent of the forecasted foreign currency denominated exposures, depending on the length of the forecasted exposures. Forecasted exposures greater than 12 months are not hedged. Forward foreign exchange contracts are the main instrument used to protect the Company against the volatility of future cash flows (caused by changes in exchange rates) of contracted and forecasted sales and purchases denominated in foreign currencies. In addition, within its treasury operations, the Company primarily uses foreign exchange swaps and forward foreign exchange contracts to manage the currency and timing mismatches arising in its liquidity management activities.

Commodity risk

Various commodity products are used in the Company's manufacturing activities. Consequently, it is exposed to volatility in future cash flows arising from changes in commodity prices. To manage the price risk of commodities, the Company's policies require that its subsidiaries hedge the commodity price risk exposures from binding contracts, as well as at least 50 percent (up to a maximum of 100 percent) of the forecasted commodity exposure over the next 12 months or longer (up to a maximum of 18 months). Primarily swap contracts are used to manage the associated price risks of commodities.

Interest rate risk

The Company has issued bonds at fixed rates. Interest rate swaps and cross-currency interest rate swaps are used to manage the interest rate and foreign currency risk associated with certain debt and generally such swaps are designated as fair value hedges. In addition, from time to time, the Company uses instruments such as interest rate swaps, interest rate futures, bond futures or forward rate agreements to manage interest rate risk arising from the Company's balance sheet structure but does not designate such instruments as hedges.

Volume of derivative activity

In general, while the Company's primary objective in its use of derivatives is to minimize exposures arising from its business, certain derivatives are designated and qualify for hedge accounting treatment while others either are not designated or do not qualify for hedge accounting.

Foreign exchange and interest rate derivatives

The gross notional amounts of outstanding foreign exchange and interest rate derivatives (whether designated as hedges or not) were as follows:

Type of derivative	**Total notional amounts at December 31,**		
($ in millions)	**2024**	**2023**	**2022**
Foreign exchange contracts	12,800	12,335	13,509
Embedded foreign exchange derivatives	1,159	1,137	933
Cross-currency interest rate swaps	833	886	855
Interest rate contracts	1,510	1,606	2,830

Derivative commodity contracts

The Company uses derivatives to hedge its direct or indirect exposure to the movement in the prices of commodities which are primarily copper, silver, steel and aluminum. The following table shows the notional amounts of outstanding derivatives (whether designated as hedges or not), on a net basis, to reflect the Company's requirements for these commodities:

		Total notional amounts at December 31,		
Type of derivative	**Unit**	**2024**	**2023**	**2022**
Copper swaps	metric tonnes	40,699	35,015	29,281
Silver swaps	ounces	2,648,681	2,359,363	2,012,213
Steel swaps	metric tonnes	20,185	10,206	—
Aluminum swaps	metric tonnes	4,525	5,900	6,825

Cash flow hedges

As noted above, the Company mainly uses forward foreign exchange contracts to manage the foreign exchange risk of its operations and commodity swaps to manage its commodity risks. The Company applies cash flow hedge accounting in only limited cases. In these cases, the effective portion of the changes in their fair value is recorded in Accumulated other comprehensive loss and subsequently reclassified into earnings in the same line item and in the same period as the underlying hedged transaction affects earnings. In 2024, 2023 and 2022, there were no significant amounts recorded for cash flow hedge accounting activities.

Fair value hedges

To reduce its interest rate exposure arising primarily from its debt issuance activities, the Company uses interest rate swaps and cross-currency interest rate swaps. Where such instruments are designated as fair value hedges, the changes in the fair value of these instruments, as well as the changes in the fair value of the risk component of the underlying debt being hedged, are recorded as offsetting gains and losses in Interest and other finance expense.

The effect of derivative instruments, designated and qualifying as fair value hedges, on the Consolidated Income Statements was as follows:

($ in millions)		**2024**	**2023**	**2022**
Gains (losses) recognized in Interest and other finance expense:				
Interest rate contracts	Designated as fair value hedges	28	44	(91)
	Hedged item	(29)	(45)	93
Cross-currency interest rate swaps	Designated as fair value hedges	33	30	(134)
	Hedged item	(30)	(40)	135

Derivatives not designated in hedge relationships

Derivative instruments that are not designated as hedges or do not qualify as either cash flow or fair value hedges are economic hedges used for risk management purposes. Gains and losses from changes in the fair values of such derivatives are recognized in the same line in the income statement as the economically hedged transaction.

Furthermore, under certain circumstances, the Company is required to split and account separately for foreign currency derivatives that are embedded within certain binding sales or purchase contracts denominated in a currency other than the functional currency of the subsidiary and the counterparty.

The gains (losses) recognized in the Consolidated Income Statements on derivatives not designated in hedging relationships were as follows:

($ in millions)	Gains (losses) recognized in income			
Type of derivative not designated as a hedge	**Location**	**2024**	**2023**	**2022**
Foreign exchange contracts	Total revenues	(262)	145	(56)
	Total cost of sales	77	(71)	21
	SG&A expenses[1]	35	27	27
	Non-order related research and development	—	(7)	—
	Interest and other finance expense	282	(240)	(128)
Embedded foreign exchange contracts	Total revenues	27	18	(3)
	Total cost of sales	(6)	1	(11)
Commodity contracts	Total cost of sales	14	(3)	(47)
Other	Interest and other finance expense	(1)	1	4
Total		**166**	**(129)**	**(193)**

(1) SG&A expenses represent "Selling, general and administrative expenses".

The fair values of derivatives included in the Consolidated Balance Sheets were as follows:

	Derivative assets		Derivative liabilities	
December 31, 2024 ($ in millions)	**Current in "Other current assets"**	**Non-current in "Other non-current assets"**	**Current in "Other current liabilities"**	**Non-current in "Other non-current liabilities"**
Derivatives designated as hedging instruments:				
Foreign exchange contracts	—	—	1	—
Interest rate contracts	—	7	—	—
Cross-currency interest rate swaps	—	—	—	256
Other	4	—	—	—
Total	**4**	**7**	**1**	**256**
Derivatives not designated as hedging instruments:				
Foreign exchange contracts	151	17	111	15
Commodity contracts	4	—	20	—
Embedded foreign exchange derivatives	22	6	11	5
Other	—	5	—	—
Total	**177**	**28**	**142**	**20**
Total fair value	**181**	**35**	**143**	**276**

December 31, 2023 ($ in millions)	Derivative assets		Derivative liabilities	
	Current in "Other current assets"	Non-current in "Other non-current assets"	Current in "Other current liabilities"	Non-current in "Other non-current liabilities"
Derivatives designated as hedging instruments:				
Foreign exchange contracts	—	—	5	2
Interest rate contracts	—	—	18	—
Cross-currency interest rate swaps	—	—	—	230
Other	10	—	—	—
Total	**10**	**—**	**23**	**232**
Derivatives not designated as hedging instruments:				
Foreign exchange contracts	123	30	177	9
Commodity contracts	8	—	3	—
Interest rate contracts	1	—	1	—
Embedded foreign exchange derivatives	23	5	26	5
Other	4	—	—	—
Total	**159**	**35**	**207**	**14**
Total fair value	**169**	**35**	**230**	**246**

Close-out netting agreements provide for the termination, valuation and net settlement of some or all outstanding transactions between two counterparties on the occurrence of one or more pre-defined trigger events.

Although the Company is party to close-out netting agreements with most derivative counterparties, the fair values in the tables above and in the Consolidated Balance Sheets at December 31, 2024 and 2023, have been presented on a gross basis.

The Company's netting agreements and other similar arrangements allow net settlements under certain conditions. At December 31, 2024 and 2023, information related to these offsetting arrangements was as follows:

December 31, 2024 ($ in millions)					
Type of agreement or similar arrangement	Gross amount of recognized assets	Derivative liabilities eligible for set-off in case of default	Cash collateral received	Non-cash collateral received	Net asset exposure
Derivatives	188	(90)	—	—	**98**
Total	**188**	**(90)**	**—**	**—**	**98**

December 31, 2024 ($ in millions)					
Type of agreement or similar arrangement	Gross amount of recognized liabilities	Derivative liabilities eligible for set-off in case of default	Cash collateral pledged	Non-cash collateral pledged	Net liability exposure
Derivatives	403	(90)	—	—	**313**
Total	**403**	**(90)**	**—**	**—**	**313**

December 31, 2023 ($ in millions)					
Type of agreement or similar arrangement	**Gross amount of recognized assets**	**Derivative liabilities eligible for set-off in case of default**	**Cash collateral received**	**Non-cash collateral received**	**Net asset exposure**
Derivatives	176	(111)	—	—	**65**
Total	**176**	**(111)**	**—**	**—**	**65**

December 31, 2023 ($ in millions)					
Type of agreement or similar arrangement	**Gross amount of recognized liabilities**	**Derivative liabilities eligible for set-off in case of default**	**Cash collateral pledged**	**Non-cash collateral pledged**	**Net liability exposure**
Derivatives	445	(111)	—	—	**334**
Total	**445**	**(111)**	**—**	**—**	**334**

—

Note 7
Fair values

Recurring fair value measures

The fair values of financial assets and liabilities measured at fair value on a recurring basis were as follows:

December 31, 2024 ($ in millions)	Level 1	Level 2	Level 3	Total fair value
Assets				
Securities in “Marketable securities and short-term investments”:				
Equity securities	—	814	—	**814**
Derivative assets—current in “Other current assets”	—	181	—	**181**
Derivative assets—non-current in “Other non-current assets”	—	35	—	**35**
Total	**—**	**1,030**	**—**	**1,030**
Liabilities				
Derivative liabilities—current in “Other current liabilities”	—	143	—	**143**
Derivative liabilities—non-current in “Other non-current liabilities”	—	276	—	**276**
Total	**—**	**419**	**—**	**419**

December 31, 2023 ($ in millions)	Level 1	Level 2	Level 3	Total fair value
Assets				
Securities in “Marketable securities and short-term investments”:				
Equity securities	—	1,282	—	**1,282**
Debt securities—U.S. government obligations	183	—	—	**183**
Derivative assets—current in “Other current assets”	—	169	—	**169**
Derivative assets—non-current in “Other non-current assets”	—	35	—	**35**
Total	**183**	**1,486**	**—**	**1,669**
Liabilities				
Derivative liabilities—current in “Other current liabilities”	—	230	—	**230**
Derivative liabilities—non-current in “Other non-current liabilities”	—	246	—	**246**
Total	**—**	**476**	**—**	**476**

During 2024, 2023 and 2022, there have been no reclassifications for any financial assets or liabilities between Level 1 and Level 2.

The Company uses the following methods and assumptions in estimating fair values of financial assets and liabilities measured at fair value on a recurring basis:

- Securities in "Marketable securities and short-term investments": If quoted market prices in active markets for identical assets are available, these are considered Level 1 inputs; however, when markets are not active, these inputs are considered Level 2. If such quoted market prices are not available, fair value is determined using market prices for similar assets or present value techniques, applying an appropriate risk-free interest rate adjusted for non-performance risk. The inputs used in present value techniques are observable and fall into the Level 2 category.

- Derivatives: The fair values of derivative instruments are determined using quoted prices of identical instruments from an active market, if available (Level 1 inputs). If quoted prices are not available, price quotes for similar instruments, appropriately adjusted, or present value techniques, based on available market data, or option pricing models are used. The fair values obtained using price quotes for similar instruments or valuation techniques represent a Level 2 input unless significant unobservable inputs are used.

Non-recurring fair value measures

In the year ended 2024, the Company recognized $113 million of fair value adjustments on assets and liabilities held for sale. These primarily relate to a fair value adjustment within the E-mobility Division of $88 million (see Note 4). In the year ended 2024, the Company also recognized $88 million in fair value adjustments of equity investments, primarily related to an impairment recorded of our investment in Northvolt AB. There were no other significant non-recurring fair value measurements during the years ended 2024, 2023 and 2022.

Disclosure about financial instruments carried on a cost basis

The fair values of financial instruments carried on a cost basis were as follows:

December 31, 2024 ($ in millions)	Carrying value	Level 1	Level 2	Level 3	Total fair value
Assets					
Cash and equivalents (excluding securities with original maturities up to 3 months):					
Cash	1,313	1,313	—	—	**1,313**
Time deposits	2,998	—	2,998	—	**2,998**
Restricted cash	15	15	—	—	**15**
Marketable securities and short-term investments (excluding securities):					
Time deposits	520	—	520	—	**520**
Liabilities					
Short-term debt and current maturities of long-term debt (excluding finance lease obligations)	265	188	77	—	**265**
Long-term debt (excluding finance lease obligations)	6,486	6,012	551	—	**6,563**

December 31, 2023 ($ in millions)	Carrying value	Level 1	Level 2	Level 3	Total fair value
Assets					
Cash and equivalents (excluding securities with original maturities up to 3 months):					
Cash	1,431	1,431	—	—	**1,431**
Time deposits	2,460	—	2,460	—	**2,460**
Restricted cash	18	18	—	—	**18**
Marketable securities and short-term investments (excluding securities):					
Time deposits	463	—	463	—	**463**
Liabilities					
Short-term debt and current maturities of long-term debt (excluding finance lease obligations)	2,576	2,521	55	—	**2,576**
Long-term debt (excluding finance lease obligations)	5,060	5,096	5	—	**5,101**

The Company uses the following methods and assumptions in estimating fair values of financial instruments carried on a cost basis:

- Cash and equivalents (excluding securities with original maturities up to 3 months), Restricted cash and Marketable securities and short-term investments (excluding securities): The carrying amounts approximate the fair values as the items are short-term in nature or, for cash held in banks, are equal to the deposit amount.
- Short-term debt and current maturities of long-term debt (excluding finance lease obligations): Short-term debt includes commercial paper, bank borrowings and overdrafts. The carrying amounts of short-term debt and current maturities of long-term debt, excluding finance lease obligations, approximate their fair values.
- Long-term debt (excluding finance lease obligations): Fair values of bonds are determined using quoted market prices (Level 1 inputs), if available. For bonds without available quoted market prices and other long-term debt, the fair values are determined using a discounted cash flow methodology based upon borrowing rates of similar debt instruments and reflecting appropriate adjustments for non-performance risk (Level 2 inputs).

Note 8
Receivables, net and Contract assets and liabilities

Receivables consisted of the following:

December 31, ($ in millions)	2024	2023
Trade receivables	7,114	7,107
Other receivables	590	646
Allowance	(316)	(307)
Total	**7,388**	**7,446**

“Trade receivables” in the table above includes contractual retention amounts billed to customers of $106 million and $104 million at December 31, 2024 and 2023, respectively. Management expects that the substantial majority of related contracts will be completed and the substantial majority of the billed amounts retained by the customer will be collected. Of the retention amounts outstanding at December 31, 2024, 60 percent and 19 percent are expected to be collected in 2025 and 2026, respectively.

“Other receivables” in the table above consists of value added tax, claims, rental deposits and other non-trade receivables.

The reconciliation of changes in the allowance for doubtful accounts is as follows:

($ in millions)	2024	2023	2022
Balance at January 1,	**307**	**308**	**339**
Current-period provision for expected credit losses	49	47	37
Write-offs charged against the allowance	(25)	(48)	(48)
Exchange rate differences	(15)	—	(20)
Balance at December 31,	**316**	**307**	**308**

The following table provides information about Contract assets and Contract liabilities:

December 31, ($ in millions)	2024	2023	2022
Contract assets	1,115	1,090	954
Contract liabilities	2,969	2,844	2,216

Contract assets primarily relate to the Company's right to receive consideration for work completed but for which no invoice has been issued at the reporting date. Contract assets are transferred to receivables when rights to receive payment become unconditional. Management expects that the majority of the amounts will be collected within one year of the respective balance sheet date.

Contract liabilities primarily relate to up-front advances received on orders from customers as well as amounts invoiced to customers in excess of revenues recognized predominantly on long-term projects. Contract liabilities are reduced as work is performed and as revenues are recognized.

The significant changes in the Contract assets and Contract liabilities balances were as follows:

	2024		2023	
($ in millions)	Contract assets	Contract liabilities	Contract assets	Contract liabilities
Revenue recognized, which was included in the Contract liabilities balance at January 1, 2024/2023		(1,543)		(1,311)
Additions to Contract liabilities - excluding amounts recognized as revenue during the period		1,814		1,845
Receivables recognized that were included in the Contract assets balance at January 1, 2024/2023	(592)		(622)	

The Company considers its order backlog to represent its unsatisfied performance obligations. At December 31, 2024, the Company had unsatisfied performance obligations totaling $21,221 million and, of this amount, the Company expects to fulfill approximately 70 percent of the obligations in 2025, approximately 16 percent of the obligations in 2026 and the balance thereafter.

Note 9
Inventories, net

Inventories consisted of the following:

December 31, ($ in millions)	2024	2023
Raw materials	2,364	2,546
Work in process	1,223	1,284
Finished goods	2,026	2,092
Advances to suppliers	246	227
Total	**5,859**	**6,149**

Note 10
Property, plant and equipment, net

Property, plant and equipment consisted of the following:

December 31, ($ in millions)	2024	2023
Land and buildings	3,778	3,818
Machinery and equipment	5,738	5,847
Construction in progress	690	713
	10,206	**10,378**
Accumulated depreciation	(6,029)	(6,236)
Total	**4,177**	**4,142**

Assets under finance leases included in Property, plant and equipment, net were as follows:

December 31, ($ in millions)	2024	2023
Land and buildings	222	208
Machinery and equipment	107	95
	329	**303**
Accumulated depreciation	(154)	(137)
Total	**175**	**166**

In 2024, 2023 and 2022, depreciation, including depreciation of assets under finance leases, was $550 million, $517 million and $531 million, respectively. In 2024, 2023 and 2022, there were no significant impairments of property, plant or equipment.

Note 11
Goodwill and intangible assets

The changes in Goodwill were as follows:

($ in millions)	Electrification	Motion	Process Automation	Robotics & Discrete Automation	Corporate and Other	Total
Balance at January 1, 2023(1)	**4,125**	**2,118**	**1,587**	**2,208**	**473**	**10,511**
Goodwill acquired during the year(2)	41	38	—	49	14	**142**
Goodwill allocated to disposals	(181)	—	(12)	—	—	**(193)**
Exchange rate differences and other	45	3	8	45	—	**101**
Balance at December 31, 2023(1)	**4,030**	**2,159**	**1,583**	**2,302**	**487**	**10,561**
Goodwill acquired during the year(2)	101	5	315	3	4	**428**
Goodwill allocated to disposals	(13)	—	—	—	(208)	**(221)**
Exchange rate differences and other	(94)	(8)	(30)	(78)	(3)	**(213)**
Balance at December 31, 2024(1)	**4,024**	**2,156**	**1,868**	**2,227**	**280**	**10,555**

(1) At December 31, 2024 and 2023, and at January 1, 2023, the gross goodwill amounted to $10,811 million, $10,833 million and $10,774 million, respectively. The accumulated impairment charges amounted to $256 million, $272 million and $263 million, respectively, and related to the Robotics & Discrete Automation operating segment.

(2) Amount includes adjustments arising during the twelve-month measurement period subsequent to the respective acquisition date.

In 2024, goodwill acquired primarily relates to the SEAM Group (acquired in July 2024) and Födisch Group (acquired in October 2024), which have been allocated to Electrification and Process Automation operating segments, respectively.

In 2024, goodwill allocated to disposals primarily relates to goodwill attributed to the reduction in the Company's ownership interest in InCharge Energy, Inc. which, prior to the change in ownership interest, was part of the E-mobility operating segment, within Corporate and Other.

Intangible assets consisted of the following:

	2024			2023		
December 31, ($ in millions)	**Gross carrying amount**	**Accumu-lated amort-ization**	**Net carrying amount**	**Gross carrying amount**	**Accumu-lated amort-ization**	**Net carrying amount**
Capitalized software for internal use	923	(800)	**123**	904	(775)	**129**
Capitalized software for sale	24	(24)	**—**	26	(26)	**—**
Intangibles other than software:						
Customer-related	1,660	(966)	**694**	1,632	(894)	**738**
Technology-related	919	(812)	**107**	1,034	(832)	**202**
Marketing-related	491	(381)	**110**	531	(400)	**131**
Other	45	(31)	**14**	56	(33)	**23**
Total	**4,062**	**(3,014)**	**1,048**	**4,183**	**(2,960)**	**1,223**

Additions to intangible assets other than goodwill consisted of the following:

($ in millions)	**2024**	**2023**
Capitalized software for internal use	50	70
Intangibles other than software:		
Customer-related	105	12
Technology-related	36	13
Marketing-related	7	35
Other	2	1
Total	**200**	**131**

Included in the additions of $200 million in 2024 were $152 million of intangible assets acquired in business combinations. In 2023 there were no significant intangible assets acquired in business combinations.

Amortization expense of intangible assets consisted of the following:

($ in millions)	**2024**	**2023**	**2022**
Capitalized software for internal use	48	44	52
Intangibles other than software	204	219	230
Total	**252**	**263**	**282**

In 2024, 2023 and 2022, impairment charges on intangible assets were not significant.

At December 31, 2024, future amortization expense of intangible assets is estimated to be:

($ in millions)	
2025	217
2026	195
2027	176
2028	154
2029	93
Thereafter	213
Total	**1,048**

—

Note 12
Supplier Finance Programs

The Company has several supplier finance programs, all with similar characteristics, with various financial institutions acting as paying agent. These programs allow qualifying suppliers access to bank facilities which permit earlier payment at a cost to the supplier. The Company's payment terms related to suppliers' finance programs are not impacted by the suppliers' decisions to sell amounts under the arrangements and are typically consistent with local market practices. Outstanding supplier finance obligations are included in Accounts payable, trade in the Consolidated Balance Sheets and are reported as operating or investing (if capitalized) activities in the Consolidated Statement of Cash Flows when paid. At December 31, 2024 and 2023, the total obligation outstanding under supplier finance programs amounted to $435 million and $415 million, respectively.

($ in millions)	2024
Confirmed obligations outstanding at January 1,	**415**
Invoices confirmed	1,540
Confirmed invoices paid	(1,497)
Exchange rate differences	(23)
Confirmed obligations outstanding at December 31,	**435**

—

Note 13
Debt

The Company's total debt at December 31, 2024 and 2023, amounted to $6,945 million and $7,828 million, respectively.

Short-term debt and current maturities of long-term debt

Short-term debt and current maturities of long-term debt consisted of the following:

December 31, ($ in millions)	2024	2023
Short-term debt (weighted-average interest rate of 4.7% and 5.1%, respectively)	83	87
Current maturities of long-term debt (weighted-average nominal interest rate of 2.3% and 1.5%, respectively)	210	2,520
Total	**293**	**2,607**

Short-term debt primarily represents short-term loans from various banks and issued commercial paper.

At December 31, 2024, the Company had two commercial paper programs in place: a $2 billion Euro-commercial paper program for the issuance of commercial paper in a variety of currencies, and a $2 billion commercial paper program for the private placement of U.S. dollar denominated commercial paper in the United States. At both December 31, 2024 and 2023, no amount was outstanding under either program.

In December 2019, the Company replaced its previous multicurrency revolving credit facility with a new $2 billion multicurrency revolving credit facility maturing in 2024. In 2021, the Company exercised its option to extend the maturity of this facility to 2026. The facility is for general corporate purposes. In 2023, the Company amended and restated its facility for the purpose of addressing the discontinuation of LIBOR. Under the amended and restated credit facility, interest costs on drawings under the facility (i) in USD are referenced to CME Term SOFR; (ii) in CHF and GBP are referenced to overnight SARON and SONIA, respectively; and (iii) in Euro are referenced to EURIBOR, subject to applicable credit adjustment spreads (for only (i) and (ii) above), plus a margin of 0.175 percent, while commitment fees (payable on the unused portion of the facility) amount to 35 percent of the margin, which represents commitment fees of 0.06125 percent per annum. Utilization fees, payable on drawings, amount to 0.075 percent per annum on drawings up to one-third of the facility, 0.15 percent per annum on drawings in excess of one-third but less than or equal to two-thirds of the facility, and 0.30 percent per annum on drawings over two-thirds of the facility. The facility contains cross-default clauses whereby an event of default would occur if the Company were to default on indebtedness as defined in the facility, at or above a specified threshold. No amount was drawn at December 31, 2024 and 2023, under this facility.

Long-term debt

The Company raises long-term debt in various currencies, maturities and on various interest rate terms. For certain of its debt obligations, the Company utilizes derivative instruments to modify its interest rate exposure. In particular, the Company uses interest rate swaps to effectively convert certain fixed-rate long-term debt into floating rate obligations. For certain non-U.S. dollar denominated debt, the Company utilizes cross-currency interest rate swaps to effectively convert the debt into a U.S. dollar obligation. The carrying value of debt, designated as being hedged by fair value hedges, is adjusted for changes in the fair value of the risk component of the debt being hedged.

The following table summarizes the Company’s long-term debt considering the effect of interest rate and cross-currency interest rate swaps. Consequently, a fixed-rate debt subject to a fixed-to-floating interest rate swap is included as a floating rate debt in the table below:

	2024			2023		
December 31, ($ in millions, except % data)	**Balance**	**Nominal rate**	**Effective rate**	**Balance**	**Nominal rate**	**Effective rate**
Floating rate	1,807	2.5%	5.0%	2,907	1.3%	4.8%
Fixed rate	5,055	2.8%	2.8%	4,834	2.6%	2.7%
	6,862			**7,741**		
Current portion of long-term debt	(210)	2.3%	2.2%	(2,520)	1.5%	3.7%
Total	**6,652**			**5,221**		

At December 31, 2024, the principal amounts of long-term debt repayable (excluding finance lease obligations) at maturity were as follows:

($ in millions)	
2025	183
2026	364
2027	990
2028	548
2029	708
Thereafter	4,013
Total	**6,806**

Details of significant long-term borrowings were as follows:

	2024				2023			
December 31, (in millions)	Nominal outstanding		Carrying value (1)		Nominal outstanding		Carrying value(1)	
Bonds:								
0.625% EUR Instruments, due 2024					EUR	700	$	768
Floating Rate EUR Instruments, due 2024					EUR	500	$	554
0.75% EUR Instruments, due 2024					EUR	750	$	819
0.3% CHF Bonds, due 2024					CHF	280	$	335
2.1% CHF Bonds, due 2025	CHF	150	$	166	CHF	150	$	179
1.965% CHF Bonds, due 2026	CHF	325	$	359	CHF	325	$	387
3.25% EUR Instruments, due 2027	EUR	500	$	518	EUR	500	$	551
0.75% CHF Bonds, due 2027	CHF	425	$	468	CHF	425	$	507
3.8% USD Notes, due 2028(2)	USD	383	$	382	USD	383	$	382
1.9775% CHF Bonds, due 2028	CHF	150	$	165	CHF	150	$	179
3.125% EUR Instruments, due 2029	EUR	500	$	523				
1.0% CHF Bonds, due 2029	CHF	170	$	188	CHF	170	$	203
0% EUR Instruments, due 2030	EUR	800	$	727	EUR	800	$	749
2.375% CHF Bonds, due 2030	CHF	150	$	165	CHF	150	$	178
3.375% EUR Instruments, due 2031	EUR	750	$	770	EUR	750	$	818
Floating rate EIB R&D Loan, due 2031	USD	539	$	539				
2.1125% CHF Bonds, due 2033	CHF	275	$	303	CHF	275	$	327
3.375% EUR Instruments, due 2034	EUR	750	$	780				
4.375% USD Notes, due 2042(2)	USD	609	$	591	USD	609	$	591
Total			**$**	**6,644**			**$**	**7,527**

(1) USD carrying values include unamortized debt issuance costs, bond discounts or premiums, as well as adjustments for fair value hedge accounting, where appropriate.

(2) Prior to completing a cash tender offer in 2020, the original principal amount outstanding, on each of the 3.8% USD Notes, due 2028, and the 4.375% USD Notes, due 2042, was $750 million.

During 2024, the Company repaid at maturity its CHF 280 million 0.3% Bonds, its EUR 750 million 0.75% EUR Instruments, and its EUR 700 million 0.625% EUR Instruments, each paid interest annually in arrears, as well as its EUR 500 million floating rate notes, which paid interest quarterly in arrears at a variable rate of 0.7 percentage points above the 3-month EURIBOR, subject to a minimum rate of interest of zero percent.

The CHF 150 million 2.1% Bonds, due 2025, and the CHF 150 million 2.375% Bonds, due 2030, both pay interest annually in arrears. The Company may redeem these bonds, three months prior to maturity, in whole but not in part, at par plus accrued interest. Further, the Company has the option to redeem these instruments prior to maturity, in whole but not in part, at par plus accrued interest, if 85 percent or more of the aggregate principal amount of the relevant bond issue has been redeemed or purchased and cancelled at the time of the option exercise notice.

The CHF 325 million 1.965% Bonds, due 2026, the CHF 150 million 1.9775% Bonds, due 2028, and the CHF 275 million 2.1125% Bonds, due 2033, all pay interest annually in arrears and have the same early redemption terms as the CHF 150 million 2.1% Bonds above.

The EUR 500 million 3.25% Instruments, due 2027, and EUR 750 million 3.375% Instruments, due 2031, both pay interest annually in arrears. The Company may redeem the EUR 500 million Instruments up to one month prior to maturity (Par call date) and the EUR 750 million Instruments up to three months prior to maturity (Par call date), at the greater of (i) 100 percent of the principal amount of the notes to be redeemed and (ii) the sum of the present values of remaining scheduled payments of principal and interest (excluding interest accrued to the redemption date) discounted to the redemption date at a rate defined in the note terms, plus interest accrued at the redemption date. The Company may also redeem these instruments, after the Par call date, at 100 percent of the principal amount of the notes to be redeemed plus accrued interest.

The CHF 425 million 0.75% Bonds, due 2027, pay interest annually in arrears. The Company may redeem the Bonds, one month prior to maturity, in whole but not in part, at par plus accrued interest. Further, the Company has the option to redeem these instruments prior to maturity, in whole but not in part, at par plus accrued interest, if 85 percent or more of the aggregate principal amount have been redeemed or purchased and cancelled at the time of the option exercise notice.

The 3.8% USD Notes, due 2028, were issued in April 2018 and pay interest semi-annually in arrears. During 2020 by way of a cash tender offer, the Company redeemed $367 million of the original $750 million 3.8% USD Notes, due 2028, issued. The Company may redeem the remaining principal outstanding of the 2028 Notes up to three months prior to their maturity date, in whole or in part, at the greater of (i) 100 percent of the principal amount of the notes to be redeemed and (ii) the sum of the present values of remaining scheduled payments of principal and interest (excluding interest accrued to the redemption date) discounted to the redemption date at a rate defined in the Notes terms, plus interest accrued at the redemption date. On or after January 3, 2028 (three months prior to their maturity date), the Company may also redeem the 2028 Notes, in whole or in part, at any time at a redemption price equal to 100 percent of the principal amount of the notes to be redeemed plus unpaid accrued interest to, but excluding, the redemption date.

The CHF 170 million 1.0% Bonds, due 2029, pay interest annually in arrears and have the same early redemption terms as the CHF 150 million 2.1% Bonds above.

The EUR 800 million 0% Instruments, due 2030, do not pay interest. The Company may redeem these notes up to three months prior to maturity (Par call date), at the greater of (i) 100 percent of the principal amount of the notes to be redeemed and (ii) the sum of the present values of remaining scheduled payments of principal and interest (excluding interest accrued to the redemption date) discounted to the redemption date at a rate defined in the note terms, plus interest accrued at the redemption date. The Company may redeem these instruments, after the Par call date at 100 percent of the principal amount of the notes to be redeemed. Cross-currency interest rate swaps have been used to modify the characteristics of these instruments. After considering the impact of these cross-currency interest rate swaps, the Company effectively has a floating rate U.S. dollar obligation.

The 4.375% USD Notes, due 2042, pay interest semi-annually in arrears. During 2020, by way of a cash tender offer, the Company redeemed $141 million of the original $750 million 4.375% USD Notes, due 2042, issued. The Company may redeem these notes prior to maturity, in whole or in part, at the greater of (i) 100 percent of the principal amount of the notes to be redeemed and (ii) the sum of the present values of remaining scheduled payments of principal and interest (excluding interest accrued to the redemption date) discounted to the redemption date at a rate defined in the note terms, plus interest accrued at the redemption date.

In January 2024, the Company issued the following EUR Instruments: (i) EUR 500 million of 3.125% Instruments, due 2029, and (ii) EUR 750 million of 3.375% Instruments, due 2034, both paying interest annually in arrears and have the same early redemption terms as the EUR 500 million 3.25% Instruments, due 2027, and EUR 750 million 3.375% Instruments, due 2031, respectively, above. The aggregate net proceeds of these EUR Instruments, after discount and fees, amounted to EUR 1,243 million (equivalent to approximately $1,360 million on date of issuance). The Company has entered into interest rate swaps for an aggregate nominal amount of EUR 500 million to partially hedge its interest obligations on these two bonds. After considering the impact of such swaps, EUR 500 million ($520 million equivalent) of the outstanding principal is shown as floating rate debt in the table of long-term debt above.

In November 2024, the Company obtained a USD 539 million (EUR 500 million equivalent) loan pursuant to an agreement with the European Investment Bank (EIB) that was entered into in 2023. This floating rate loan, due 2031, pays interest semi-annually in arrears at a variable rate of 0.64 percentage points above the 6-month compound SOFR. The Company may repay the amount drawn down at any time, prior to maturity, in whole or in part, at par plus accrued interest and fees, if any. The funds received from this loan are required to be used to finance research and development (R&D) within the Electrification operating segment.

The Company's various debt instruments contain cross-default clauses which would allow the bondholders to demand repayment if the Company were to default on any borrowing at or above a specified threshold. Furthermore, all such bonds constitute unsecured obligations of the Company and rank pari passu with other debt obligations.

In addition to the bonds and other borrowings described above, included in long-term debt at December 31, 2024 and 2023, are finance lease obligations, bank borrowings of subsidiaries and other long-term debt, none of which is individually significant.

Note 14
Other provisions, other current liabilities and other non-current liabilities

Other provisions consisted of the following:

December 31, ($ in millions)	2024	2023
Contract-related provisions	286	523
Provisions for contractual penalties and compliance and litigation matters	134	88
Restructuring and restructuring-related provisions	125	187
Provision for insurance-related reserves	111	183
Other	197	220
Total	**853**	**1,201**

Other current liabilities consisted of the following:

December 31, ($ in millions)	2024	2023
Employee-related liabilities	1,635	1,566
Accrued expenses	589	788
Non-trade payables	582	631
Accrued customer rebates	486	514
Income taxes payable and other income tax related liabilities	485	668
Other tax liabilities	389	360
Derivative liabilities (see Note 6)	143	230
Accrued interest	121	105
Other	152	184
Total	**4,582**	**5,046**

Other non-current liabilities consisted of the following:

December 31, ($ in millions)	2024	2023
Income tax related liabilities	847	813
Derivative liabilities (see Note 6)	275	246
Provisions for contractual penalties and compliance and litigation matters	141	160
Other	291	329
Total	**1,554**	**1,548**

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Note 15
Commitments and contingencies

Contingencies—Regulatory, Compliance and Legal

Regulatory
Based on findings during an internal investigation, the Company self-reported to the Securities and Exchange Commission (SEC) and the Department of Justice (DoJ), in the United States, to the Special Investigating Unit (SIU) and the National Prosecuting Authority (NPA) in South Africa, as well as to various authorities in other countries, potential suspect payments and other compliance concerns in connection with some of the Company's dealings with Eskom and related persons. Many of those parties have expressed an interest in, or commenced an investigation into, these matters and the Company is cooperating fully with them. The Company paid $104 million to Eskom in December 2020 as part of a full and final settlement with Eskom and the SIU relating to improper payments and other compliance issues associated with the Controls and Instrumentation Contract, and its Variation Orders for Units 1 and 2 at Kusile. The Company made a provision of approximately $325 million, which was recorded in Other income (expense) during the third quarter of 2022. In December 2022, the Company settled with the SEC and DoJ as well as the authorities in South Africa and Switzerland. In March 2024, the Company settled its final pending matter with the authorities in Germany. The Company does not believe that it will need to record any additional provisions for this matter, and has paid all amounts in full.

General
The Company is aware of proceedings, or the threat of proceedings, against it and others in respect of private claims by customers and other third parties with regard to certain actual or alleged anticompetitive practices. Also, the Company is subject to other claims and legal proceedings, as well as investigations carried out by various law enforcement authorities. With respect to the above-mentioned claims, regulatory matters, and any related proceedings, the Company will bear the related costs, including costs necessary to resolve them.

Liabilities recognized
At December 31, 2024 and 2023, the Company had aggregate liabilities of $83 million and $101 million, respectively, included in Other provisions and Other non-current liabilities, for the above regulatory, compliance and legal contingencies, and none of the individual liabilities recognized was significant. As it is not possible to make an informed judgment on, or reasonably predict, the outcome of certain matters and as it is not possible, based on information currently available to management, to estimate the maximum potential liability on other matters, there could be adverse outcomes beyond the amounts accrued.

Guarantees

General
The following table provides quantitative data regarding the Company's third-party guarantees. The maximum potential payments represent a "worst-case scenario", and do not reflect management's expected outcomes.

	Maximum potential payments(1)	
December 31, ($ in millions)	**2024**	**2023**
Performance guarantees	2,299	3,451
Financial guarantees	22	94
Total	**2,321**	**3,545**

(1) Maximum potential payments include amounts in both continuing and discontinued operations.

The carrying amount of liabilities recorded in the Consolidated Balance Sheets reflects the Company's best estimate of future payments, which it may incur as part of fulfilling its guarantee obligations. In respect of the above guarantees, the carrying amounts of liabilities at December 31, 2024 and 2023, were not significant.

The Company is party to various guarantees providing financial or performance assurances to certain third parties. These guarantees, which have various maturities up to 2034, mainly consist of performance guarantees whereby (i) the Company guarantees the performance of a third party's product or service according to the terms of a contract and (ii) as member of a consortium/joint venture that includes third parties, the Company guarantees not only its own performance but also the work of third parties. Such guarantees may include guarantees that a project will be completed within a specified time. If the third party does not fulfill the obligation, the Company will compensate the guaranteed party in cash or in kind. The original maturity dates for the majority of these performance guarantees range from one to ten years.

In conjunction with the divestment of the high-voltage cable and cables accessories businesses in 2017, the Company has entered into various performance guarantees with other parties with respect to certain liabilities of the divested business. At December 31, 2024 and 2023, the maximum potential payable under these guarantees amounts to $747 million and $874 million, respectively, and these guarantees have various maturities ranging from five to ten years.

The Company retained obligations for financial and performance guarantees related to its former Power Grids business (reported as discontinued operations prior to its sale to Hitachi Ltd in 2020), which at both December 31, 2024 and 2023, have been fully indemnified by Hitachi Ltd. These guarantees, having various maturities up to 2034, primarily consist of bank guarantees, standby letters of credit, business performance guarantees and other trade-related guarantees, the majority of which have original maturity dates ranging from one to ten years. The maximum amount payable under these guarantees at December 31, 2024 and 2023, is approximately $1.1 billion and $2.2 billion, respectively. On completing the sale of the Company's remaining 19.9 percent interest in Hitachi Energy Ltd. to Hitachi Ltd in 2022, the Company also settled certain existing indemnification guarantees that were due to be settled concurrent with such transaction. As a result, in 2022, the Company recorded $136 million of cash outflows for the settlement of these liabilities (recorded in Proceeds from sales of businesses, cost- and equity-accounted companies).

Commercial commitments

In addition, in the normal course of bidding for and executing certain projects, the Company has entered into standby letters of credit, bid/performance bonds and surety bonds (collectively "performance bonds") with various financial institutions. Customers can draw on such performance bonds in the event that the Company does not fulfill its contractual obligations. The Company would then have an obligation to reimburse the financial institution for amounts paid under the performance bonds. At December 31, 2024 and 2023, the total outstanding performance bonds aggregated to $3.2 billion and $3.1 billion, respectively. There have been no significant amounts reimbursed to financial institutions under these types of arrangements in 2024 and 2023.

Product and order-related contingencies

The Company calculates its provision for product warranties based on historical claims experience and specific review of certain contracts.

The reconciliation of the Provisions for warranties, including guarantees of product performance, was as follows:

($ in millions)	2024	2023	2022
Balance at January 1,	**1,210**	**1,028**	**1,005**
Net change in warranties due to acquisitions, divestments and spin-offs	2	—	(24)
Claims paid in cash or in kind	(157)	(171)	(157)
Net increase in provision for changes in estimates, warranties issued and warranties expired	256	327	252
Exchange rate differences	(63)	26	(48)
Balance at December 31,	**1,248**	**1,210**	**1,028**

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Note 16
Leases

The Company's lease obligations primarily relate to real estate, machinery and equipment. The components of lease expense were as follows:

	Land and buildings			Machinery and equipment			Total		
($ in millions)	**2024**	**2023**	**2022**	**2024**	**2023**	**2022**	**2024**	**2023**	**2022**
Operating lease cost	231	221	217	88	73	71	**319**	**294**	**288**
Finance lease cost	20	15	15	20	15	22	**40**	**30**	**37**
Short-term lease cost	12	16	20	4	10	18	**16**	**26**	**38**
Sub-lease income	(27)	(20)	(18)	—	—	(1)	**(27)**	**(20)**	**(19)**
Total lease expense	**236**	**232**	**234**	**112**	**98**	**110**	**348**	**330**	**344**

The following table presents supplemental cash flow information related to leases:

	Land and buildings			Machinery and equipment			Total		
($ in millions)	**2024**	**2023**	**2022**	**2024**	**2023**	**2022**	**2024**	**2023**	**2022**
Operating leases:									
Cash paid under operating cash flows	228	220	200	88	73	66	316	293	266
Right-of-use assets obtained in exchange for new liabilities	187	198	285	129	92	50	316	290	335

In 2024, 2023 and 2022 the cash flow amounts under finance leases were not significant.

At December 31, 2024, the future net minimum lease payments for operating and finance leases and the related present value of the net minimum lease payments consisted of the following:

	Operating leases		Finance leases	
($ in millions)	**Land and buildings**	**Machinery and equipment**	**Land and buildings**	**Machinery and equipment**
2025	193	85	18	22
2026	160	61	18	12
2027	118	35	18	11
2028	91	11	18	7
2029	70	2	9	3
Thereafter	136	—	88	7
Total minimum lease payments	**768**	**194**	**169**	**62**
Difference between undiscounted cash flows and discounted cash flows	(81)	(15)	(32)	(5)
Present value of minimum lease payments	**687**	**179**	**137**	**57**

The following table presents certain information related to lease terms and discount rates:

	Land and buildings			Machinery and equipment		
	2024	**2023**	**2022**	**2024**	**2023**	**2022**
Operating leases:						
Weighted-average remaining term (months)	70	71	73	33	35	31
Weighted-average discount rate (in %)	3.9%	3.7%	3.3%	5.4%	4.3%	1.9%
Finance leases:						
Weighted-average remaining term (months)	202	128	135	39	36	33
Weighted-average discount rate (in %)	4.6%	4.9%	5.5%	4.7%	3.7%	2.3%

The present value of minimum finance lease payments included in Short-term debt and current maturities of long-term debt and Long-term debt in the Consolidated Balance Sheets at December 31, 2024, amounts to $28 million and $166 million, respectively, and at December 31, 2023, amounts to $31 million and $161 million, respectively.

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Note 17
Income taxes

Income tax expense consisted of the following:

($ in millions)	2024	2023	2022
Current taxes	1,277	955	1,101
Deferred taxes	1	(25)	(344)
Income tax expense allocated to continuing operations	**1,278**	**930**	**757**
Income tax benefit allocated to discontinued operations	**(4)**	**(6)**	**(5)**

Income tax expense from continuing operations is reconciled below from the Company's weighted-average global tax rate (rather than from the Swiss domestic statutory tax rate) as the parent company of the ABB Group, ABB Ltd, is domiciled in Switzerland and income generated in jurisdictions outside of Switzerland (hereafter "foreign jurisdictions") which has already been subject to corporate income tax in those foreign jurisdictions is, to a large extent, tax exempt in Switzerland. There is no requirement in Switzerland for any parent company of a group to file a tax return of the consolidated group determining domestic and foreign pre-tax income. As the Company's consolidated income from continuing operations is predominantly earned outside of Switzerland, the weighted-average global tax rate of the Company results from enacted corporate income tax rates in foreign jurisdictions.

The reconciliation of Income tax expense from continuing operations at the weighted-average tax rate to the effective tax rate is as follows:

($ in millions, except % data)	2024	2023	2022
Income from continuing operations before income taxes	**5,233**	**4,778**	**3,394**
Weighted-average global tax rate	**23.7%**	**22.3%**	**23.6%**
Income taxes at weighted-average tax rate	1,240	1,065	800
Items taxed at rates other than the weighted-average tax rate	110	33	127
Unrecognized tax benefits	(182)	(207)	(83)
Changes in valuation allowance, net	56	9	(195)
Effects of changes in tax laws and enacted tax rates	—	(3)	(19)
Non-deductible / non-taxable items	33	43	97
Other, net	21	(10)	30
Income tax expense from continuing operations	**1,278**	**930**	**757**
Effective tax rate for the year	**24.4%**	**19.5%**	**22.3%**

The allocation of consolidated income from continuing operations, which is predominantly earned outside of Switzerland, impacts the “Weighted-average global tax rate”.

In 2024, 2023 and 2022, “Items taxed at rates other than the weighted-average tax rate” included $17 million, $30 million and $53 million, respectively, for dividends received in holding entities which could not fully benefit from the participation exemption as well as the impact of recording expected taxes on undistributed earnings of foreign subsidiaries. The amount in 2024 also includes an insigificant amount relating to the impact of the minimum tax effects from the OECD Pillar Two framework.

In 2024, “Changes in valuation allowance, net” included $79 million of negative impacts from certain unfavorable business developments in Europe and $8 million of negative impacts from changes in certain outlooks, partially offset by positive impacts from operations of remaining businesses. In 2023, this amount included $57 million of negative impacts from negative business performance in Europe, partially offset with positive impacts from changes in certain outlooks related to certain business performance in the Americas of $13 million and Europe of $22 million. In 2022, this amount included positive impacts from changes in certain outlooks in Asia of $22 million, Europe of $23 million and the Americas of $208 million, offset by negative impacts from other changes in certain outlooks in Europe of $55 million.

In 2024 and 2023, “Effects of changes in tax laws and enacted tax rates” were not significant while in 2022, this amount primarily reflects the impact of changes in certain tax rates in Europe for $25 million.

In 2024, there were no significant items impacting “Non-deductible / non-taxable items”. In 2023, this amount also reflects an additional tax impact of $24 million related to the sale of the former Power Conversion Division. In 2022, this amount includes a net tax impact of $65 million for the non-deductible regulatory penalties in connection with the Kusile project offset partially by the impact of the non-taxable gain from the sale of the remaining investment in Hitachi Energy. In all periods, the amounts reported also include other items that were deducted for financial accounting purposes but are typically not tax deductible, such as certain interest expense costs, local taxes on productive activities, disallowed amounts for meals and entertainment expenses and other similar items.

In 2024, “Unrecognized tax benefits” included a combined benefit of $92 million related to positive reassessments of certain tax risks in Europe and Africa and, in addition, closed tax audits of $78 million in Europe. In 2023, this amount included a benefit of $206 million related to a favorable resolution of an uncertain tax matter in Asia relating to the divestment in 2020 of the Power Grids business. In 2022, this amount included a net benefit of $95 million related to the interpretation of tax law and double tax treaty agreements by competent tax authorities.

Deferred tax assets and liabilities consisted of the following:

December 31, ($ in millions)	2024	2023
Deferred tax assets:		
Unused tax losses and credits	582	544
Provisions and other accrued liabilities	826	839
Other current assets including receivables	69	76
Pension	243	284
Inventories	364	347
Intangible assets	1,032	1,121
Other	56	69
Total gross deferred tax asset	**3,172**	**3,280**
Valuation allowance	(1,080)	(1,070)
Total gross deferred tax asset, net of valuation allowance	**2,092**	**2,210**
Deferred tax liabilities:		
Property, plant and equipment	(239)	(243)
Intangible assets	(203)	(241)
Other assets	(155)	(142)
Pension	(281)	(317)
Other liabilities	(103)	(154)
Inventories	(70)	(66)
Unremitted earnings of subsidiaries	(375)	(335)
Total gross deferred tax liability	**(1,426)**	**(1,498)**
Net deferred tax asset (liability)	**666**	**712**
Included in:		
"Deferred taxes"—non-current assets	1,341	1,381
"Deferred taxes"—non-current liabilities	(675)	(669)
Net deferred tax asset (liability)	**666**	**712**

Certain entities have deferred tax assets related to net operating loss carryforwards and other items. As recognition of these assets in certain entities did not meet the more likely than not criterion, valuation allowances have been recorded. "Unused tax losses and credits" at December 31, 2024 and 2023, in the table above, included $44 million and $54 million, respectively, for which the Company has established a valuation allowance as, due to limitations imposed by the relevant tax law, the Company determined that, more likely than not, such deferred tax assets would not be realized.

The valuation allowance at December 31, 2024, 2023 and 2022, was $1,080 million, $1,070 million and $1,000 million, respectively.

Certain amounts included in deferred tax assets for intangible assets result from intercompany transactions occurring at fair market value for which no corresponding accounting basis exists.

At December 31, 2024 and 2023, deferred tax liabilities totaling $375 million and $335 million, respectively, have been provided for withholding taxes, dividend distribution taxes or additional corporate income taxes (hereafter "withholding taxes") on unremitted earnings which will be payable in foreign jurisdictions in the event of repatriation of the foreign earnings to Switzerland. Income which has been generated outside of Switzerland and has already been subject to corporate income tax in such foreign jurisdictions is, to a large extent, tax exempt in Switzerland and therefore, generally no or only limited Swiss income tax has to be provided for on the repatriated earnings of foreign subsidiaries.

Certain countries levy withholding taxes on dividend distributions and these taxes cannot always be fully reclaimed by the Company's relevant subsidiary receiving the dividend, although the taxes have to be withheld and paid by the relevant subsidiary distributing such dividend. In 2024 and 2023, certain taxes arose in certain foreign jurisdictions for which the technical merits do not allow utilization of benefits. At December 31, 2024 and 2023, foreign subsidiary retained earnings which would be subject to withholding taxes upon distribution were approximately $50 million and $50 million, respectively. These earnings were considered as indefinitely reinvested, as these funds are used for financing current operations as well as business growth through working capital and capital expenditure in those countries and, consequently, no deferred tax liability was recorded.

At December 31, 2024, net operating loss carryforwards of $2,306 million and tax credits of $39 million were available to reduce future income taxes of certain subsidiaries. Of these amounts, $788 million of operating loss carryforwards and $38 million of tax credits will expire in varying amounts through 2042, while the remainder are available for carryforward indefinitely. The largest amount of these carryforwards are related to the Company's Europe operations.

Unrecognized tax benefits consisted of the following:

($ in millions)	Unrecognized tax benefits	Penalties and interest related to unrecognized tax benefits	Total
Classification as unrecognized tax items on January 1, 2022	**1,322**	**199**	**1,521**
Increase relating to prior year tax positions	26	36	**62**
Decrease relating to prior year tax positions	(126)	(24)	**(150)**
Increase relating to current year tax positions	80	4	**84**
Decrease due to settlements with tax authorities	(3)	(2)	**(5)**
Decrease as a result of the applicable statute of limitations	(71)	(23)	**(94)**
Exchange rate differences	(58)	(10)	**(68)**
Balance at December 31, 2022, which would, if recognized, affect the effective tax rate	**1,170**	**180**	**1,350**
Net change due to acquisitions and divestments	(9)	(1)	**(10)**
Increase relating to prior year tax positions	32	44	**76**
Decrease relating to prior year tax positions	(294)	(20)	**(314)**
Increase relating to current year tax positions	131	7	**138**
Decrease due to settlements with tax authorities	(21)	1	**(20)**
Decrease as a result of the applicable statute of limitations	(80)	(19)	**(99)**
Exchange rate differences	14	3	**17**
Balance at December 31, 2023, which would, if recognized, affect the effective tax rate	**943**	**195**	**1,138**
Increase relating to prior year tax positions	21	47	**68**
Decrease relating to prior year tax positions	(225)	(59)	**(284)**
Increase relating to current year tax positions	87	4	**91**
Decrease due to settlements with tax authorities	(10)	(4)	**(14)**
Decrease as a result of the applicable statute of limitations	(59)	(15)	**(74)**
Exchange rate differences	(46)	(12)	**(58)**
Balance at December 31, 2024, which would, if recognized, affect the effective tax rate	**711**	**156**	**867**

In 2024, 2023 and 2022, "Increase relating to current year tax positions" included a total of $59 million, $76 million and $69 million, respectively, in taxes related to the interpretation of tax law and double tax treaty agreements by competent tax authorities.

In 2024, "Increase relating to prior year tax positions" included $8 million, predominantly from Europe.

In 2023, "Increase relating to prior year tax positions" included $14 million predominantly from Africa.

In 2022, “Increase relating to prior year tax positions” included a total of $26 million predominantly from Asia and Europe.

In 2024, “Decrease relating to prior year tax positions” included $92 million for a decrease related to reassessments of tax risks in Europe and Africa and $78 million related to closed tax audits in Europe.

In 2023, “Decrease relating to prior year tax positions” included $206 million for a decrease in tax risk in Asia related to the divestment in 2020 of the Power Grids business, $40 million due to audit settlements in Europe and the remainder is primarily due to changed tax risk assessments.

In 2022, “Decrease relating to prior year tax positions” included $94 million related to tax risk assessments in Europe and settlements of $26 million in Asia and Europe.

In 2024, “Decrease due to settlements with tax authorities” included $7 million in Europe related to closed tax audits.

In 2023, “Decrease due to settlements with tax authorities” of $21 million related to tax risk assessments in Europe.

In 2022, “Decrease due to settlements with tax authorities” is predominantly related to tax assessments received in Asia and Europe.

At December 31, 2024, the Company expects the resolution, within the next twelve months, of unrecognized tax benefits related to pending court cases amounting to $20 million for income taxes, penalties and interest. Otherwise, the Company had not identified any other significant changes which were considered reasonably possible to occur within the next twelve months.

At December 31, 2024, the earliest significant open tax years that remained subject to examination were the following:

Region	Year
Europe	2018
United States	2021
Rest of Americas	2020
China	2015
Rest of Asia, Middle East and Africa	2020

—

Note 18
Employee benefits

The Company operates defined benefit pension plans, defined contribution pension plans, and termination indemnity plans, in accordance with local regulations and practices. At December 31, 2024, the Company’s most significant defined benefit pension plans are in Switzerland as well as in Germany, the United Kingdom, and the United States. These plans cover a large portion of the Company’s employees and provide benefits to employees in the event of death, disability, retirement, or termination of employment. Certain of these plans are multi-employer plans. The Company also operates other postretirement benefit plans including postretirement health care benefits and other employee-related benefits for active employees including long-service award plans. The postretirement benefit plans are not significant. The measurement date used for the Company’s employee benefit plans is December 31. The funding policies of the Company’s plans are consistent with local government and tax requirements.

The Company recognizes in its Consolidated Balance Sheets the funded status of its defined benefit pension plans, postretirement plans and other employee-related benefits measured as the difference between the fair value of the plan assets and the benefit obligation.

Unless otherwise indicated, the following tables include amounts relating to both continuing and discontinued operations.

Obligations and funded status of the plans

The change in benefit obligation, change in fair value of plan assets, and funded status recognized in the Consolidated Balance Sheets were as follows:

	Defined pension benefits			
	Switzerland		International	
($ in millions)	**2024**	**2023**	**2024**	**2023**
Benefit obligation at January 1,	**2,834**	**2,457**	**3,669**	**3,572**
Service cost	46	40	28	30
Interest cost	35	48	156	166
Contributions by plan participants	39	34	9	11
Benefit payments	(132)	(134)	(226)	(236)
Settlements	(32)	(97)	(41)	(69)
Actuarial (gain) loss	166	224	(188)	91
Plan amendments and other	10	1	(2)	5
Exchange rate differences	(220)	261	(125)	99
Benefit obligation at December 31,	**2,746**	**2,834**	**3,280**	**3,669**
Fair value of plan assets at January 1,	**3,476**	**3,183**	**3,239**	**3,172**
Actual return on plan assets	139	147	43	178
Contributions by employer	45	18	77	89
Contributions by plan participants	39	34	9	11
Benefit payments	(132)	(134)	(226)	(236)
Settlements	(32)	(97)	(41)	(69)
Plan assets of businesses acquired (divested)	—	—	—	1
Exchange rate differences	(266)	325	(99)	93
Fair value of plan assets at December 31,	**3,269**	**3,476**	**3,002**	**3,239**
Funded status — overfunded (underfunded)	**523**	**642**	**(278)**	**(430)**

The amounts recognized in Accumulated other comprehensive loss and Noncontrolling interests were:

	Defined pension benefits		
December 31, ($ in millions)	**2024**	**2023**	**2022**
Net actuarial (loss) gain	(1,397)	(1,439)	(1,183)
Prior service credit	17	39	56
Amount recognized in OCI(1) and NCI(2)	**(1,380)**	**(1,400)**	**(1,127)**
Taxes associated with amount recognized in OCI and NCI	287	311	266
Amount recognized in OCI(1) and NCI, net of tax(3)	**(1,093)**	**(1,089)**	**(861)**

(1) OCI represents Accumulated other comprehensive loss and, in addition, includes $8 million, $14 million and $37 million at December 31, 2024, 2023 and 2022, recognized for Other postretirement benefits.
(2) NCI represents Noncontrolling interests.
(3) NCI, net of tax, amounted to $(1) million, $0 million and $(1) million at December 31, 2024, 2023 and 2022.

In addition, the following amounts were recognized in the Company's Consolidated Balance Sheets:

	Defined pension benefits			
	Switzerland		International	
December 31, ($ in millions)	**2024**	**2023**	**2024**	**2023**
Overfunded plans	523	642	165	137
Underfunded plans — current	—	—	(16)	(16)
Underfunded plans — non-current	—	—	(427)	(551)
Funded status — overfunded (underfunded)	**523**	**642**	**(278)**	**(430)**

December 31, ($ in millions)	**2024**	**2023**
Non-current assets		
Overfunded pension plans	688	779
Other employee-related benefits	1	1
Pension and other employee benefits	**689**	**780**

December 31, ($ in millions)	2024	2023
Current liabilities		
Underfunded pension plans	(16)	(16)
Underfunded other postretirement benefit plans	(2)	(3)
Other employee-related benefits	(14)	(14)
Pension and other employee benefits	**(32)**	**(33)**

December 31, ($ in millions)	2024	2023
Non-current liabilities		
Underfunded pension plans	(427)	(551)
Underfunded other postretirement benefit plans	(16)	(18)
Other employee-related benefits	(126)	(117)
Pension and other employee benefits	**(569)**	**(686)**

The accumulated benefit obligation (ABO) for all defined benefit pension plans was $5,963 million and $6,427 million at December 31, 2024 and 2023, respectively. The projected benefit obligation (PBO), ABO and fair value of plan assets, for pension plans with a PBO in excess of fair value of plan assets or ABO in excess of fair value of plan assets, was:

	PBO exceeds fair value of plan assets				ABO exceeds fair value of plan assets			
December 31,	Switzerland		International		Switzerland		International	
($ in millions)	2024	2023	2024	2023	2024	2023	2024	2023
PBO	—	—	2,116	2,315	—	—	2,109	2,311
ABO	—	—	2,071	2,257	—	—	2,065	2,253
Fair value of plan assets	—	—	1,675	1,749	—	—	1,669	1,745

Components of net periodic benefit cost

Net periodic benefit cost mainly consisted of the following:

	Defined pension benefits					
	Switzerland			International		
($ in millions)	2024	2023	2022	2024	2023	2022
Operational pension cost:						
Service cost	46	40	50	28	30	38
Operational pension cost	**46**	**40**	**50**	**28**	**30**	**38**
Non-operational pension cost (credit):						
Interest cost (credit)	35	48	13	156	166	87
Expected return on plan assets	(126)	(129)	(117)	(168)	(157)	(153)
Amortization of prior service cost (credit)	(8)	(8)	(9)	(2)	(2)	(2)
Amortization of net actuarial loss	—	—	—	52	52	58
Curtailments, settlements and special termination benefits	5	13	4	3	19	7
Non-operational pension cost (credit)(1)	**(94)**	**(76)**	**(109)**	**41**	**78**	**(3)**
Net periodic benefit cost (credit)	**(48)**	**(36)**	**(59)**	**69**	**108**	**35**

(1) Total Non-operational pension cost (credit) includes additional credits of $2 million, $19 million and $4 million at December 31, 2024, 2023 and 2022, related to Other postretirement benefits.

The components of net periodic benefit cost other than the service cost component are included in Non-operational pension cost (credit) in the Consolidated Income Statements.

Assumptions

The following weighted-average assumptions were used to determine projected benefit obligations:

	Defined pension benefits			
	Switzerland		International	
December 31, (in %)	2024	2023	2024	2023
Discount rate	0.9	1.4	4.9	4.5
Rate of compensation increase	—	—	1.6	1.7
Rate of pension increase	—	—	1.5	1.6
Cash balance interest credit rate	2.0	2.0	3.4	3.2

For the Company's significant benefit plans, the discount rate used at each measurement date is set based on a high-quality corporate bond yield curve (derived based on bond universe information sourced from reputable third-party index and data providers and rating agencies) reflecting the timing, amount and currency of the future expected benefit payments for the respective plan. Consistent discount rates are used across all plans in each currency zone, based on the duration of the applicable plan(s) in that zone. For plans in the other countries, the discount rate is based on high quality corporate or government bond yields applicable in the respective currency, as appropriate at each measurement date with a duration broadly consistent with the respective plan's obligations.

The following weighted-average assumptions were used to determine the "Net periodic benefit cost":

	Defined pension benefits					
	Switzerland			International		
(in %)	2024	2023	2022	2024	2023	2022
Discount rate	1.4	2.0	0.7	4.5	4.8	2.1
Expected long-term rate of return on plan assets	3.9	4.0	3.3	5.4	5.0	3.7
Rate of compensation increase	—	—	—	1.7	1.8	1.5
Cash balance interest credit rate	2.0	2.0	1.3	3.2	2.7	2.1

The "Expected long-term rate of return on plan assets" is derived for each benefit plan by considering the expected future long-term return assumption for each individual asset class. A single long-term return assumption is then derived for each plan based upon the plan's target asset allocation.

Plan assets

The Company has pension plans in various countries with the majority of the Company's pension liabilities deriving from a limited number of these countries.

The pension plans are typically funded by regular contributions from employees and the Company. These plans are typically administered by boards of trustees (which include Company representatives) whose primary responsibilities include ensuring that the plans meet their liabilities through contributions and investment returns. The boards of trustees have the responsibility for making key investment strategy decisions within a risk-controlled framework.

The pension plan assets are invested in diversified portfolios that are managed by third-party asset managers, in accordance with local statutory regulations, pension plan rules and the respective plans' investment guidelines, as approved by the boards of trustees.

Plan assets are generally segregated from those of the Company and invested with the aim of meeting the respective plans' projected future pension liabilities. Plan assets are measured at fair value at the balance sheet date.

The boards of trustees manage the assets of the pension plans in a risk-controlled manner and assess the risks embedded in the pension plans through asset/liability management studies. Asset/liability management studies typically take place every three years. However, the risks of the plans are monitored on an ongoing basis.

The boards of trustees' investment goal is to maximize the long-term returns of plan assets within specified risk parameters, while considering the future liabilities and liquidity needs of the individual plans. Risk measures taken into account include the funding ratio of the plan, the likelihood of extraordinary cash contributions being required, the risk embedded in each individual asset class, and the plan asset portfolio as a whole.

The Company's global pension asset allocation is the result of the asset allocations of the individual plans, which are set by the respective boards of trustees. The target asset allocation of the Company's plans on a weighted-average basis is as follows:

	Target	
(in %)	**Switzerland**	**International**
Asset class		
Equity	16	17
Fixed income	52	67
Real estate	25	2
Other	7	14
Total	**100**	**100**

The actual asset allocations of the plans are in line with the target asset allocations.

Equity securities primarily include investments in large-cap and mid-cap publicly traded companies. Fixed income assets primarily include corporate bonds of companies from diverse industries and government bonds. Both fixed income and equity assets are invested either via funds or directly in segregated investment mandates, and include an allocation to emerging markets. Real estate consists primarily of investments in real estate in Switzerland held in the Swiss plans. The "Other" asset class includes investments in private equity, insurance contracts, cash, and reflects a variety of investment strategies.

Based on the global asset allocation and the fair values of the plan assets, the expected long-term return on assets at December 31, 2024, is 4.4 percent. The Company and the local boards of trustees regularly review the investment performance of the asset classes and individual asset managers. Due to the diversified nature of the investments, the Company is of the opinion that no significant concentration of risks exists in its pension fund assets.

At December 31, 2024 and 2023, plan assets include ABB Ltd's shares (as well as an insignificant amount of the Company's debt instruments) with a total value of $9 million and $9 million, respectively.

The fair values of the Company's pension plan assets by asset class are presented below. For further information on the fair value hierarchy and an overview of the Company's valuation techniques applied, see the "Fair value measures" section of Note 2.

December 31, 2024 ($ in millions)	**Level 1**	**Level 2**	**Level 3**	**Not subject to leveling[1]**	**Total fair value**
Asset class					
Equity					
Equity securities	198				**198**
Mutual funds/commingled funds		636			**636**
Emerging market mutual funds/commingled funds		107			**107**
Fixed income					
Government and corporate securities	178	730			**908**
Government and corporate—mutual funds/commingled		2,390			**2,390**
Emerging market bonds—mutual funds/commingled funds		343			**343**
Real estate				981	**981**
Insurance contracts			184		**184**
Cash and short-term investments	157	72			**229**
Private equity			44	251	**295**
Total	**533**	**4,278**	**228**	**1,232**	**6,271**

December 31, 2023 ($ in millions)	Level 1	Level 2	Level 3	Not subject to leveling(1)	Total fair value
Asset class					
Equity					
Equity securities	64				**64**
Mutual funds/commingled funds		751			**751**
Emerging market mutual funds/commingled funds		76			**76**
Fixed income					
Government and corporate securities	160	953			**1,113**
Government and corporate—mutual funds/commingled		2,410			**2,410**
Emerging market bonds—mutual funds/commingled funds		367			**367**
Real estate				1,225	**1,225**
Insurance contracts			215		**215**
Cash and short-term investments	99	85			**184**
Private equity			60	250	**310**
Total	**323**	**4,642**	**275**	**1,475**	**6,715**

(1) Amounts relate to assets measured using the NAV practical expedient which are not subject to leveling.

The Company applies accounting guidance related to the presentation of certain investments using the net asset value (NAV) practical expedient. This accounting guidance exempts investments using this practical expedient from categorization within the fair value hierarchy. Investments measured at NAV are primarily non exchange-traded commingled or collective funds in private equity and real estate where the fair value of the underlying assets is determined by the investment manager. Investments in private equity can never be redeemed, but instead the funds will make distributions through liquidation of the underlying assets. Total unfunded commitments for the private equity funds were approximately $122 million and $108 million at December 31, 2024 and 2023, respectively. The real estate funds typically offer a redemption notice of three to twelve months.

Contributions

Employer contributions were as follows:

	Defined pension benefits			
	Switzerland		International	
($ in millions)	2024	2023	2024	2023
Total contributions to defined benefit pension plans	45	18	77	89

The Company expects to contribute approximately $85 million to its defined benefit pension plans in 2025. Of these contributions, $4 million are expected to be non-cash contributions.

The Company also contributes to a number of defined contribution plans. The aggregate expense for these plans in continuing operations was $317 million, $293 million and $269 million in 2024, 2023 and 2022, respectively. Contributions to multi-employer plans were not significant in 2024, 2023 and 2022.

Estimated future benefit payments

The expected future cash flows to be paid by the Company’s plans in respect of pension at December 31, 2024, are as follows:

	Defined pension benefits	
($ in millions)	Switzerland	International
2025	226	247
2026	202	256
2027	198	254
2028	192	253
2029	186	254
Years 2030 - 2034	852	1,208

Note 19
Share-based payment arrangements

The Company has granted share-based instruments to its employees under three principal share-based payment plans, as more fully described in the respective sections below. Compensation cost for equity-settled awards is recorded in Total cost of sales and in Selling, general and administrative expenses and totaled $102 million, $103 million and $42 million in 2024, 2023 and 2022, respectively, while compensation cost for cash-settled awards, recorded in Selling, general and administrative expenses, was not significant. The total tax benefit recognized in 2024, 2023 and 2022 was not significant.

At December 31, 2024, the Company had the ability to issue up to 94 million new shares out of contingent capital in connection with share-based payment arrangements. In addition, 7 million of the 22 million shares held by the Company as treasury stock at December 31, 2024, could be used to settle share-based payment arrangements.

As the primary trading market for the shares of ABB Ltd is the SIX Swiss Exchange (on which the shares are traded in Swiss francs) and substantially all the share-based payment arrangements with employees are based on the Swiss franc share or have strike prices set in Swiss francs, certain data disclosed below related to the instruments granted under share-based payment arrangements are presented in Swiss francs.

Employee Share Acquisition Plan

The employee share acquisition plan (ESAP) is a stock-option plan with a savings feature that is made widely available to Company employees. Employees save over a twelve-month period, by way of regular payroll deductions. At the end of the savings period, employees choose whether to exercise their stock options using their savings plus interest, if any, to buy ABB Ltd shares at the exercise price set at the grant date, or have their savings returned with any interest. The savings are accumulated in bank accounts held by a third-party trustee on behalf of the participants and earn interest, where applicable. Employees can withdraw from the ESAP at any time during the savings period and will be entitled to a refund of their accumulated savings.

The fair value of each option is estimated on the date of grant using a lattice model, using the assumptions noted in the table below. The expected term of the option granted has been determined to be the contractual one-year life of each option, at the end of which the options vest and the participants are required to decide whether to exercise their options or have their savings returned with interest. The risk-free rate is based on one-year Swiss franc interest rates, reflecting the one-year contractual life of the options. In estimating forfeitures, the Company has used the data from previous ESAP launches.

	2024	2023	2022
Expected volatility	22%	21%	25%
Dividend yield	1.8%	2.8%	3.0%
Expected term	1 year	1 year	1 year
Risk-free interest rate	0.4%	1.6%	1.1%

Presented below is a summary of activity under the ESAP:

	Number of shares (in millions)	Weighted-average exercise price (in Swiss francs)	Weighted-average remaining contractual term (in years)	Aggregate intrinsic value (in millions of Swiss francs)(1)
Outstanding at January 1, 2024	**1.8**	**30.49**		
Granted	1.5	48.41		
Forfeited	(0.1)	31.07		
Exercised(2)	(1.5)	30.49		
Not exercised (savings returned plus interest)	(0.2)	30.49		
Outstanding at December 31, 2024	**1.5**	**48.41**	**0.8**	**1**
Vested and expected to vest at December 31, 2024	**1.4**	**48.41**	**0.8**	**1**
Exercisable at December 31, 2024	**—**	**—**	**—**	**—**

(1) Computed using the closing price, in Swiss francs, of ABB Ltd shares on the SIX Swiss Exchange and the exercise price of each option in Swiss francs.

(2) The cash received in 2024 from exercises was approximately $51 million. The shares were delivered out of treasury stock.

The exercise prices per ABB Ltd share of 48.41 Swiss francs and 30.49 Swiss francs for the 2024 grant and the 2023 grant, respectively, were determined using the closing price of the ABB Ltd share on the SIX Swiss Exchange on the respective grant dates. The exercise prices per ABB Ltd share and per ADS of 27.99 Swiss francs and $28.09, respectively, for the 2022 grant were determined using the closing price of the ABB Ltd share on the SIX Swiss Exchange and ADS on the New York Stock Exchange on the grant date.

At December 31, 2024, the total unrecognized compensation cost related to non-vested options granted under the ESAP was not significant. The weighted-average grant-date fair value (per option) of options granted during 2024, 2023 and 2022 was 3.86 Swiss francs, 2.28 Swiss francs and 2.47 Swiss francs, respectively. The total intrinsic value (on the date of exercise) of options exercised in 2024 was $31 million, while for 2023 and 2022 it was not significant.

Long-Term Incentive Plan

The long-term incentive plan (LTIP) involves annual grants of the Company's stock subject to certain conditions (Performance Shares) to members of the Company's Executive Committee and selected other senior executives, as defined in the terms of the LTIP. The ultimate amount delivered under the LTIP's Performance Shares grant is based on achieving certain results against targets, as set out below, over a three-year period from grant and the final amount is delivered to the participants at the end of this period. Generally, for awards to vest, the participant has to fulfill a three-year service condition as defined in the terms and conditions of the LTIP.

The Performance Shares under the 2024, 2023 and 2022 LTIP launches include a component based on the Company's earnings per share performance (weighted 50 percent), a component based on the Company's relative total shareholder return (weighted 30 percent) and a sustainability component based on the Company's CO_2 equivalent emissions reductions (weighted 20 percent).

For the earnings per share performance component of the Performance Shares, the actual number of shares that will be delivered at a future date is based on the Company's average earnings per share over three financial years, beginning with the year of launch. The actual number of shares that will ultimately be delivered will vary depending on the earnings per share outcome as computed under each LTIP launch, interpolated between a lower threshold (no shares delivered) and an upper threshold (the number of shares delivered is capped at 200 percent of the conditional grant).

For the relative total shareholder return component of the Performance Shares, the actual number of shares that will be delivered at a future date is based on the Company's total shareholder return performance relative to a peer group of companies over a three-year period starting with the year of grant. The actual number of shares that will ultimately be delivered will vary depending on the relative total shareholder return outcome achieved between a lower threshold (no shares delivered) and an upper threshold (the number of shares delivered is capped at 200 percent of the conditional grant).

For the sustainability component of the Performance Shares, the actual number of shares that will be delivered at a future date is based on the Company's scope 1 and 2 CO_2 equivalent emissions reduction over three financial years, beginning with the year of launch, compared to 2019 baseline emissions. The actual number of shares that will ultimately be delivered will vary depending on the sustainability outcome as computed under the LTIP launch, interpolated between a lower threshold (no shares delivered) and an upper threshold (the number of shares delivered is capped at 200 percent of the conditional grant).

Certain other key employees not included in the employee group granted the Performance Shares described above, were granted Restricted Shares of the Company under the LTIP. The Restricted Shares do not have performance conditions and vest over a three-year period from the grant date.

Under the 2024, 2023 and 2022 LTIP launches, participants generally do not have the ability to receive any of the award in cash, subject to legal restrictions in certain jurisdictions.

Presented below is a summary of activity under the Performance Shares of the LTIP:

	Number of Performance Shares (in millions)	**Weighted-average grant-date fair value per share (Swiss francs)**
Nonvested at January 1, 2024	**1.6**	**33.60**
Granted	0.6	36.15
Vested	(0.8)	36.64
Forfeited	(0.1)	31.03
Nonvested at December 31, 2024	**1.4**	**33.06**

The aggregate fair value, at the dates of grant, of Performance Shares granted in 2024, 2023 and 2022 was $23 million, $24 million and $26 million, respectively. The total grant-date fair value of shares that vested during 2024 and 2023 was $31 million and $17 million, respectively, while in 2022 it was not significant. The weighted-average grant-date fair value (per share) of shares granted during 2024, 2023 and 2022 was 36.15 Swiss francs, 29.18 Swiss francs and 33.33 Swiss francs, respectively. The total fair value of Performance Shares delivered in 2024 and 2023 (including shares vested in prior years and delivered in the year) was approximately $77 million and $80 million, respectively, while in 2022 it was not significant.

Presented below is a summary of activity under the Restricted Shares of the LTIP:

	Number of Restricted Shares (in millions)	**Weighted-average grant-date fair value per share (Swiss francs)**
Nonvested at January 1, 2024	**2.3**	**29.51**
Granted	0.7	41.65
Vested	(0.8)	26.64
Forfeited	(0.1)	32.65
Nonvested at December 31, 2024	**2.1**	**34.55**

The aggregate fair value, at the dates of grant, of Restricted Shares granted in 2024, 2023 and 2022 was $34 million, $30 million and $27 million, respectively. The total grant-date fair value of shares that vested during 2024 and 2023 was $22 million and $20 million, respectively, while in 2022 it was not significant. The weighted-average grant-date fair value (per share) of shares granted during 2024, 2023 and 2022 was 41.65 Swiss francs, 31.38 Swiss francs and 30.52 Swiss francs, respectively. The total fair value of Restricted Shares delivered in 2024 and 2023 was approximately $40 million and $35 million, respectively, while in 2022 it was not significant.

Equity-settled awards are recorded in the Additional paid-in capital component of Stockholders' equity, with compensation cost recorded in Selling, general and administrative expenses over the vesting period (which is from grant date to the end of the vesting period) based on the grant-date fair value of the shares. Cash-settled awards are recorded as a liability, remeasured at fair value at each reporting date for the percentage vested, with changes in the liability recorded in Selling, general and administrative expenses.

At December 31, 2024, total unrecognized compensation cost related to equity-settled awards under the LTIP was $71 million and is expected to be recognized over a weighted-average period of 1.8 years. The compensation cost recorded in 2024, 2023 and 2022 for cash-settled awards was not significant.

For the earnings per share component of the LTIP launches, the fair value of granted shares is based on the market price of the ABB Ltd share at grant date for equity-settled awards and at each reporting date for cash-settled awards, as well as the probable outcome of the earnings per share achievement, as computed using a Monte Carlo simulation model. The main inputs to this model are the Company's and external financial analysts' revenue growth rates and Operational EBITA margin expectations. For the relative total shareholder return component of the LTIP launches, the fair value of granted shares at grant date, for equity-settled awards, and at each reporting date, for cash-settled awards, is determined using a Monte Carlo simulation model. The main inputs to this model are the Company's share price and dividend yield, the volatility of the Company's and the peer group's share price as well as the correlation between the peer companies. For the sustainability component of the LTIP launches, the fair value of granted shares is based on the market price of the ABB Ltd share at grant date for equity-settled awards and at each reporting date for cash-settled awards, as well as the probable outcome of the sustainability component achievement, as determined by internal modelling based on the Company's CO_2 equivalent emissions.

Management Incentive Plan

Up to 2019, the Company offered, under the Management Incentive Plan (MIP), options and cash-settled warrant appreciation rights (WARs) to key employees for no consideration. The options and WARs expire six years from the date of grant. Participants may exercise or sell options and exercise WARs after the vesting period, which is three years from the date of grant. No grants were made in 2024, 2023 and 2022 under the MIP.

The options granted under the MIP allow participants to purchase shares of ABB Ltd at predetermined prices. Participants may sell the options rather than exercise the right to purchase shares. Equivalent warrants are listed by a third-party bank on the SIX Swiss Exchange, which facilitates pricing and transferability of options granted under this plan. The options entitle the holder to request that the third-party bank purchase such options at the market price of equivalent listed warrants related to that MIP launch. If the participant elects to sell the options, the options will thereafter be held by a third party and, consequently, the Company's obligation to deliver shares will be toward this third party.

The fair value of each option was estimated on the date of grant using a lattice model. In 2024, 71 million options (with a conversion ratio of 5:1) were exercised, representing 14 million shares, with the shares delivered out of treasury stock. Cash received upon exercise amounted to approximately $340 million. In 2024, 2023 and 2022, the aggregate intrinsic value (on the date of exercise) of options exercised was approximately $341 million, $64 million and $143 million, respectively. At December 31, 2024, all options granted under the MIP were vested and exercisable. The aggregate intrinsic value at December 31, 2024, of options outstanding was $38 million. At December 31, 2024, there were 6 million options (with an exercise price of 17.63 Swiss francs) outstanding, representing approximately 1 million shares, with a remaining contractual term of 0.7 years.

Each WAR gives the participant the right to receive, in cash, the market price of an equivalent listed warrant on the date of exercise of the WAR. At December 31, 2024 and 2023, the number of WARs outstanding and their aggregate fair value was not significant.

Other share-based payments

The Company has other minor share-based payment arrangements with certain employees. The compensation cost related to these arrangements in 2024, 2023 and 2022 was not significant.

Note 20
Stockholders' equity

Capital

ABB Ltd is a corporation organized under the laws of Switzerland and the rights of its shareholders are governed by Swiss law and its Articles of Incorporation.

At December 31, 2024 and 2023, the Company had 1,861 million shares and 1,882 million shares, respectively, that were registered and issued.

In line with the revised provisions of Swiss corporate law effective January 1, 2023, shareholders approved, at ABB's Annual General Meeting of Shareholders (AGM) in March 2023, the introduction of a capital band ranging from 90 percent to 110 percent of the issued share capital entered in the commercial register at that time. Within this capital band, the Board of Directors is authorized to increase or reduce the share capital once or several times until March 23, 2028, or until an earlier expiry of the capital band. The Company also has contingent share capital, as specified in the ABB Ltd Articles of Incorporation, which forms a component of total authorized shares. At December 31, 2024 and 2023, the Company had a total of 2,361 million and 2,383 million authorized shares, respectively.

Dividends

At the AGM in March 2024, the shareholders approved the proposal of the Board of Directors to distribute a total of 0.87 Swiss francs per share. The approved dividend distribution amounted to $1,804 million, with the Company disbursing a portion in March 2024 and the remaining amounts in April 2024. At the AGM in March 2023, the shareholders approved the proposal of the Board of Directors to distribute a total of 0.84 Swiss francs per share. The approved dividend distribution amounted to $1,706 million, with the Company disbursing a portion in March 2023 and the remaining amounts in April 2023. At the AGM in March 2022, the shareholders approved the proposal of the Board of Directors to distribute a total of 0.82 Swiss francs per share. The approved dividend distribution amounted to $1,700 million, with the Company disbursing a portion in March 2022 and the remaining amounts in April 2022.

Amounts available to be distributed as dividends to the stockholders of ABB Ltd are based on the requirements of Swiss law and ABB Ltd's Articles of Incorporation, and are determined based on amounts presented in the unconsolidated financial statements of ABB Ltd, prepared in accordance with Swiss law. At December 31, 2024, the total unconsolidated stockholders' equity of ABB Ltd was 4,473 million Swiss francs ($4,942 million), including 223 million Swiss francs ($247 million) representing share capital, 5,234 million Swiss francs ($5,783 million) representing reserves and 984 million Swiss francs ($1,088 million) representing a reduction of equity for treasury shares. Of these amounts, 984 million Swiss francs ($1,088 million) relating to treasury shares and 45 million Swiss francs ($49 million) representing 20 percent of share capital, at December 31, 2024, are restricted by law and not available for distribution.

Treasury stock transactions

In March 2022, the Company announced a share buyback program of up to $3 billion. This program, which was launched in April 2022, was executed on a second trading line on the SIX Swiss Exchange and was completed in March 2023. In March 2023, the Company announced a share buyback program of up to $1 billion. This program, which was launched in April 2023, was executed on a second trading line on the SIX Swiss Exchange and was completed in March 2024. In March 2024, the Company announced a share buyback program of up to $1 billion. This program, which was launched in April 2024, was executed on a second trading line on the SIX Swiss Exchange and was completed in January 2025.

Under these buyback programs, in 2024, 2023 and 2022, the Company purchased 19 million, 25 million and 91 million, respectively, of its own shares, resulting in an increase in Treasury stock of $1,007 million, $893 million and $2,842 million, respectively.

At the March 2022 AGM, shareholders approved the cancellation of 88 million shares which had been purchased under the share buyback programs. The cancellation was completed in the second quarter of 2022, resulting in a decrease in Treasury stock of $2,876 million and a corresponding total decrease in Capital stock, Additional paid-in capital and Retained earnings. In the second quarter of 2023, the Company cancelled 83 million shares which had been purchased under its share buyback programs. This resulted in a decrease in Treasury stock of $2,567 million and a corresponding total decrease in Capital stock, Additional paid-in capital and Retained earnings. In the second quarter of 2024, the Company cancelled 21 million shares which had been purchased under its share buyback programs. This resulted in a decrease in Treasury stock of $832 million and a corresponding total decrease in Capital stock, Additional paid-in capital and Retained earnings.

In addition to the share buyback programs, in 2024, 2023 and 2022, the Company purchased a total of 5 million, 9 million and 20 million, respectively, of its own shares on the open market, mainly for use in connection with its employee share plans, resulting in an increase in Treasury stock of $244 million, $354 million and $660 million, respectively.

Obligations to issue shares relating to employee incentive programs

At December 31, 2024, the Company had outstanding obligations to deliver:

- approximately 1 million shares relating to the options granted under the 2019 launch of the MIP, with a strike price of 17.63 Swiss francs, vested in August 2022 and expiring in August 2025,
- up to 2 million shares relating to the ESAP, vesting and expiring in October 2025,
- up to 6 million shares to Eligible Participants under the 2024, 2023 and 2022 launches of the LTIP, vesting and expiring in April 2027, April 2026 and April 2025, respectively, and
- less than 1 million shares in connection with certain other share-based payment arrangements with employees.

See Note 19 for a description of the above share-based payment arrangements.

In 2024, 2023 and 2022, the Company delivered 17 million, 6 million and 16 million shares, respectively, out of treasury stock, for options exercised in relation to the MIP. In addition, in 2024 and 2023, the Company delivered 1.5 million and 1.3 million shares, respectively, out of treasury stock for options exercised in relation to the ESAP. The number of shares delivered in 2022 under the ESAP was not significant.

Issuance of subsidiary shares

In November 2022, the Company received gross proceeds of 203 million Swiss francs ($216 million) through a private placement of shares in its ABB E-Mobility subsidiary, ABB E-mobility Holding Ltd (ABB E-Mobility), reducing the Company's beneficial ownership in the subsidiary from 100 percent to 92 percent. This resulted in an increase in Additional paid-in capital of $120 million. In February 2023, the Company obtained an additional amount of funding raised through the private placement of new shares of ABB E-Mobility, increasing the total gross proceeds by an additional 325 million Swiss francs (approximately $351 million) and further reducing the Company’s ownership in ABB E-Mobility to 81 percent. This resulted in an increase in Additional paid-in capital of $170 million. In December 2023, an agreement was reached to increase the ownership percentage of the investors participating in these private placements to 25 percent for no additional consideration.

Declaration of dividends for the year 2024

In January 2025, the Company announced that a proposal will be put to the 2025 AGM for approval by the shareholders to distribute 0.90 Swiss francs per share to shareholders.

Note 21
Earnings per share

Basic earnings per share is calculated by dividing income by the weighted-average number of shares outstanding during the year. Diluted earnings per share is calculated by dividing income by the weighted-average number of shares outstanding during the year, assuming that all potentially dilutive securities were exercised, if dilutive. Potentially dilutive securities comprise outstanding written call options and outstanding options and shares granted subject to certain conditions under the Company’s share-based payment arrangements. In both 2024 and 2022, outstanding securities representing a maximum of 2 million shares were excluded from the calculation of diluted earnings per share as their inclusion would have been antidilutive. None were excluded in 2023.

Basic earnings per share:

($ in millions, except per share data in $)	2024	2023	2022
Amounts attributable to ABB shareholders:			
Income from continuing operations, net of tax	3,937	3,769	2,517
Loss from discontinued operations, net of tax	(2)	(24)	(42)
Net income	**3,935**	**3,745**	**2,475**
Weighted-average number of shares outstanding (in millions)	**1,844**	**1,855**	**1,899**
Basic earnings per share attributable to ABB shareholders:			
Income from continuing operations, net of tax	2.14	2.03	1.33
Loss from discontinued operations, net of tax	—	(0.01)	(0.02)
Net income	**2.13**	**2.02**	**1.30**

Diluted earnings per share:

($ in millions, except per share data in $)	2024	2023	2022
Amounts attributable to ABB shareholders:			
Income from continuing operations, net of tax	3,937	3,769	2,517
Loss from discontinued operations, net of tax	(2)	(24)	(42)
Net income	**3,935**	**3,745**	**2,475**
Weighted-average number of shares outstanding (in millions)	1,844	1,855	1,899
Effect of dilutive securities:			
Call options and shares	7	12	11
Adjusted weighted-average number of shares outstanding (in millions)	**1,851**	**1,867**	**1,910**
Diluted earnings per share attributable to ABB shareholders:			
Income from continuing operations, net of tax	2.13	2.02	1.32
Loss from discontinued operations, net of tax	—	(0.01)	(0.02)
Net income	**2.13**	**2.01**	**1.30**

Note 22
Other comprehensive income

The following table includes amounts recorded within Total other comprehensive income (loss) including the related income tax effects:

	2024			2023			2022		
($ in millions)	Before tax	Tax effect	Net of tax	Before tax	Tax effect	Net of tax	Before tax	Tax effect	Net of tax
Foreign currency translation adjustments:									
Foreign currency translation adjustments	(317)	(2)	**(319)**	(292)	2	**(290)**	(685)	—	**(685)**
Net loss on complete or substantially complete liquidations of foreign subsidiaries	14	—	**14**	—	—	**—**	5	—	**5**
Changes attributable to divestments	9	—	**9**	9	—	**9**	41	—	**41**
Net change during the year	**(294)**	**(2)**	**(296)**	**(283)**	**2**	**(281)**	**(639)**	**—**	**(639)**
Available-for-sale securities:									
Net unrealized gains (losses) arising during the year	1	—	**1**	6	(1)	**5**	(28)	5	**(23)**
Reclassification adjustments for net (gains) losses included in net income	5	(1)	**4**	8	(2)	**6**	2	—	**2**
Net change during the year	**6**	**(1)**	**5**	**14**	**(3)**	**11**	**(26)**	**5**	**(21)**
Pension and other postretirement plans:									
Prior service (costs) credits arising during the year	(15)	5	**(10)**	1	(2)	**(1)**	(2)	2	**—**
Net actuarial gains (losses) arising during the year	(24)	(13)	**(37)**	(339)	57	**(282)**	298	(72)	**226**
Amortization of prior service cost (credit) included in net income	(11)	1	**(10)**	(11)	2	**(9)**	(13)	(3)	**(16)**
Amortization of net actuarial loss included in net income	66	(19)	**47**	48	(10)	**38**	55	(11)	**44**
Net gains (losses) from settlements and curtailments included in net income	(8)	2	**(6)**	16	(2)	**14**	11	(2)	**9**
Changes attributable to divestments	—	—	**—**	3	—	**3**	(8)	—	**(8)**
Net change during the year	**8**	**(24)**	**(16)**	**(282)**	**45**	**(237)**	**341**	**(86)**	**255**
Derivative instruments and hedges:									
Net gains (losses) arising during the year	(10)	2	**(8)**	(11)	1	**(10)**	(10)	(2)	**(12)**
Reclassification adjustments for net (gains) losses included in net income	10	—	**10**	8	—	**8**	12	—	**12**
Net change during the year	**—**	**2**	**2**	**(3)**	**1**	**(2)**	**2**	**(2)**	**—**
Total other comprehensive income (loss)	**(280)**	**(25)**	**(305)**	**(554)**	**45**	**(509)**	**(322)**	**(83)**	**(405)**

The following table shows changes in Accumulated other comprehensive loss (OCI) attributable to ABB, by component, net of tax:

($ in millions)	Foreign currency translation adjustment	Unrealized gains (losses) on available-for-sale securities	Pension and other post-retirement plan adjustments	Derivative instruments and hedges	Accumulated other comprehensive loss
Balance at January 1, 2022	**(2,993)**	**2**	**(1,089)**	**(8)**	**(4,088)**
Other comprehensive (loss) income before reclassifications	(685)	(23)	226	(12)	**(494)**
Amounts reclassified from OCI	46	2	29	12	**89**
Total other comprehensive (loss) income	**(639)**	**(21)**	**255**	**—**	**(405)**
Spin-off of the Turbocharging Division	(93)	—	(5)	—	**(98)**
Less:					
Amounts attributable to noncontrolling interests	(34)	—	(1)	—	**(35)**
Balance at December 31, 2022[(1)]	**(3,691)**	**(19)**	**(838)**	**(8)**	**(4,556)**
Other comprehensive (loss) income before reclassifications	(290)	5	(283)	(10)	**(578)**
Amounts reclassified from OCI	9	6	46	8	**69**
Total other comprehensive (loss) income	**(281)**	**11**	**(237)**	**(2)**	**(509)**
Less:					
Amounts attributable to noncontrolling interests and redeemable noncontrolling interests	5	—	—	—	**5**
Balance at December 31, 2023	**(3,977)**	**(8)**	**(1,075)**	**(10)**	**(5,070)**
Other comprehensive (loss) income before reclassifications	(319)	1	(47)	(8)	**(373)**
Amounts reclassified from OCI	23	4	31	10	**68**
Total other comprehensive (loss) income	**(296)**	**5**	**(16)**	**2**	**(305)**
Less:					
Amounts attributable to noncontrolling interests and redeemable noncontrolling interests	(25)	—	—	—	**(25)**
Balance at December 31, 2024	**(4,248)**	**(3)**	**(1,091)**	**(8)**	**(5,350)**

The following table reflects amounts reclassified out of OCI in respect of Foreign currency translation adjustments and Pension and other postretirement plan adjustments:

($ in millions) Details about OCI components	Location of (gains) losses reclassified from OCI	2024	2023	2022
Foreign currency translation adjustments:				
Net loss on complete or substantially complete liquidations of foreign subsidiaries	Other income (expense), net	14	—	5
Changes attributable to divestments	Other income (expense), net	9	9	41
Amounts reclassified from OCI		**23**	**9**	**46**
Pension and other postretirement plan adjustments:				
Amortization of prior service cost (credit)	Non-operational pension (cost) credit	(11)	(11)	(13)
Amortization of net actuarial loss	Non-operational pension (cost) credit	66	48	55
Net losses from settlements and curtailments	Non-operational pension (cost) credit	(8)	16	11
Changes attributable to divestments	Other income (expense), net	—	3	(8)
Total before tax		**47**	**56**	**45**
Tax	Income tax expense	(16)	(10)	(16)
Amounts reclassified from OCI		**31**	**46**	**29**

The amounts reclassified out of OCI in respect of “Unrealized gains (losses) on available-for-sale securities” and “Derivative instruments and hedges” were not significant in 2024, 2023 and 2022.

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Note 23
Restructuring and related expenses

Restructuring-related activities

In 2024, 2023 and 2022, the Company executed various restructuring-related activities and incurred the following charges, net of changes in estimates:

($ in millions)	2024	2023	2022
Employee severance costs	111	120	81
Estimated contract settlement, loss order and other costs	11	7	209
Inventory and long-lived asset impairments	29	49	7
Total	**151**	**176**	**297**

Expenses associated with these activities are recorded in the following line items in the Consolidated Income Statements:

($ in millions)	2024	2023	2022
Total cost of sales	40	65	24
Selling, general and administrative expenses	31	52	40
Non-order related research and development expenses	11	3	2
Other income (expense), net	69	56	231
Total	**151**	**176**	**297**

In 2022, the Company completed a plan (initiated in 2021) to fully exit its full train retrofit business by transferring the remaining contracts to a third party. The Company recorded $195 million of restructuring expenses in connection with this business exit primarily for contract settlement costs. Prior to exiting this business, the business was reported as part of the Company's non-core business activities within Corporate and Other.

At December 31, 2024 and 2023, $197 million and $250 million, respectively, was recorded for restructuring-related liabilities and is primarily included in Other provisions.

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Note 24
Operating segment and geographic data

The Chief Operating Decision Maker (CODM) is the Chief Executive Officer. The CODM allocates resources to and assesses the performance of each operating segment using the information outlined below. The Company is organized into the following segments, based on products and services: Electrification, Motion, Process Automation and Robotics & Discrete Automation. The remaining operations of the Company are included in Corporate and Other.

A description of the types of products and services provided by each reportable segment is as follows:

- Electrification: manufactures and sells electrical products and solutions which are designed to provide the efficient and reliable distribution of electricity from source to socket. The portfolio of increasingly digital and connected solutions includes renewable power solutions, modular substation packages, distribution automation products, switchboards and panelboards, switchgear, UPS solutions, circuit breakers, measuring and sensing devices, control products, wiring accessories, enclosures and cabling systems and intelligent home and building solutions, designed to integrate and automate lighting, heating, ventilation, security and data communication networks. The products and services are delivered through five operating Divisions: Distribution Solutions, Smart Power, Smart Buildings, Installation Products, and Service, as well as, prior to its sale in July 2023, the Power Conversion Division.

- Motion: designs, manufactures and sells drives, motors, generators and traction converters that are driving the low-carbon future for industries, cities, infrastructure and transportation. These products, digital technology and related services enable industrial customers to increase energy efficiency, improve safety and reliability, and achieve precise control of their processes. Building on over 140 years of cumulative experience in electric powertrains, Motion combines domain expertise and technology to deliver the optimum solution for a wide range of applications in all industrial segments. In addition, Motion, along with its partners, has a leading global service presence. These products and services are delivered through seven operating Divisions: Large Motors and Generators, IEC LV Motors, NEMA Motors, Drive Products, System Drives, Service, and Traction.

- Process Automation: offers a broad range of industry-specific, integrated automation, electrification and digital solutions, as well as lifecycle services for the process, hybrid and marine industries. The product portfolio includes control technologies, industrial software, advanced analytics, sensing and measurement technology, and marine propulsion systems. In addition, Process Automation offers a comprehensive range of services, from repair to advanced digital capabilities such as remote monitoring, preventive maintenance, asset performance management, emission monitoring and cybersecurity. The products, systems and services are currently delivered through four operating Divisions: Energy Industries, Process Industries, Marine & Ports and Measurement & Analytics, as well as, prior to its spin-off in October 2022, the Turbocharging Division.

- Robotics & Discrete Automation: delivers its products, solutions and services through two operating Divisions: Robotics provides industrial and collaborative robots, autonomous mobile robotics, mapping and navigation solutions, robotic solutions, field services, spare parts and digital services. Machine Automation specializes in automation solutions based on its programmable logic controllers (PLC), industrial PCs (IPC), servo motion, transport systems and machine vision. Both divisions offer software across the entire life cycle, including engineering and simulation software as well as a comprehensive range of digital solutions.

Corporate and Other: Corporate includes headquarter costs, the Company's corporate real estate activities and Corporate Treasury while Other includes the E-mobility operating segment and other non-core operating activities as well as the operating activities of certain divested businesses.

The primary measure of profitability on which the operating segments are evaluated is Operational EBITA, which represents income from operations excluding:

- amortization expense on intangibles arising upon acquisition (acquisition-related amortization),
- restructuring, related and implementation costs,
- changes in the amount recorded for obligations related to divested businesses occurring after the divestment date (changes in obligations related to divested businesses),
- gains and losses from sale of businesses (including fair value adjustment on assets and liabilities held for sale, if any),
- acquisition- and divestment-related expenses and integration costs,
- certain other non-operational items, as well as
- foreign exchange/commodity timing differences in income from operations consisting of: (a) unrealized gains and losses on derivatives (foreign exchange, commodities, embedded derivatives), (b) realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized, and (c) unrealized foreign exchange movements on receivables/payables (and related assets/liabilities).

Certain other non-operational items generally includes certain regulatory, compliance and legal costs, certain asset write downs/impairments and certain other fair value changes, as well as other items which are determined by management on a case-by-case basis.

For all operating segments, the primary performance measure the CODM uses to allocate resources (including capital expenditure and financial resources) and assess performance as part of the monthly business review process is Operational EBITA. As part of this review process, current year-to-date budget-to-actual variances are provided (inclusive of key deviations) along with forecasted annual expectations and plans to address any negative variances. Operational EBITA is also used to assess segment performance against targets set in the annual incentive plans as part of the compensation of the Company's employees.

The CODM primarily reviews the results of each segment on a basis that is before the elimination of profits made on inventory sales between segments. Segment results below are presented before these eliminations, with a total deduction for intersegment profits to arrive at the Company's consolidated Operational EBITA. Intersegment sales and transfers are accounted for as if the sales and transfers were to third parties, at current market prices.

For a category of expense to be classified as a significant segment expense, it must be significant to the segment, regularly provided to or easily computed from information regularly provided to the CODM and included in the primary measure of profitability. Significant segment expenses include Operational cost of sales, Operational selling, general and administrative expenses, and Operational non-order related research and development costs, which respectively are comprised of Cost of sales, Selling, general and administrative expenses (excluding bad debt expense), and Non-order related research and development costs, with each of these expense categories being adjusted to exclude any costs incurred on behalf of other segments and any relevant non-operational items (as defined above).

Other segment items represent Other income (expense) excluding its respective components of non-operational items (as defined above), bad debt expense, and foreign exchange/commodity timing differences in total revenues.

The following tables present disaggregated segment revenues from contracts with customers, significant segment expenses, and Operational EBITA for 2024, 2023 and 2022:

	2024					
($ in millions)	**Electrification**	**Motion**	**Process Automation**	**Robotics & Discrete Automation**	**Corporate and Other[(1)]**	**Total**
Geographical markets						
Europe	4,566	2,241	2,443	1,648	221	**11,119**
The Americas	6,577	2,618	1,871	535	204	**11,805**
of which: United States	5,128	2,122	1,158	329	142	**8,879**
Asia, Middle East and Africa	4,047	2,353	2,408	1,020	98	**9,926**
of which: China	1,777	1,098	695	704	22	**4,296**
	15,190	**7,212**	**6,722**	**3,203**	**523**	**32,850**
Product type						
Products	14,129	6,060	3,930	2,622	476	**27,217**
Services and other	1,061	1,152	2,792	581	47	**5,633**
	15,190	**7,212**	**6,722**	**3,203**	**523**	**32,850**
Third-party revenues	15,190	7,212	6,722	3,203	523	**32,850**
Intersegment revenues	258	575	34	10	(877)	**—**
Total revenues	**15,448**	**7,787**	**6,756**	**3,213**	**(354)**	**32,850**
Operational cost of sales	(9,285)	(5,016)	(4,395)	(2,110)		
Operational selling, general and administrative expenses	(2,237)	(976)	(1,009)	(563)		
Operational non-order related research and development expenses	(454)	(330)	(336)	(219)		
Other segment items	48	53	9	8		
Operational EBITA	**3,520**	**1,518**	**1,025**	**329**		

($ in millions)	2023 Electrification	Motion	Process Automation	Robotics & Discrete Automation	Corporate and Other[(1)]	Total
Geographical markets						
Europe	4,547	2,455	2,294	1,932	340	**11,568**
The Americas	5,926	2,562	1,738	573	291	**11,090**
of which: United States	4,456	2,123	1,076	358	235	**8,248**
Asia, Middle East and Africa	3,899	2,276	2,212	1,119	71	**9,577**
of which: China	1,775	1,148	707	804	34	**4,468**
	14,372	**7,293**	**6,244**	**3,624**	**702**	**32,235**
Product type						
Products	13,437	6,219	3,661	3,063	630	**27,010**
Services and other	935	1,074	2,583	561	72	**5,225**
	14,372	**7,293**	**6,244**	**3,624**	**702**	**32,235**
Third-party revenues	14,372	7,293	6,244	3,624	702	**32,235**
Intersegment revenues	212	521	26	16	(775)	**—**
Total revenues	**14,584**	**7,814**	**6,270**	**3,640**	**(73)**	**32,235**
Operational cost of sales	(9,183)	(5,167)	(4,127)	(2,347)		
Operational selling, general and administrative expenses	(2,095)	(914)	(928)	(564)		
Operational non-order related research and development expenses	(427)	(287)	(295)	(201)		
Other segment items	58	29	(11)	8		
Operational EBITA	**2,937**	**1,475**	**909**	**536**		

	2022					
($ in millions)	**Electrification**	**Motion**	**Process Automation**	**Robotics & Discrete Automation**	**Corporate and Other(1)**	**Total**
Geographical markets						
Europe	4,199	2,031	2,248	1,494	313	**10,285**
The Americas	5,140	2,148	1,566	524	195	**9,573**
of which: United States	3,769	1,787	943	373	151	**7,023**
Asia, Middle East and Africa	4,053	2,101	2,199	1,155	80	**9,588**
of which: China	1,948	1,147	666	897	38	**4,696**
	13,392	**6,280**	**6,013**	**3,173**	**588**	**29,446**
Product type						
Products	12,535	5,380	3,311	2,695	550	**24,471**
Services and other	857	900	2,702	478	38	**4,975**
	13,392	**6,280**	**6,013**	**3,173**	**588**	**29,446**
Third-party revenues	13,392	6,280	6,013	3,173	588	**29,446**
Intersegment revenues	227	465	31	8	(731)	**—**
Total revenues	**13,619**	**6,745**	**6,044**	**3,181**	**(143)**	**29,446**
Operational cost of sales	(8,987)	(4,596)	(4,022)	(2,204)		
Operational selling, general and administrative expenses	(1,975)	(796)	(913)	(488)		
Operational non-order related research and development expenses	(389)	(241)	(299)	(169)		
Other segment items	75	51	38	20		
Operational EBITA	**2,343**	**1,163**	**848**	**340**		

(1) The amounts shown for "Intersegment revenues" within Corporate and Other primarily represents the consolidated intersegment revenue elimination. These amounts include intersegment revenues of $33 million, $67 million and $65 million for 2024, 2023 and 2022, respectively.

Revenues by geography reflect the location of the customer. In 2024, 2023 and 2022 the United States and China are the only countries where revenue exceeded 10 percent of total revenues. In each of 2024, 2023 and 2022 more than 98 percent of the Company's total revenues were generated from customers outside Switzerland.

The following tables present Operational EBITA, the reconciliations of consolidated Operational EBITA to Income from continuing operations before taxes, as well as Depreciation and amortization, and Capital expenditures for 2024, 2023 and 2022, and Total assets at December 31, 2024, 2023 and 2022:

($ in millions)	2024	2023	2022
Operational EBITA:			
Electrification	3,520	2,937	2,343
Motion	1,518	1,475	1,163
Process Automation	1,025	909	848
Robotics & Discrete Automation	329	536	340
Corporate and Other:			
— E-mobility	(273)	(167)	(15)
— Corporate costs, intersegment elimination and other	(151)	(263)	(169)
Total	**5,968**	**5,427**	**4,510**
Acquisition-related amortization	(203)	(220)	(229)
Restructuring, related and implementation costs(1)	(178)	(219)	(347)
Changes in obligations related to divested businesses	10	3	88
Gains and losses from sale of businesses	57	101	(7)
Fair value adjustment on assets and liabilities held for sale	(113)	—	—
Acquisition- and divestment-related expenses and integration costs	(73)	(74)	(195)
Foreign exchange/commodity timing differences in income from operations:			
Unrealized gains and losses on derivatives (foreign exchange, commodities, embedded derivatives)	(118)	19	32
Realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized	3	12	(48)
Unrealized foreign exchange movements on receivables/payables (and related assets/liabilities)	43	(13)	(15)
Certain other non-operational items:			
Other income/expenses relating to the Power Grids joint venture	16	36	(57)
Regulatory, compliance and legal costs	(12)	—	(317)
Business transformation costs(2)	(204)	(205)	(152)
Gains and losses from sale of investments in equity-accounted companies	—	—	43
Certain other fair value changes, including asset impairments	(107)	(10)	45
Other non-operational items	(18)	14	(14)
Income from operations	**5,071**	**4,871**	**3,337**
Interest and dividend income	206	165	72
Interest and other finance expense	(99)	(275)	(130)
Non-operational pension (cost) credit	55	17	115
Income from continuing operations before taxes	**5,233**	**4,778**	**3,394**

(1) Includes impairment of certain assets.
(2) Amounts in 2024, 2023 and 2022 include ABB Way process transformation costs of $199 million, $188 million and $131 million, respectively.

	Depreciation and amortization			**Capital expenditures(1)**			**Total assets(1) at December 31,**		
($ in millions)	2024	2023	2022	2024	2023	2022	2024	2023	2022
Electrification	395	365	382	472	386	343	13,124	12,668	12,500
Motion	161	149	141	191	171	150	6,895	7,016	6,565
Process Automation	62	56	75	62	66	100	5,330	4,971	4,598
Robotics & Discrete Automation	116	138	141	81	71	86	4,762	5,047	4,901
Corporate and Other	68	72	75	39	76	83	10,246	11,238	10,584
Consolidated	**802**	**780**	**814**	**845**	**770**	**762**	**40,357**	**40,940**	**39,148**

(1) Capital expenditures and Total assets are after intersegment eliminations and therefore reflect third-party activities only.

Other geographic information

Geographic information for long-lived assets was as follows:

	Long-lived assets at December 31,	
($ in millions)	**2024**	**2023**
Europe	2,752	2,762
The Americas	1,369	1,335
Asia, Middle East and Africa	896	938
Total	**5,017**	**5,035**

Long-lived assets represent Property, plant and equipment, net and Operating lease right-of-use assets and are shown by location of the assets. At December 31, 2024, approximately 20 percent, 11 percent and 8 percent of the Company's long-lived assets were located in the United States, China and Switzerland, respectively. At December 31, 2023, approximately 19 percent, 11 percent and 9 percent of the Company's long-lived assets were located in the United States, China and Switzerland, respectively.

Statutory Auditor's Report

To the General Meeting of ABB Ltd, Zurich

Report on the Audit of the Consolidated Financial Statements

Opinion

We have audited the consolidated financial statements of ABB Ltd and its subsidiaries (the Group), which comprise the consolidated balance sheets as at December 31, 2024 and 2023, the related consolidated income statements, consolidated statements of comprehensive income, consolidated statements of changes in stockholders' equity, and consolidated statement of cash flows for each of the years in the three-year period ended December 31, 2024, and the related notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, the consolidated financial statements (pages 55 to 120) present fairly, in all material respects, the financial position of the Group as at December 31, 2024 and 2023, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2024, in conformity with U.S. generally accepted accounting principles (U.S. GAAP) and comply with Swiss law.

Basis for Opinion

We conducted our audit in accordance with Swiss law, International Standards on Auditing (ISA) and Swiss Standards on Auditing (SA-CH). Our responsibilities under those provisions and standards are further described in the "Auditor's Responsibilities for the Audit of the Consolidated Financial Statements" section of our report. We are independent of the Group in accordance with the provisions of Swiss law, together with the requirements of the Swiss audit profession, as well as those of the International Ethics Standards Board for Accountants' International Code of Ethics for Professional Accountants (including International Independence Standards) (IESBA Code), and we have fulfilled our other ethical responsibilities in accordance with these requirements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Key Audit Matters

Revenue recognition for certain long-term fixed-price contracts using percentage-of-completion method

Valuation of goodwill for the Machine Automation reporting unit

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, we do not provide a separate opinion on these matters.

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Revenue recognition for certain long-term fixed-price contracts using percentage-of-completion method

Key Audit Matter

The Group recognizes a portion of its revenues from the sale of customized products, including long-term fixed-price contracts for integrated automation and electrification systems and solutions that are generally recognized on an over time basis using the percentage-of-completion method of accounting.

We identified the determination of estimated costs to complete related to revenue recognition of certain long-term fixed-price contracts using the percentage-of-completion method of accounting as a key audit matter. In particular, a high degree of subjective auditor judgment was required to evaluate the Group's estimate regarding the amount of future direct materials, labor and subcontractor costs, as well as indirect costs to complete the contracts.

Our response

As part of our audit, we obtained an understanding of the Group's accounting process specific to fixed-price contracts which are recognized using the percentage-of-completion method. We evaluated the design and implementation of certain internal controls over the development of estimates regarding the amount of future direct materials, labor and subcontractor costs, as well as indirect costs.

We assessed the Group's historical ability to accurately estimate costs to complete by comparing historical estimate-to-actual results for a selection of long-term contracts. We evaluated the estimate of remaining costs to be incurred for a selection of contracts by assessing progress to date and the nature and complexity of work to be performed through interviewing project managers and inspecting correspondence, if any, between the Group and the customers and/or subcontractors.

For further information on Revenue recognition for certain long-term fixed-price contracts using percentage-of-completion method refer to the following:

— Note 2 Significant accounting policies

Valuation of goodwill for the Machine Automation reporting unit

Key Audit Matter

The Group evaluates goodwill for impairment annually as of October 1, or more frequently if events or circumstances indicate that the carrying value may not be recoverable. The fair value for the quantitative impairment assessment is determined using an income approach based on the present value of the future cash flows of the reporting unit. Management's income approach to the estimate requires certain assumptions, specifically projected revenue growth rates and projected operational earnings before interest, tax, and acquisition-related amortization ("EBITA") margin.

We identified the valuation of goodwill for the Machine Automation goodwill reporting unit (GRU) as a key audit matter. The division's performance in the current financial year and its future outlook combined with a lower excess of fair value over carrying value make the goodwill impairment test and a potential impairment highly sensitive to these assumptions. A high degree of subjective auditor judgment and specialized skills and knowledge was required to evaluate the projected revenue growth rates and projected operational EBITA margins used in the Group's impairment test.

Our response

As part of our audit, we obtained an understanding of the Group's accounting process specific to impairment testing. We evaluated the design and implementation of internal control over management's review of the projected revenue growth rates and projected operational EBITA margin assumptions.

We assessed the Group's ability to accurately prepare projections for the Machine Automation reporting unit by comparing the projected revenues from past periods to actual results for the same periods. Additionally, we evaluated the assumptions of the GRU's projected revenue growth rates and projected operational EBITA margins used in management's discounted cash flow analysis by comparing projections to past historical performance of the reporting unit.

We involved valuation professionals with specialized skills and knowledge who assisted in assessing the reasonableness of the projected revenue growth rates and projected operational EBITA margins by comparing the assumptions to relevant industry trends and current market indices of comparable peer companies.

For further information on valuation of goodwill for the Machine Automation Reporting unit refer to the following:

— Note 2 Significant accounting policies

— Note 11 Goodwill and intangible assets

Other Information in the ABB Annual Reporting Suite

The Board of Directors is responsible for the other information. The other information comprises the information included in the ABB Annual Reporting Suite (consisting of the Integrated Report, the Financial Report, the Corporate Governance Report, the Compensation Report, and the Sustainability Statement), but does not include the consolidated financial statements, the statutory financial statements of ABB Ltd, the audited content of the compensation report and our auditor's reports thereon.

Our opinion on the consolidated financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated.

If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Board of Directors' Responsibilities for the Consolidated Financial Statements

The Board of Directors is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with U.S. GAAP and the provisions of Swiss law, and for such internal control as the Board of Directors determines is necessary to enable the preparation and fair presentation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, the Board of Directors is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Board of Directors either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

Auditor's Responsibilities for the Audit of the Consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Swiss law, ISA and SA-CH will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with Swiss law, ISA and SA-CH, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

— Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

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— Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.

— Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made.

— Conclude on the appropriateness of the Board of Directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.

— Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

— Plan and perform the group audit to obtain sufficient appropriate audit evidence regarding the financial information of the entities or business units within the Group as a basis for forming an opinion on the consolidated financial statements. We are responsible for the direction, supervision and review of the audit work performed for purposes of the group audit. We remain solely responsible for our audit opinion.

We communicate with the Board of Directors or its relevant committee regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide the Board of Directors or its relevant committee with a statement that we have complied with relevant ethical requirements regarding independence, and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, actions taken to eliminate threats or safeguards applied.

From the matters communicated to the Board of Directors or its relevant committee, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report, unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

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Report on Other Legal and Regulatory Requirements

In accordance with Art. 728a para. 1 item 3 CO and PS-CH 890, we confirm that an internal control system exists, which has been designed for the preparation of the consolidated financial statements according to the instructions of the Board of Directors.

We recommend that the consolidated financial statements submitted to you be approved.

KPMG AG

Achim Wolper
Licensed Audit Expert
Auditor in Charge

Mohamad Midani

Zurich, Switzerland
February 26, 2025

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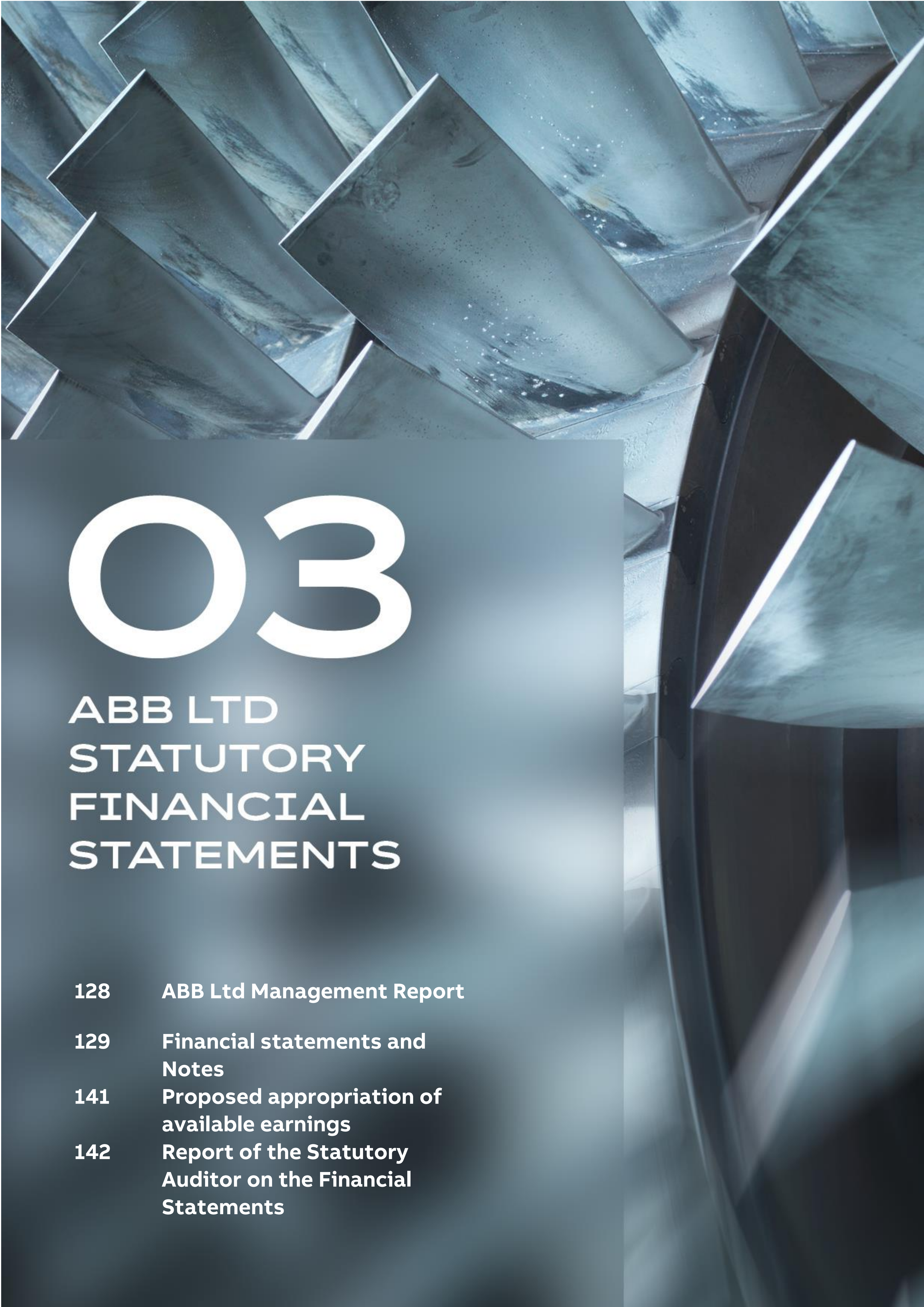

03

ABB LTD STATUTORY FINANCIAL STATEMENTS

ABB LTD MANAGEMENT REPORT 2024

ABB Ltd is the holding company of the ABB Group, owning directly or indirectly all subsidiaries globally. The major business activities during 2024 can be summarized as follows:

Management services

The Company provided management services to Group companies for CHF 27 million.

Share transactions

- share deliveries in relation to employee share programs of CHF 670 million
- share cancellations of CHF 733 million: those shares were repurchased under share buyback program in 2023/24
- share repurchases of CHF 881 million under share buyback program in 2024/25 for cancellation purposes
- share repurchases for employee share programs of CHF 216 million

Dividend distribution to external shareholders

- from retained earnings brought forward of CHF 1,451 million

Other information

In 2024, the Company employed on average 18 employees.

Once a year, the Company's Board of Directors performs a risk assessment in accordance with the Group's risk management process and discusses appropriate actions if necessary.

The Company does not carry out any research and development activities.

In 2025, the Company will continue to operate as the holding company of the ABB Group. No change of business is expected.

February 26, 2025

FINANCIAL STATEMENTS 2024

INCOME STATEMENT

Year ended December 31 (CHF in thousands)	Note	2024	2023
Dividend income	7	2,600,000	—
Finance income		60,257	126,228
Other operating income	8	32,935	31,718
Gain on sale of participation	2	8,019	536
Total income		**2,701,211**	**158,482**
Finance expense		(193,820)	(169,504)
Personnel expenses		(55,904)	(58,981)
Other operating expenses	9	(17,781)	(15,705)
Total expenses		**(267,505)**	**(244,190)**
Net income/(loss) before taxes		**2,433,706**	**(85,708)**
Net income/(loss)		**2,433,706**	**(85,708)**

BALANCE SHEET

December 31 (CHF in thousands)	Note	2024	2023
Cash		302	545
Cash deposit with ABB Capital Ltd		391,648	189,664
Non-trade receivables		1,137	81
Non-trade receivables – Group		87,672	48,750
Short-term loans – Group		22,628	271,814
Accrued income and prepaid expenses		188	1,440
Accrued income and prepaid expenses – Group		43	195
Total current assets		**503,618**	**512,489**
Long-term loans – Group		248,902	—
Participations	2	5,709,367	5,709,367
Other non-current assets		3,839	5,102
Total non-current assets		**5,962,108**	**5,714,469**
Total assets		**6,465,726**	**6,226,958**
Interest-bearing liabilities	4	150,003	280,013
Interest-bearing liabilities – Group	4	22,628	271,814
Non-trade payables		25,184	29,974
Non-trade payables – Group		8,976	1,696
Current provisions		8,545	35,030
Deferred income and accrued expenses		28,414	33,109
Deferred income and accrued expenses – Group		4,243	12,520
Total current liabilities		**247,993**	**664,156**
Interest-bearing liabilities	4	1,495,399	1,645,534
Interest-bearing liabilities – Group	4	248,902	—
Total non-current liabilities		**1,744,301**	**1,645,534**
Total liabilities		**1,992,294**	**2,309,690**
Share capital	6	223,274	225,840
Legal retained earnings	6	1,000,000	1,000,000
Treasury shares	6	(984,382)	(1,290,941)
Available earnings			
Retained earnings brought forward	6	1,800,834	4,068,077
Net income/(loss)		2,433,706	(85,708)
Total shareholders' equity		**4,473,432**	**3,917,268**
Total liabilities and shareholders’ equity		**6,465,726**	**6,226,958**

NOTES TO THE FINANCIAL STATEMENTS

Note 1
General

ABB Ltd, Zurich, Switzerland (the Company) is the parent company of the ABB Group. Its stand-alone financial statements are prepared in accordance with Article 957 et seqq. of Title 32 of the Swiss Code of Obligations.

Group companies are all companies which are directly or indirectly controlled by the Company and any variable interest entities if it is determined that the Company is the primary beneficiary.

Note 2
Participations

			2024		2023	
Company name	Purpose	Domicile	Share capital	Ownership and voting rights	Share capital	Ownership and voting rights
ABB Asea Brown Boveri Ltd	Holding	CH-Zurich	CHF 2,767,880,000	100.00%	CHF 2,767,880,000	100.00%

Participations are valued at the lower of cost or fair value, using generally accepted valuation principles.

In 2024, an adjustment of CHF 8 million was recorded in “Gain on sale of participation” related to the sale of Power Grids business.

Note 3
Indirect Participations

The following table sets forth the name, country of incorporation, ownership and voting rights, as well as share capital, of the significant indirect subsidiaries of the Company, as of December 31, 2024 and 2023.

Company name/Location	Country	Company ownership and voting rights % 2024	Share capital in thousands 2024	Company ownership and voting rights % 2023	Share capital in thousands 2023	Currency
ABB S.A.U., Buenos Aires	Argentina	100.00	25,659,498	—[2]	—[2]	ARS
ABB Australia Pty. Limited, Moorebank	Australia	100.00	71,218	100.00	131,218	AUD
ABB Group Holdings Pty. Ltd., Moorebank	Australia	—[3]	—[3]	100.00	537,988[5]	AUD
ABB Group Investment Management Pty. Ltd., Moorebank	Australia	100.00	403,318	100.00	520,318[5]	AUD
ABB AG, Wiener Neudorf	Austria	100.00	15,000	100.00	15,000	EUR
B&R Holding GmbH, Eggelsberg	Austria	100.00	35	100.00	35	EUR
B&R Industrial Automation GmbH, Eggelsberg	Austria	100.00	1,240	100.00	1,240	EUR
ABB N.V., Zaventem	Belgium	100.00	4,000	100.00	4,000	EUR
ABB AUTOMAÇÃO LTDA., Sorocaba	Brazil	100.00	191,039	100.00	191,039	BRL

Company name/Location	Country	Company ownership and voting rights % 2024	Share capital in thousands 2024	Company ownership and voting rights % 2023	Share capital in thousands 2023	Currency
ABB ELETRIFICAÇÃO LTDA., Sorocaba	Brazil	100.00	268,759	100.00	268,759	BRL
ABB Bulgaria EOOD, Sofia	Bulgaria	100.00	65,110	100.00	65,110	BGN
ABB Electrification Canada Inc., Saint-Laurent	Canada	100.00	—(1)	100.00	—(1)	CAD
ABB Inc., Saint-Laurent	Canada	100.00	—(1)	100.00	—(1)	CAD
ABB S.A., Santiago	Chile	100.00	5,484,348	100.00	5,484,348	CLP
ABB (China) Investment Limited, Beijing	China	100.00	95,000	100.00	95,000	USD
ABB (China) Ltd., Beijing	China	100.00	140,000	100.00	140,000	USD
ABB Beijing Drive Systems Co. Ltd., Beijing	China	90.00	5,000	90.00	5,000	USD
ABB Beijing Switchgear Limited, Beijing	China	60.00	16,500	60.00	16,500	USD
ABB Electrical Machines Ltd., Shanghai	China	100.00	14,400	100.00	14,400	USD
ABB Engineering (Shanghai) Ltd., Shanghai	China	100.00	40,000	100.00	40,000	USD
ABB LV Installation Materials Co. Ltd. Beijing, Beijing	China	85.70	17,100	85.70	17,100	USD
ABB Shanghai Free Trade Zone Industrial Co., Ltd., Shanghai	China	100.00	6,500	100.00	6,500	CNY
ABB Shanghai Motors Co. Ltd., Shanghai	China	75.00	11,217	75.00	11,217	USD
ABB Xiamen Low Voltage Equipment Co. Ltd., Xiamen	China	100.00	15,800	100.00	15,800	USD
ABB Xiamen Switchgear Co. Ltd., Xiamen	China	66.52	29,500	66.52	29,500	USD
ABB Xinhui Low Voltage Switchgear Co. Ltd., Xinhui	China	90.00	6,200	90.00	6,200	USD
ABB s.r.o., Prague	Czech Republic	100.00	400,000	100.00	400,000	CZK
ABB A/S, Middelfart(6)	Denmark	100.00	100,000	100.00	100,000	DKK
ABB for Electrical Industries (ABB ARAB) S.A.E., Cairo	Egypt	100.00	353,479	100.00	353,479	EGP
Asea Brown Boveri S.A.E., Cairo	Egypt	100.00	166,000	100.00	166,000	USD
ABB AS, Jüri	Estonia	100.00	1,663	100.00	1,663	EUR
ABB Oy, Helsinki	Finland	100.00	10,003	100.00	10,003	EUR
ABB France, Cergy Pontoise	France	99.84	25,778	99.84	25,778	EUR
ABB SAS, Cergy Pontoise	France	100.00	45,921	100.00	45,921	EUR
ABB AG, Mannheim	Germany	100.00	167,500	100.00	167,500	EUR
ABB Beteiligungs- und Verwaltungsgesellschaft mbH, Mannheim	Germany	100.00	61,355	100.00	61,355	EUR
ABB Stotz-Kontakt GmbH, Heidelberg	Germany	100.00	7,500	100.00	7,500	EUR
ABB Striebel & John GmbH, Sasbach	Germany	100.00	1,050	100.00	1,050	EUR
B + R Industrie-Elektronik GmbH, Friedberg(7)	Germany	100.00	358	100.00	358	EUR
Busch-Jaeger Elektro GmbH, Lüdenscheid	Germany	100.00	1,535	100.00	1,535	EUR
ABB Business Services Private Limited, Bangalore(8)	India	100.00	5,200,100	100.00	5,200,100	INR
ABB Global Industries and Services Private Limited, Bangalore	India	100.00	366,923	100.00	366,923	INR
ABB India Limited, Bangalore	India	75.00	423,817	75.00	423,817	INR
ABB Limited, Dublin	Ireland	100.00	635	100.00	635	EUR
ABB E-mobility S.p.A., Milan	Italy	74.34	20,000	74.70	20,000	EUR
ABB S.p.A., Milan	Italy	100.00	110,000	100.00	110,000	EUR
ABB K.K., Tokyo	Japan	100.00	1,000,000	100.00	1,000,000	JPY
ABB Ltd., Seoul	Korea, Republic of	100.00	16,950,000	100.00	23,670,000	KRW
ABB Electrical Control Systems S. de R.L. de C.V., Monterrey	Mexico	100.00	712,463	100.00	712,463	MXN
ABB Mexico S.A. de C.V., San Luis Potosi	Mexico	100.00	1,135,752	100.00	1,135,752	MXN
Asea Brown Boveri S.A. de C.V., San Luis Potosi	Mexico	100.00	667,686	100.00	667,686	MXN
ABB B.V., Rotterdam	Netherlands	100.00	9,200	100.00	9,200	EUR
ABB E-mobility B.V., Delft	Netherlands	74.34	1	74.70	1	EUR
ABB Finance B.V., Rotterdam	Netherlands	100.00	20	100.00	20	EUR
ABB Holdings B.V., Rotterdam	Netherlands	100.00	363	100.00	363	EUR
ABB AS, Fornebu	Norway	100.00	134,550	100.00	134,550	NOK
ABB Electrification Norway AS, Skien	Norway	100.00	60,450	100.00	60,450	NOK
ABB Holding AS, Fornebu	Norway	100.00	240,000	100.00	240,000	NOK
ABB Business Services Sp. z o.o., Warsaw	Poland	99.94	24	99.94	24	PLN
ABB Sp. z o.o., Warsaw	Poland	99.94	245,461	99.94	245,461	PLN
Industrial C&S of P.R. LLC, Arecibo	Puerto Rico	100.00	—(1)	100.00	—(1)	USD

Company name/Location	Country	Company ownership and voting rights % 2024	Share capital in thousands 2024	Company ownership and voting rights % 2023	Share capital in thousands 2023	Currency
ABB Electrical Industries Co. Ltd., Riyadh	Saudi Arabia	65.00	100,000	65.00	181,000	SAR
ABB Pte. Ltd., Singapore	Singapore	100.00	32,797	100.00	32,797	SGD
ABB Holdings (Pty) Ltd., Modderfontein	South Africa	100.00	217,758	100.00	217,758	ZAR
ABB Investments (Pty) Ltd., Modderfontein	South Africa	51.00	185,978	51.00	185,978	ZAR
ABB South Africa (Pty) Ltd., Modderfontein	South Africa	74.91	3,835,544	74.91	3,835,544	ZAR
Asea Brown Boveri S.A., Madrid	Spain	100.00	33,318	100.00	33,318	EUR
ABB AB, Västerås	Sweden	100.00	200,000	100.00	200,000	SEK
ABB Electrification Sweden AB, Västerås	Sweden	100.00	10,000	100.00	10,000	SEK
ABB Norden Holding AB, Västerås	Sweden	100.00	2,344,783	100.00	2,344,783	SEK
ABB Capital AG, Zurich	Switzerland	100.00	100	100.00	100	CHF
ABB E-mobility Holding Ltd, Zurich	Switzerland	74.34	1,138	74.70	1,138	CHF
ABB Schweiz AG, Baden	Switzerland	100.00	55,000	100.00	55,000	CHF
ABB Ltd., Taipei	Taiwan (Chinese Taipei)	100.00	195,000	100.00	195,000	TWD
ABB Elektrik Sanayi A.S., Istanbul	Türkiye	99.99	165,000	99.99	165,000	TRY
ABB Industries (L.L.C.), Dubai	United Arab Emirates	100.00	5,000	49.00(4)	5,000(4)	AED
ABB Industries FZE, Dubai	United Arab Emirates	100.00	3,000	100.00	3,000	AED
ABB Holdings Limited, Warrington	United Kingdom	100.00	226,014	100.00	226,014	GBP
ABB Limited, Warrington	United Kingdom	100.00	120,000	100.00	120,000	GBP
ABB E-mobility Inc., Wilmington, DE	United States	74.34	—	74.70	—	USD
ABB Finance (USA) Inc., Wilmington, DE	United States	100.00	1	100.00	1	USD
ABB Holdings Inc., Cary, NC	United States	100.00	2	100.00	2	USD
ABB Inc., Cary, NC	United States	100.00	1	100.00	1	USD
ABB Installation Products Inc., Memphis, TN	United States	100.00	1	100.00	1	USD
ABB Motors and Mechanical Inc., Fort Smith, AR	United States	100.00	—(1)	100.00	—(1)	USD
ABB Treasury Center (USA), Inc., Wilmington, DE	United States	100.00	1	100.00	1	USD
Edison Holding Corporation, Wilmington, DE	United States	100.00	—(1)	100.00	—(1)	USD
Industrial Connections & Solutions LLC, Cary, NC	United States	100.00	—(1)	100.00	—(1)	USD

(1) Shares without par value.
(2) Based on the internally defined thresholds, these indirect participations are considered not significant, and therefore no details to these participations are disclosed in the respective year.
(3) Participation was either sold, liquidated or merged in 2024.
(4) Company consolidated as ABB exercises full management control.
(5) Share capital adjusted to current facts and circumstances.
(6) In 2024, location changed from Skovlunde to Middelfart.
(7) In 2024, location changed from Bad Homburg to Friedberg.
(8) In 2024, name changed from ABB Global Business Services and Contracting India Private Limited to ABB Business Services Private Limited.

Note 4
Interest-bearing liabilities

December 31 (CHF in thousands)		2024	2023
Bonds 2019 – 2024 0.3% coupon	nominal value	—	280,000
	premium on issuance	—	13
Bonds 2019 – 2029 1.0% coupon	nominal value	170,000	170,000
	premium on issuance	94	115
Bonds 2022 – 2025 2.10% coupon	nominal value	150,000	150,000
	premium on issuance	3	7
Bonds 2022 – 2027 0.75% coupon	nominal value	425,000	425,000
	premium on issuance	289	393
Bonds 2022 – 2030 2.375% coupon	nominal value	150,000	150,000
	premium on issuance	16	19
Bonds 2023 – 2026 1.965% coupon	nominal value	325,000	325,000
	premium on issuance	—	—
Bonds 2023 – 2028 1.9775% coupon	nominal value	150,000	150,000
	premium on issuance	—	—
Bonds 2023 – 2033 2.1125% coupon	nominal value	275,000	275,000
	premium on issuance	—	—
Loan 2016 – 2028 $300 million (in 2023 $325 million)		271,530	271,814
Total		**1,916,932**	**2,197,361**

Bonds are valued at nominal value. Any bond premium is accrued over the duration of the bond so that at maturity, the balance sheet amount equals the amount that is due to be paid.

In August 2024, the Company repaid at maturity its CHF 280 million 0.3% bonds.

In September 2023, the Company issued the following bonds: (i) CHF 325 million 1.965% bonds due in 2026, (ii) CHF 150 million 1.9775% bonds due in 2028 and (iii) CHF 275 million 2.1125% bonds due in 2033. Each of the respective bonds pays interest annually. The Company has the option, three months before their maturity date, to redeem each of these bonds, in whole but not in part, at par plus accrued interest. Further, the Company has the option to redeem the above bonds prior to maturity, in whole but not in part, at par plus accrued interest, if 85% or more of the aggregate principal amount of the relevant bond issue has been redeemed or purchased and cancelled at the time of the option exercise notice.

In October 2022, the Company issued the following bonds: (i) CHF 150 million 2.1% bonds due in 2025 and (ii) CHF 150 million 2.375% bonds due in 2030. Each of the respective bonds pays interest annually. The Company has the option, three months before their maturity date, to redeem each of these bonds, in whole but not in part, at par plus accrued interest. Further, the Company has the option to redeem the above bonds prior to maturity, in whole but not in part, at par plus accrued interest, if 85% or more of the aggregate principal amount of the relevant bond issue has been redeemed or purchased and cancelled at the time of the option exercise notice.

In March 2022, the Company issued CHF 425 million 0.75% bonds due in 2027. The interest on those bonds is paid annually. The Company has the option, one month before their maturity date, to redeem the bonds, in whole but not in part, at par plus accrued interest. Further, the Company has the option to redeem the bonds prior to maturity, in whole but not in part, at par plus accrued interest, if 85% or more of the aggregate principal amount of the relevant bond issue has been redeemed or purchased and cancelled at the time of the option exercise notice.

In February 2019, the Company issued CHF 170 million 1.0% bonds due in 2029. The interest on those bonds is paid annually in May. The Company has the option, three months before their maturity date, to redeem the bonds, in whole but not in part, at par plus accrued interest. Further, the Company has the option to redeem the bonds prior to maturity, in whole but not in part, at par plus accrued interest, if 85% or more of the aggregate principal amount of the relevant bond issue has been redeemed or purchased and cancelled at the time of the option exercise notice.

In 2016, the Company entered into an 8-year borrowing agreement of USD 500 million with ABB Capital Ltd to hedge a USD 500 million loan granted to a Group Company. In 2024, the borrowing agreement was amended and extended by 4 years. Both the original and the extended agreement have an amortization schedule of USD 25 million per annum. The average interest in 2024 and 2023 was 6.20% and 6.01%, respectively.

Note 5
Contingent liabilities

With certain Group companies, the Company has keep-well agreements. A keep-well agreement is a shareholder agreement between the Company and a Group company. These agreements provide for maintenance of a minimum net worth in the Group company and the maintenance of 100% direct or indirect ownership by the Company.

The keep-well agreements additionally provide that if at any time the Group company has insufficient liquid assets to meet any payment obligation on its debt (as defined in the agreements) and has insufficient unused commitments under its credit facilities with its lenders, the Company will make available to the Group company sufficient funds to enable it to fulfill such payment obligation as it falls due. A keep-well agreement is not a guarantee by the Company for payment of the indebtedness, or any other obligation, of a Group company. No party external to the ABB Group is a party to any keep-well agreement.

The Company has also provided certain guarantees securing the payment obligations of certain Group companies in connection with debt issuance and commercial paper programs, indentures, or other debt instruments. The amount guaranteed under these instruments was CHF 4,494 million as of December 31, 2024, and CHF 4,534 million as of December 31, 2023.

Additionally, the Company has provided certain guarantees securing the performance of contracts and undertakings of Group companies with third parties entered into in the normal course of business with an aggregate value of CHF 72 million as per December 31, 2024, and CHF 67 million as per December 31, 2023.

Furthermore, the Company is the guarantor in the Group's USD 2 billion multicurrency revolving credit facility ("Group Facility"). In December 2019, the Group Facility was entered into and originally scheduled to mature in 2024. In 2021, the Company exercised its option to extend the maturity of this facility to 2026. No amounts were drawn under this Group Facility at December 31, 2024 and 2023.

The Company through certain of its direct and indirect subsidiaries is involved in various regulatory and legal matters. The Company's direct and indirect subsidiaries have made certain related provisions as further described in "Note 15 Commitments and contingencies" to the Consolidated Financial Statements of ABB Ltd. As described in the note, there is a risk of adverse outcomes beyond the provisioned amounts.

The Company is part of a value added tax Group and therefore is jointly liable to the Swiss Federal Tax Department for the value added tax liabilities of the other members.

Note 6
Stockholders' equity

		Legal reserves	Available earnings			
(CHF in thousands)	Share capital	from retained earnings	from retained earnings brought forward	Net income /(loss)	Treasury shares	Total
Opening balance at January 1, 2024	**225,840**	**1,000,000**	**4,068,077**	**(85,708)**	**(1,290,941)**	**3,917,268**
Allocation to retained earnings brought forward			(85,708)	85,708		—
Cancellation of shares	(2,566)		(730,422)		732,988	—
Dividend payment CHF 0.87 per share			(1,451,113)			**(1,451,113)**
Purchases of treasury shares					(1,096,075)	**(1,096,075)**
Delivery of treasury shares					669,646	**669,646**
Net income/(loss) for the year				2,433,706		**2,433,706**
Closing balance at December 31, 2024	**223,274**	**1,000,000**	**1,800,834**	**2,433,706**	**(984,382)**	**4,473,432**

Share capital as of December 31, 2024	Number of registered shares	Par value (CHF)	Total (CHF in thousands)
Issued shares	1,860,614,888	0.12	223,274
Contingent shares	304,038,800	0.12	36,485
Capital Band available increase	196,474,500	0.12	23,577
Capital Band available decrease	(92,344,313)	0.12	(11,081)
Share capital as of December 31, 2023	**Number of registered shares**	**Par value (CHF)**	**Total (CHF in thousands)**
Issued shares	1,882,002,575	0.12	225,840
Contingent shares	304,038,800	0.12	36,485
Capital Band available increase	196,474,500	0.12	23,577
Capital Band available decrease	(113,732,000)	0.12	(13,648)

Treasury shares are valued at acquisition cost. During 2024 and 2023, a loss from the delivery of treasury shares of CHF 116 million and CHF 46 million, respectively, was recorded in the Income Statement under Finance expense.

During 2024, a bank holding call options related to ABB Group's management incentive plan (MIP) exercised a portion of these options. Such options had been issued in 2018 and 2019 by the Group company that facilitates the MIP at fair value and had adjusted strike prices of CHF 22.05 and CHF 17.63, respectively. At issuance, the Group company had entered into an intercompany option agreement with the Company, having the same terms and conditions to enable it to meet its future obligations. As a result of the exercise by the bank, the Company delivered 14,386,669 shares at CHF 22.05 and 2,398,642 shares at CHF 17.63, out of treasury shares. During 2023, a bank holding call options related to ABB Group's management incentive plan (MIP) exercised a portion of these options. Such options had been issued in 2017 and 2019 by the Group company that facilitates the MIP at fair value and had strike prices of CHF 21.23 and CHF 17.63, respectively. At issuance, the Group company had entered into an intercompany option agreement with the Company, having the same terms and conditions to enable it to meet its future obligations. As a result of the exercise by the bank, the Company delivered to the bank 1,440,850 shares at CHF 21.23 and 4,082,844 shares at CHF 17.63, out of treasury shares.

The ABB Group has an annual employee share acquisition plan (ESAP) which provides share options to employees globally. To enable the Group company that facilitates the ESAP to deliver shares to employees who have exercised their stock options under the ESAP, the Group company entered into an agreement with the Company to acquire the required number of shares at their then market value from the Company.

Consequently, in 2024, the Company delivered, out of treasury shares, to the Group company 1,531,249 shares at CHF 49.85. In 2023, the Company delivered, out of treasury shares, to the Group company 1,266,178 shares at CHF 33.54.

In 2024 and 2023, the Company transferred 2,659,053 and 3,484,043 treasury shares at an average acquisition price per share of CHF 33.15 and CHF 29.16, respectively, to fulfill its obligations under other share-based arrangements.

In 2024, the Company purchased 5 million shares, for CHF 216 million, to support its employee share programs globally and 19 million shares, for CHF 881 million, as part of its share buyback programs for capital reduction purposes announced on March 28, 2024, and March 31, 2023. In 2023, the Company purchased 9 million shares, for CHF 310 million, to support its employee share programs globally and 25 million shares, for CHF 804 million, as part of its share buyback programs for capital reduction purposes announced on March 31, 2023, and March 31, 2022.

Following the introduction of a capital band as approved by the Company's shareholders at its Annual General Meeting 2023, the Company has a capital band ranging from CHF 212 million (lower limit) to CHF 259 million (upper limit). The Board of Directors is authorized within the capital band to increase or reduce the share capital once or several times and in any amounts or to acquire or dispose of shares directly or indirectly, until March 23, 2028, or until an earlier expiry of the capital band.

In 2024, the Board of Directors resolved to cancel under the above referred capital band 21,387,687 shares repurchased under 2023/24 share buyback program. These shares were cancelled in May 2024, resulting in a reduced total number of issued ABB Ltd shares of 1,860,614,888, and a decrease of CHF 733 million in treasury shares and a corresponding combined decrease in share capital and retained earnings brought forward.

The movement in the number of treasury shares during the year was as follows:

	2024		2023	
	Number of shares	Average acquisition price per share (in CHF)	Number of shares	Average acquisition price per share (in CHF)
Opening balance as of January 1	**40,495,329**	**31.88**	**99,741,744**	**28.77**
Purchases for employee share programs	5,112,500	42.16	9,100,000	34.08
Purchases for intended cancellation	19,178,071	45.91	24,670,000	32.58
Cancellation	(21,387,687)	34.27	(82,742,500)	28.88
Delivery for employee share programs	(20,975,613)	31.92	(10,273,915)	29.40
Closing balance as of December 31	**22,422,600**	**43.90**	**40,495,329**	**31.88**
Thereof pledged for MIP	406,303		2,919,226	

Note 7
Dividend income

In 2024, the Company received dividend payments from ABB Asea Brown Boveri Ltd of CHF 2.6 billion in cash. As planned, the Company did not receive any dividend payments in 2023 from ABB Asea Brown Boveri Ltd.

Note 8
Other operating income

Other operating income includes mainly outgoing charges for Business Area and Division management services and guarantee compensation fees to Group companies.

Note 9
Other operating expenses

In 2024 and 2023, Other operating expenses included usual operating expenses.

Note 10
Shareholdings of Board members and Executive Committee members

At December 31, 2024 and 2023, the members of the Board of Directors as of that date, held the following numbers of shares:

Board ownership of ABB shares	**Total numbers of shares held**	
Name	**December 31, 2024**	**December 31, 2023**
Peter Voser	206,652	215,876
Jacob Wallenberg	—	251,318
Gunnar Brock	—	41,785
David Constable	49,070	46,319
Frederico Curado	62,905	57,181
Lars Förberg	86,927	80,095
Johan Forssell	1,283	—
Denise Johnson	9,723	3,929
Jennifer Xin-Zhe Li	49,968	45,812
Geraldine Matchett	39,530	36,023
David Meline(1)	51,387	47,948
Mats Rahmström(2)	4,858	—
Total	**562,303**	**826,286**

(1) Includes 3,150 shares held by spouse.
(2) Includes 735 shares held by family members.

As part of their compensation, the members of the Board received 62,444 shares (amounting to CHF 3,262,500) and 87,948 shares (amounting to CHF 3,290,000) in 2024 and 2023, respectively.

At December 31, 2024, the members of the Executive Committee as of that date, held the following number of shares, the conditional rights to receive ABB shares under the Long-term Incentive Plan (LTIP) and unvested shares in respect of other compensation arrangements.

		Unvested at December 31, 2024					
Name	**Total number of shares held at December 31, 2024**	**Reference number of shares under the 2022 performance factors (EPS, TSR and sustainability) of the LTIP[1] (vesting 2025)**	**Reference number of shares under the 2023 performance factors (EPS, TSR and sustainability) of the LTIP[1] (vesting 2026)**	**Reference number of shares under the 2024 performance factors (EPS, TSR and sustainability) of the LTIP[1] (vesting 2027)**	**Replacement share grant for foregone benefits from former employer[2] (vesting 2025)**	**Replacement share grant for foregone benefits from former employer[2] (vesting 2026)**	**Replacement share grant for foregone benefits from former employer[2] (vesting 2027)**
Morten Wierod (CEO as of August 1, 2024)	170,999	28,736	31,210	59,509	—	—	—
Timo Ihamuotila	200,000	31,609	31,691	26,184	—	—	—
Carolina Granat[3]	38,018	23,148	23,208	19,175	—	—	—
Mathias Gärtner (EC member as of November 1, 2024)	—	—	—	31,738	6,275	33,057	34,002
Karin Lepasoon	690	19,157	19,207	15,869	—	—	—
Sami Atiya	100,000	25,543	25,609	21,159	—	—	—
Peter Terwiesch	100,330	26,501	27,529	22,746	—	—	—
Brandon Spencer (EC member as of August 1, 2024)	—	9,541	16,013	26,545	—	—	—
Giampiero Frisio (EC member as of August 1, 2024)	1,381	14,404	21,249	30,091	—	—	—
Total Executive Committee members at December 31, 2024	**611,418**	**178,639**	**195,716**	**253,016**	**6,275**	**33,057**	**34,002**

(1) The final 2022 LTIP, 2023 LTIP and 2024 LTIP awards will be settled 100 percent in shares, with an automatic sell-to-cover in place for employees who are subject to withholding taxes.

(2) The first tranche of the replacement share grant consists of Restricted Share Units and will vest one year after the grant. The second and the third tranche of the replacement share grant consist of Performance Share Units and will vest two respectively three years after the grant. The vesting level of the Performance Share Units depends on the achievement of the applicable performance targets. The final replacement awards will be settled 100 percent in shares. Shares are entitled to receive dividend equivalent payment on the final number of vested shares.

(3) This includes 1,200 shares held by spouse.

At December 31, 2023, the members of the Executive Committee, as of that date, held the following number of shares, the conditional rights to receive ABB shares under the Long-term Incentive Plan (LTIP) and unvested shares in respect of other compensation arrangements.

		Unvested at December 31, 2023		
Name	Total number of shares held at December 31, 2023	Reference number of shares deliverable under the 2021 performance factors (EPS and TSR) of the LTIP(1) (vesting 2024)	Reference number of shares deliverable under the 2022 performance factors (EPS, TSR and sustainability) of the LTIP(1) (vesting 2025)	Reference number of shares deliverable under the 2023 performance factors (EPS, TSR and sustainability) of the LTIP(1) (vesting 2026)
Björn Rosengren	262,334	99,450	85,487	85,708
Timo Ihamuotila	202,000	37,830	31,609	31,691
Carolina Granat(2)	5,200	27,301	23,148	23,208
Karin Lepasoon	360	—	19,157	19,207
Sami Atiya	100,000	31,201	25,543	25,609
Tarak Mehta	134,710	36,271	29,694	29,770
Peter Terwiesch	100,000	31,201	26,501	27,529
Morten Wierod	141,267	31,201	28,736	31,210
Total Executive Committee members at December 31, 2023	**945,871**	**294,455**	**269,875**	**273,932**

(1) The final 2021 LTIP, 2022 LTIP and 2023 LTIP awards will be settled 100 percent in shares, with an automatic sell-to-cover in place for employees who are subject to withholding taxes.
(2) This includes 1,200 shares held by spouse.

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Note 11
Full time employees

During each of 2024 and 2023, the Company employed on average 18 and 19 employees, respectively.

At ABB, we believe that a culture of diversity, inclusion and equal opportunity is critical to our business success and makes us stronger. ABB has non-discriminatory pay policies which play an important part in minimizing any pay disparities based on gender.

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Note 12
Subsequent events

Subsequent to December 31, 2024, and up to February 18, 2025, the Company purchased, under the share buyback program, an additional 2 million shares, for approximately CHF 125 million. Any further purchases up to February 26, 2025, are not considered significant for the Company.

PROPOSED APPROPRIATION OF AVAILABLE EARNINGS

Proposed appropriation of available earnings (CHF in thousands)	2024	2023
Net income/(loss) for the year	2,433,706	(85,708)
Carried forward from previous year	2,531,256	6,448,125
Cancellation of shares	(730,422)	(2,380,048)
Available earnings to the Annual General Meeting	**4,234,540**	**3,982,369**
Gross dividend of CHF 0.87 per share paid directly by the Company(1)		(1,451,113)
Gross dividend of CHF 0.90 per share on total number of registered shares(1)	(1,674,553)	
Balance to be carried forward	**2,559,987**	**2,531,256**

(1) No dividend will be paid on treasury shares held by ABB Ltd. Shareholders who are resident in Sweden participating in the established dividend access facility will receive an amount in Swedish kronor from ABB Norden Holding AB which corresponds to the dividend resolved on a registered share of ABB Ltd without deduction of the Swiss withholding tax. This amount however is subject to taxation according to Swedish law.

On January 30, 2025, the Company announced that the Board of Directors will recommend for approval at the Annual General Meeting on March 27, 2025, that a dividend of CHF 0.90 per share be distributed out of the available earnings, expected to be paid in April 2025. As the legal retained earnings exceed 20% of the share capital, no further allocation to those reserves is required.

Statutory Auditor's Report

To the General Meeting of ABB Ltd, Zurich

Report on the Audit of the Financial Statements

Opinion

We have audited the financial statements of ABB Ltd (the Company), which comprise the balance sheet as at December 31, 2024, and the income statement for the year then ended, and notes to the financial statements, including a summary of significant accounting policies.

In our opinion, the financial statements (pages 129 to 141) comply with Swiss law and the Company's articles of incorporation.

Basis for Opinion

We conducted our audit in accordance with Swiss law and Swiss Standards on Auditing (SA-CH). Our responsibilities under those provisions and standards are further described in the 'Auditor's Responsibilities for the Audit of the Financial Statements" section of our report. We are independent of the Company in accordance with the provisions of Swiss law and the requirements of the Swiss audit profession, and we have fulfilled our other ethical responsibilities in accordance with these requirements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the financial statements of the current period. We have determined that there are no key audit matters to communicate in our report.

Other Information

The Board of Directors is responsible for the other information. The other information comprises the information included in the ABB Annual Reporting Suite (consisting of the Integrated Report, the Financial Report, the Corporate Governance Report, the Compensation Report and the Sustainability Statement), but does not include the consolidated financial statements, the statutory financial statements of the Company, the audited content of the Compensation Report, and our auditor's reports thereon.

Our opinion on the financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated.

If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Board of Directors' Responsibilities for the Financial Statements

The Board of Directors is responsible for the preparation of the financial statements in accordance with the provisions of Swiss law and the Company's articles of incorporation, and for such internal control as the Board of Directors determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the Board of Directors is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Board of Directors either intends to liquidate the Company or to cease operations, or has no realistic alternative but to do so.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Swiss law and SA-CH will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with Swiss law and SA-CH, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

— Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

— Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control.

— Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made.

— Conclude on the appropriateness of the Board of Directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Company to cease to continue as a going concern.

We communicate with the Board of Directors or its relevant committee regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide the Board of Directors or its relevant committee with a statement that we have complied with relevant ethical requirements regarding independence, and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, actions taken to eliminate threats or safeguards applied.

From the matters communicated to the Board of Directors or its relevant committee, we determine those matters that were of most significance in the audit of the financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report, unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

Report on Other Legal and Regulatory Requirements

In accordance with article 728a para. 1 item 3 CO and PS-CH 890, we confirm that an internal control system exists, which has been designed for the preparation of the financial statements according to the instructions of the Board of Directors.

Based on our audit in accordance with Art. 728a para. 1 item 2 CO, we confirm that the proposal of the Board of Directors complies with Swiss law and the Company's articles of incorporation. We recommend that the financial statements submitted to you be approved.

KPMG AG

Achim Wolper
Licensed Audit Expert
Auditor in Charge

Mohamad Midani

Zurich, Switzerland
February 26, 2025

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