UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

(Mark One)

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

For the fiscal year ended December 31, 2022

01

□ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from _____ to ____ to ____



ALLEGION PUBLIC LIMITED COMPANY

(Exact name of registrant as specified in its charter)

Ireland

(State or other jurisdiction of incorporation or organization)

98-1108930

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

Name of each exchange on which registered

Block D Iveagh Court Harcourt Road Dublin 2, D02 VH94, Ireland

(Address of principal executive offices, including zip code)

+(353) (1) 2546200 (Registrant's telephone number, including area code)

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

Title of each class

Title of each class	Truding by moons	Traine of each exchange on which registered			
Ordinary shares, par value \$0.01 per share	ALLE	New York Stock Exchange			
3.500% Senior Notes due 2029	ALLE 3 ½	New York Stock Exchange			
Securities registered pursuant to Section 12(g) of the Act: None					
Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.					
Yes ⊠ No □					
Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act.					
Yes □ No ⊠					

Trading symbols

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

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

"smaller reporting company," and "emerging growth comp	oany'	' in Rule 12b-2 of the Exchange Act.:	
Large accelerated filer	X	Accelerated filer	
Non-accelerated filer		Smaller reporting company	
		Emerging growth company	
If an emerging growth company, indicate by check period for complying with any new or revised financi Exchange Act. □		e e e e e e e e e e e e e e e e e e e	
Indicate by check mark whether the registrant has fi effectiveness of its internal control over financial repo 7262(b)) by the registered public accounting firm that prep	rting	under Section 404(b) of the Sarbanes-Oxley	
If securities are registered pursuant to Section 12(b) of the registrant included in the filing reflect the correction of			al statements of
Indicate by check mark whether any of those error incentive-based compensation received by any of the region $\$240.10D-1(b)$. \square			
Indicate by check mark whether the registrant is a she	ell co	mpany (as defined in Rule 12b-2 of the Act). Yes	□ No 🗷

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer,"

The number of ordinary shares outstanding of Allegion plc as of February 16, 2023 was 87,867,431.

based on the closing price of such shares on the New York Stock Exchange on that date.

DOCUMENTS INCORPORATED BY REFERENCE

The aggregate market value of our ordinary shares held by non-affiliates on June 30, 2022 was approximately \$8.6 billion

Portions of the registrant's definitive proxy statement to be filed with the Securities and Exchange Commission (the "SEC") within 120 days of the close of the registrant's fiscal year in connection with the registrant's Annual General Meeting of Shareholders to be held June 8, 2023 (the "Proxy Statement") are incorporated by reference into Part III of this Form 10-K as described herein.

ALLEGION PLC

Form 10-K For the Fiscal Year Ended December 31, 2022

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CAUTIONARY STATEMENT FOR FORWARD LOOKING STATEMENTS

Certain statements in this report, other than purely historical information, are "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995, Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). These forward-looking statements generally are identified by the words "believe," "project," "expect," "anticipate," "estimate," "forecast," "outlook," "intend," "strategy," "future," "opportunity," "plan," "may," "should," "will," "would," "will be," "will continue," "will likely result," or the negative thereof or variations thereon or similar expressions generally intended to identify forward-looking statements.

These statements are based on currently available information and our current assumptions, expectations and projections about future events. While we believe that our assumptions, expectations and projections are reasonable in view of the currently available information, you are cautioned not to place undue reliance on our forward-looking statements. Forward-looking statements speak only as of the date they are made and are not guarantees of future performance. They are subject to future events, risks and uncertainties — many of which are beyond our control — as well as potentially inaccurate assumptions, that could cause actual results to differ materially from our expectations and projections including, among other things:

- ongoing macroeconomic challenges and continued economic instability;
- · increased prices and inflation;
- volatility and uncertainty in the political, economic and regulatory environments in which we operate, including
 changes to trade agreements, sanctions, import and export regulations, custom duties and applicable tax regulations
 and interpretations, social and political unrest, instability, national and international conflict, terrorist acts and other
 geographical disputes and uncertainties;
- the strength and stability of the institutional, commercial and residential construction and remodeling markets;
- fluctuations in currency exchange rates;
- potential impairment of our goodwill, indefinite-lived intangible assets and/or our long-lived assets;
- instability in the U.S. and global capital and credit markets;
- our ability to make scheduled debt payments or to refinance our debt obligations;
- increased competition, including from technological developments;
- the development, commercialization and acceptance of new products and services;
- changes in customer and consumer preferences and our ability to maintain beneficial relationships with large customers;
- our products or solutions failing to meet certification and specification requirements, being defective, causing property damage, bodily harm or injury, or otherwise falling short of customers' needs and expectations;
- our ability to identify and successfully complete and integrate acquisitions, including achieving their anticipated strategic and financial benefits;
- business opportunities that diverge from our core business;
- our ability to achieve the expected improvements or financial returns we expect from our strategic initiatives;
- our ability to effectively manage and implement restructuring initiatives or other organizational changes;
- global climate change or other unexpected events, including global health crises, such as COVID-19;
- the proper functioning of our information technology and operational technology systems, including disruption or breaches of our information systems, such as cybersecurity attacks;
- the failure of our third-party vendors to provide effective support for many of the critical elements of our global information and operational technology infrastructure;
- our ability to recruit and retain a highly qualified and diverse workforce;
- disruptions in our global supply chain, including product manufacturing and logistical services provided by our supplier partners;
- our ability to effectively manage real or perceived issues related to product quality, safety, corporate social responsibility and other reputational matters;
- our ability to protect our brand reputation and trademarks;

- legal judgments, fines, penalties or settlements imposed against us or our assets as a result of legal proceedings, claims and disputes;
- claims of infringement of intellectual property rights by third parties;
- improper conduct by any of our employees, agents or business partners;
- changes to, or changes in interpretations of, current laws and regulations;
- uncertainty and inherent subjectivity related to transfer pricing regulations in the countries in which we operate;
- · changes in tax rates, the adoption of new tax legislation or exposure to additional tax liabilities; and
- risks related to our incorporation in Ireland, including the possible effects on us of future legislation or adverse determinations by taxing authorities that could increase our tax burden.

These events, risks and uncertainties are further described in Item 1A. "Risk Factors" and Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations" of this report. We do not undertake to update any forward-looking statements.

Item 1. BUSINESS

Overview

Allegion plc ("Allegion," "we," "us" or "the Company") is a leading global provider of security products and solutions that keep people and assets safe and secure in the places they live, learn, work and visit. We create peace of mind by pioneering safety and security with a vision of seamless access and a safer world. Seamless access allows authorized, automated and safe passage and movement through spaces and places in the most efficient and frictionless manner possible. Central to our vision is partnering and developing ecosystems to create a flawless experience and enable an uninterrupted and secure flow of people and assets. We offer an extensive and versatile portfolio of security and access control products and solutions across a range of market-leading brands. Our experts across the globe deliver high-quality security products, services and systems, and we use our deep expertise to serve as trusted partners to end-users who seek customized solutions to their security needs.

Allegion Principal Products and Services

Door controls and systems	Locks, locksets, portable locks and key systems
Exit devices	Electronic security products
Software-enabled access control systems	Time, attendance and workforce productivity systems
Doors, accessories and other	Services and software

Access control security products and solutions are critical elements in every building and home. Many door openings are configured to maximize a room's particular form and function while also meeting local and national building and safety code requirements and end-user security needs. Most buildings have multiple door openings, each serving its own purpose and requiring different specific access control solutions. Each door must fit exactly within its frame, be prepared precisely for its hinges, synchronize with its specific lockset and corresponding latch and align with a specific key to secure the door. Moreover, with the increasing adoption of the Internet of Things ("IoT"), security products – including credentials – are increasingly linked electronically, integrated into software and popular consumer technology platforms and controlled with mobile applications, creating additional functionality and complexity. Seamless access capitalizes on the ability for multiple products and brands to work in tandem, allowing people and assets to move efficiently and safely by adapting access rights for various settings or use cases. These solutions can also provide insights on usage and traffic patterns to boost efficiency, improve hygiene of high-traffic areas and improve visitor, staff and tenant experiences.

We believe our ability to deliver a wide range of solutions that can be custom configured to meet end-users' security needs is a key driver of our success. We accomplish this with:

- Our extensive and versatile product and service portfolio, combined with our deep expertise, which enables us to
 deliver the right products and solutions to meet diverse security and functional specifications and to successfully and
 securely integrate into leading technologies and systems;
- Our consultative approach and expertise, which enables us to develop the most efficient and appropriate building security and access control specifications to fulfill the unique needs of our end-users and their partners, including architects, contractors, homebuilders and engineers;
- Our access to and management of key channels in the market, which is critical to delivering our products in an
 efficient and consistent manner; and
- Our enterprise excellence capabilities, including our global manufacturing operations and agile supply chain, which
 facilitate our ability to deliver specific product and system configurations to end-users and consumers worldwide,
 quickly and efficiently.

We believe the security products industry will continue to benefit from several global macroeconomic trends, including:

- Expected growth in global electronic products and solutions as end-users adopt newer technologies in their facilities and homes;
- Heightened awareness of security and privacy requirements;
- Increased focus on touchless solutions that help promote a healthy environment; and
- The shift to a digital, interconnected environment.

We operate in and report financial results for two segments: Allegion Americas and Allegion International, the latter of which provides security products, services and solutions primarily throughout Europe, Asia and Oceania. We sell our products and solutions under the following brands:

Allegion Brands

(Listed for each business segment)

Product Category	Allegion Americas	Allegion International	
Locks, locksets, portable	DEXTER [®]	Austral Lock Gaingborough	
locks and key systems	FALCON.	AXA KRYPTONITE	
	KRYPTONITE [*]	BRICARD	
	LOCKNETICS	Briton NORMBAU	
	SCHLAGE	CISA SCHLAGE	
		FALCON. Simons≣Voss technologies	
		FSH> Deine Sicherheit.	
Electronic security	ISONAS	BRICARD ISONAS	
products and access control systems,	LOCKNETICS	◆ CISA PegaSys	
including time, attendance and	LCN.	◇FSH> plano J	
workforce productivity	SCHLAGE	Gaingborough Simons≣Voss technologies	
	VON DUPRIN.	interflex VON DUPRIN .	
Door controls and	AD SYSTEMS	BRICARD	
systems and exit devices	DEXTER [®]	Briton	
	FALCON.	◆ CISA	
	LCN _°	FALCON. LCN.	
	STANLEY. Access Technologies	SCHLAGE	
	VON DUPRIN.	VON DUPRIN.	

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Allegion Brands

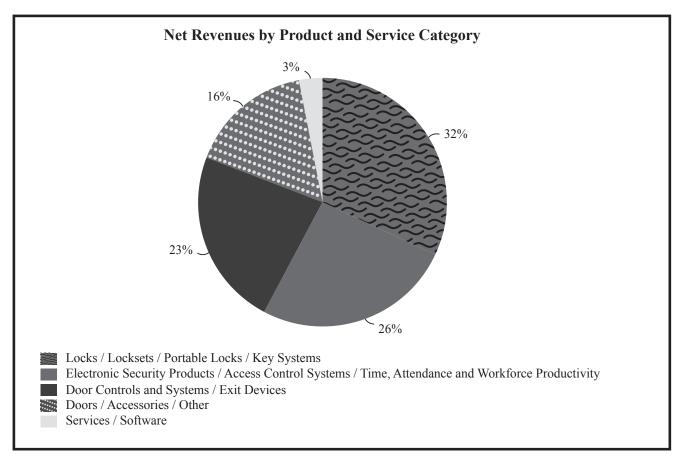
(Listed for each business segment)

Product Category	Allegion Americas	Allegion Ir	nternational
Doors, accessories	Brio	Austral Lock BY CANABORDAGE	IVES.
and other	GLYNN-JOHNSON.	AXA	KRYPTONITE*
	IVES.	PDICA DD	LEGGE
	KRYPTONITE°	BRICARD	(HACICIA)
	LOCKNETICS	Brio	NORMBAU
	Republic	Briton	STEELCRAFT.
	STEELCRAFT	CISA CISA	TGP
	TGP	Gainsborough	Deine Sicherheit.
	ZERO RYTERNATONAL	GLYNN-JOHNSON.	ZERO
Services and software	STANLEY. Access Technologies	\$.60	\PI ksmiths
	ISONAS	interf	lex 🌶
	Yonomi		

^{*}STANLEY ACCESS TECHNOLOGIES is used with permission. STANLEY is the property of Stanley Logistics L.L.C.

We sell a wide range of security and access control solutions for end-users in commercial, institutional and residential facilities worldwide, including the education, healthcare, government, hospitality, retail, commercial office and single and multi-family residential markets. Our leading brands include CISA®, Interflex®, LCN®, Schlage®, SimonsVoss® and Von Duprin®. We believe LCN, Schlage and Von Duprin hold the No. 1 or No. 2 position in their primary product categories in North America while CISA, Interflex and SimonsVoss hold the No. 1 or No. 2 position in their primary product categories in certain European markets

During the year ended December 31, 2022, we generated Net revenues of \$3,271.9 million and Operating income of \$586.4 million.



History and Developments

We were incorporated in Ireland on May 9, 2013, to hold the commercial and residential security businesses of what was then Ingersoll Rand plc ("Ingersoll Rand"). On December 1, 2013, we became a stand-alone public company after Ingersoll Rand completed the separation of these businesses from the rest of Ingersoll Rand via the transfer of these businesses from Ingersoll Rand to us and the issuance by us of ordinary shares directly to Ingersoll Rand's shareholders (the "Spin-off"). Our security businesses have long and distinguished operating histories. Several of our brands were established more than 100 years ago, and many originally created their categories:

- Von Duprin, established in 1908, was awarded the first exit device patent;
- Schlage, established in 1920, was awarded the first patents granted for the cylindrical lock and the push button lock;
- LCN, established in 1926, created the first door closer;
- CISA, established in 1926, devised the first electronically controlled lock; and
- SimonsVoss, established in 1995, created the first keyless digital transponder.

We have built upon these founding legacies since our entry into the security products market through the acquisition of Schlage, Von Duprin and LCN in 1974. Today, we continue to develop, acquire and introduce innovative and market-leading products. For example, in 2022, we acquired Stanley Access Technologies LLC and assets related to the automatic entrance solutions business from Stanley Black & Decker, Inc. (the "Access Technologies business"), which patented the world's first hands-free door operator in 1931. Through this acquisition, we have added another innovative market leader to our portfolio of businesses and broadened our product and service offerings throughout the U.S. and Canada.

In 2018, we announced the formation of Allegion Ventures to invest in and help accelerate the growth of companies that have innovative, digital-first technologies and products such as touchless access and workspace monitoring solutions that complement our core business solutions. Building on this success, in December 2021, Allegion Ventures announced a second fund with an additional allocation of \$100 million to focus on investing in technologies like artificial intelligence, video monitoring, machine learning and cybersecurity.

Recent examples of successful product launches by Allegion are illustrated in the table below:

Product	Brands	Year	Innovation
Electronic	G.11		Schlage Encode Plus Smart WiFi Deadbolt, one of the first in the market to work with Apple home keys, allows lock or unlock access using an iPhone or Apple Watch. NDEBSi and LEBSi (Schlage) wireless electronic locks expand access control. Introduction of MIFARE® DESFire® EV3 family (Schlage) provides increased levels of security, flexibility and freedom of choice for customers when it comes to providing access using credential technology.
Locks, Locksets and Portable Locks	Schlage, Gainsborough, CISA	2020/ 2021/2022	In Australia, a next generation smart lock, Freestyle Trilock (Gainsborough), features passage, privacy or dead lock modes and can be operated using the built-in keypad, a key override or through the mobile app. In conjunction with the optional WiFi bridge, the Trilock can be programmed and operated from anywhere in the world. In Europe, new high security connected solutions (CISA Domo Connexa) and integration of Smart Access functionalities include CISA ACS platform solutions for hospitality, with both cloud-based (Aero) and on-premise hardware (eServer), as well as wall mount energy saver with card intelligent detection.
		2020/ 2021/2022	Mobile Student ID (Schlage) allows university students, faculty and staff to add student ID cards to their virtual wallets for door access, payments, attendance tracking and ticketing. Pure Access (ISONAS) enhanced support for mobile-ready MTB readers (Schlage) connected to an ISONAS IP-Bridge allows seamless integration with mobile credentials and enhanced functionality for the NDE/LE (Schlage) wireless locks.
Web Applications	SimonsVoss	2021/2022	FSS1 High Security Door Position Sensors (Schlage) provide a high-security solution with adjustable anti-tamper features to help prevent against attacks through magnetic, electronic or physical means. AX Manager Classic (SimonsVoss) for management of digital locking systems based on a new Microsoft SQL-based backend system with new user interface.
Mechanical Locks, Locksets, Portable Locks and Key	CISA, Bricard, AXA	2020/ 2021/2022	New flat key European cylinders for multiple entrance buildings (CISA Asix P8). Evidence (Bricard) handle ranges for commercial and residential markets, with an exclusive rose fixation and adjustment design, functionality and finishes.
Systems			Innovation in bike safety including Fold Lite (AXA) folding bike lock with a bracket that can be mounted on the frame.
Electronic and			Security indicator (Von Duprin) for visual verification and lockdown. The 2SI security indicator provides at-a-glance verification of door status from inside the room. Also available as a retrofit conversion kit for existing 98/99 Series (Von Duprin) exit devices.
Electrified Door Controls and Systems and Exit Devices	Von Duprin, LCN	2020/ 2021/2022	New 6400 Compact Series (LCN) low-energy automatic operator retrofit solution with actuators reduces the cost and complexity of touchless access and adds ADA accessibility. Enhancements to the already durable 4040XP (LCN) door closer, making it even easier to install and maintain. Follows the introduction of a range of touchless solutions, including automatic operators, actuators and wireless transmitters.
Doors, Accessories and Other	TGP	2021	North America's first fire-rated Full-Lite Door System (TGP), certified to meet forced entry standards.

Industry and Competition

We serve customers within institutional, commercial and residential construction and remodeling markets throughout North America, Europe, Asia and Oceania. We expect the security products industry will continue to benefit from favorable trends such as increased concerns about safety and security, new attention on touchless solutions that help promote a healthy environment and technology-driven innovation that enables seamless access and a better user experience as people and assets traverse multiple locations and facilities. Further, we expect continued growth in connected security products and solutions as end-users continue to adopt newer technologies, including IoT, in their facilities and single and multi-family homes.

The security products markets are highly competitive and fragmented throughout the world, with a number of large multinational companies and thousands of smaller regional and local companies. This high degree of fragmentation primarily reflects local regulatory requirements and highly variable end-user needs. We believe our principal global competitors are Assa Abloy AB and dormakaba Group. We also face competition in various markets and product categories throughout the world, including from Spectrum Brands Holdings, Inc. in the North American residential market. As we move into more technologically advanced product categories, we may also compete against new, more specialized competitors and technology companies.

Our success depends on a variety of factors, including brand and reputation, product breadth, innovation, integration with popular technology platforms, quality and delivery capabilities, price and service capabilities. As many of our businesses sell through wholesale distribution, our success also depends on building and partnering with a strong channel network. Although price often serves as an important customer decision point, we also compete based on the breadth, innovation and quality of our products and solutions, our ability to custom-configure solutions to meet individual end-user requirements and our global supply chain.

Products and Services

We offer the following extensive and versatile portfolio of security and access control products and solutions across a range of market-leading brands:

- Locks, locksets, portable locks and key systems: A broad array of cylindrical, tubular and mortise door locksets, security levers and master key systems that are used to protect and control access and a range of portable security products, including bicycle, small vehicle and travel locks;
- Electronic security products and access control systems: A broad range of electrified locks, electrified door closers and exit devices, access control products and systems, credentials and credential readers and accessories, including IoT, Bluetooth Low Energy, Power over Ethernet and cloud-based solutions;
- *Time, attendance and workforce productivity systems*: These products are designed to help business customers manage and monitor workforce access, attendance and employee scheduling;
- Door controls and systems and exit devices: An extensive portfolio of life-safety products and solutions generally
 installed on fire doors and facility entrances and exits. Exit devices, also known as panic hardware, provide rapid
 egress to allow building occupants to exit safely in an emergency. Door controls and systems include mechanical door
 closers, automatic door operators, as well as high-performance interior and storefront door systems. In addition, with
 our recently acquired Access Technologies business, we now offer a full range of automatic entrance solutions,
 including sliding, swing, folding and ICU doors, as well as an array of sensors, controls and security options for
 commercial and institutional buildings;
- Doors, accessories and other: A portfolio of hollow metal, glass and specialty doors, as well as a variety of additional security products and components, including hinges, door pulls, door stops, bike lights, louvers, weather stripping, thresholds and other accessories, as well as certain bathroom fittings and accessibility aids; and
- Services and software: Our Access Technologies business offers extensive planned inspection, maintenance and repair
 services for its automatic entrance solutions throughout the U.S. and Canada. Additionally, we offer software as a
 service ("SaaS") offerings throughout the U.S. and internationally, including access control, IoT integration and
 workforce management solutions. We also offer ongoing aftermarket services, design and installation offerings and
 locksmith services in select locations.

Customers

We sell most of our products and solutions through distribution and retail channels, including specialty distribution, ecommerce and wholesalers. We have built a network of channel partners that help our customers choose the right solution to meet their security needs and help commercial and institutional end-users fulfill and install orders. We also sell through a variety of retail channels, including large do-it-yourself home improvement centers, multiple online and e-commerce platforms, as well as small, specialty showroom outlets. We work with our retail partners on developing marketing and merchandising strategies to maximize their sales per square foot of shelf space. Through a few of our businesses, most notably our Access Technologies business, Interflex and our Global Portable Security brands, we also provide products and services directly to end-users.

Our 10 largest customers represented approximately 26% of our total Net revenues in 2022. No single customer represented 10% or more of our total Net revenues in 2022.

Sales and Marketing

In markets where we sell through commercial and institutional distribution channels, we employ sales professionals around the world who work with a combination of end-users, security professionals, architects, contractors, engineers and distribution partners to develop specific, custom-configured solutions for our end-users' needs. Our field sales professionals are assisted by specification writers who work with architects, engineers and consultants to help design door openings and security systems to meet end-users' functional, aesthetic and regulatory requirements. Both groups are supported by dedicated customer care and technical sales-support specialists worldwide. We also support our sales efforts with a variety of marketing efforts, including trade-specific advertising, cooperative distributor merchandising, digital marketing and marketing at a variety of industry trade shows.

In markets in which we sell through retail and home-builder distribution channels, we have teams of sales, merchandising and marketing professionals who help drive brand and product awareness through our channel partners and to consumers. We utilize a variety of advertising and marketing strategies, including traditional consumer media, retail merchandising, digital marketing, retail promotions and builder and consumer trade shows, to support these teams.

We also work actively with several industry bodies around the world to help promote effective and consistent safety and security standards. For example, we are members of the American Association of Automatic Door Manufacturers (AAADM), Builders Hardware Manufacturers Association (BHMA), Connectivity Standards Alliance, Construction Specification Institute, Door and Hardware Institute (DHI), FiRa Consortium, National Association of State Fire Marshals (NASFM), Partner Alliance for Safer Schools (PASS), Physical Security Interoperability Alliance (PSIA), Security Industry Association, Security Technology Alliance, Z-Wave Alliance, The European Federation of Associations of Locks and Builders Hardware Manufacturers (ARGE), ASSOFERMA (Italy), BHE (Germany) and UNIQ (France).

Production and Distribution

We manufacture products in several geographic markets around the world. We operate 29 principal production and assembly facilities – 16 in our Allegion Americas segment and 13 in our Allegion International segment. We own 16 of these facilities and lease the others. Our strategy is to produce in the region of use, wherever appropriate, to allow us to be closer to the enduser and increase efficiency and timely product delivery. Much of our U.S. based residential portfolio is manufactured in the Baja region of Mexico under the Maquiladora, Manufacturing and Export Services Industry ("IMMEX") program. In managing our network of production and assembly facilities, we focus on continuous improvement in customer experience, employee health and safety, productivity, resource utilization and operational excellence.

We distribute our products through a broad network of channel partners. In addition, third-party manufacturing and logistics providers perform certain manufacturing, storage and distribution services for us to support certain parts of our manufacturing and distribution network.

Raw Materials

We support our region-of-use production strategy with corresponding region-of-use supplier partners for much of our supply base. Our global and regional commodity teams work with production leadership, product management and materials management teams to procure materials for production. Where appropriate, we may enter into fixed-cost contracts to lower overall costs.

We purchase a wide range of raw materials, including steel, zinc, brass and other non-ferrous metals, as well as other parts and components, such as electronic components, to support our production facilities. Through much of 2022, we continued to experience supply chain disruptions and delays, including logistical challenges; shortages in parts and materials (particularly shortages of electronic components); and increased material and other inflation. While these trends have negatively impacted our results of operations, we have taken multiple actions to address these challenges, including product redesigns, carrying increased levels of safety stock and working with our supplier base, including establishing new and diverse supplier relationships, to increase part and component availability and our overall supply chain agility. As a result of these actions, we have seen many of these supply chain related challenges improve over the second half of 2022, although shortages of electronic parts and components persist. See "Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations" for a more detailed discussion of these trends and challenges.

Intellectual Property

Intellectual property, inclusive of certain patents, trademarks, copyrights, know-how, trade secrets and other proprietary rights, is important to our business. We create, protect and enforce our intellectual property investments in a variety of ways. We work actively in the U.S. and internationally to try to ensure the protection and enforcement of our intellectual property rights. We use trademarks on nearly all of our products and believe such distinctive marks are an important factor in creating a market for our goods, in identifying us and in distinguishing our products from others. We consider our CISA, Interflex, LCN, Schlage, SimonsVoss, Von Duprin and other associated trademarks to be among our most valuable assets, and we have registered these trademarks in a number of countries. Although certain proprietary intellectual property rights are important to our success, we do not believe we are materially dependent on any particular patent or license, or any particular group of patents or licenses.

Facilities

We operate through a broad network of sales offices, engineering centers, 29 principal production and assembly facilities and several distribution centers throughout the world. Our active properties represent approximately 6.7 million square feet, of which approximately 41% is leased. The following table shows the location of our principal worldwide production and assembly facilities:

Production and Assembly Facilities

Allegion Americas	Allegion International
Blue Ash, Ohio	Auckland, New Zealand
Chino, California	Blackburn, Australia
Ensenada, Mexico	Brooklyn, Australia
Everett, Washington	Clamecy, France
Farmington, Connecticut	Durchhausen, Germany
Greenfield, Indiana	Faenza, Italy
Indianapolis, Indiana	Feuquieres, France
Irving, Texas	Jinshan, China
McKenzie, Tennessee	Monsampolo, Italy
Mississauga, Ontario	Osterfeld, Germany
Perrysburg, Ohio	Renchen, Germany
Princeton, Illinois	Veenendaal, Netherlands
Security, Colorado	Zawiercie, Poland
Snoqualmie, Washington	
Tecate, Mexico	
Tijuana, Mexico	

Research and Development

We are committed to investing in our research and development capabilities with a focus on innovations that will deliver growth through the introduction of new products and solutions. In addition, we invest in initiatives that continuously drive improvements in product cost, quality, safety and sustainability.

Our research and development team is managed as a global, collaborative group to identify and develop new technologies and worldwide product platforms. Our regionally located resources leverage expertise in local standards and configurations and apply those to adapt products for the benefit of our customers. Further, we operate a global technology center in Bengaluru, India, which augments and supports our regional engineering and technology teams.

Seasonality

Our business experiences seasonality that varies by product and service line. For instance, as more construction and do-it-yourself projects occur during the second and third calendar quarters in the Northern Hemisphere, our security product sales related to those projects are typically higher in those quarters than in the first and fourth quarters. However, certain other businesses typically experience higher sales in the fourth quarter due to demand for services and project timing.

Human Capital

Our human capital strategy is based on our values and is foundational to achieving our business strategy. To ensure we attract and retain top talent, we strive for a diverse and inclusive culture that rewards performance, provides growth and development opportunities and supports employees through competitive compensation, benefits and numerous volunteer and charitable giving opportunities.

As of December 31, 2022, we had approximately 12,300 employees worldwide, with approximately 46% employed within the U.S. and approximately 54% based outside the U.S. Among our U.S. based employees, approximately 15% were subject to collective bargaining agreements with various labor unions. Outside the U.S., we have employees in certain countries, particularly in Europe, that are represented by an employee representative organization, such as a works council. The vast majority of our employees work on a full-time basis. Our employee base is supplemented by contingent labor where business demand fluctuates or we experience short-term needs for specialized skills. We believe our relations with our workforce in both unionized and non-unionized settings are generally positive.

Compensation and Benefits

Compensation and benefit programs are tailored to be competitive in the geographies where we work, including a total rewards package (which varies by country/region) that includes hourly and salaried compensation, performance-based incentive and long-term equity incentive plans, retirement, insurance and government social welfare programs, disability and family leave,

health and wellness programs, education benefits to pursue degrees and certifications and additional offerings to support financial stability and personal planning. The Allegion Leadership Behaviors – break boundaries, innovate, be courageous, engage and develop, champion change and be inclusive – work in concert with our performance management system to reinforce our values and code of conduct in assessing how people lead and deliver top performance.

Talent Attraction

Our employer brand strength creates a differentiated employee experience that attracts and retains the right talent for Allegion. Our talent attraction efforts are focused on and highlight a culture that reflects our core values, Allegion Leadership Behaviors and business objectives. These efforts begin well before people work for us. Around the world, our sites partner with schools and support teachers, providing mentoring, grants, scholarships, internships, co-op programs, classroom technology and on-site activities and full-time rotational programs after graduation. Our sites sponsor science, technology, engineering and math ("STEM") programs and competitions to spur interest in fields like robotics, IT and engineering. In the U.S., we also host annual Manufacturing Day events virtually and at several of our production and assembly facilities. These programs expose students to careers in manufacturing and technology and provide educators with programming to encourage academic excellence and social development while building a pipeline of talent for us.

We want to attract talent with core capabilities relevant to our long-term corporate business strategy: customer focus, innovation, partnering, pace and agility and collaboration. We use a variety of recruitment tactics to ensure a strong base of labor for manufacturing operations and to build the base of talent with these capabilities. Throughout the recruitment cycle, we provide a technology-enabled seamless experience for internal and external candidates and hiring managers.

Talent Development and Succession Planning

Talent development and succession planning are key components of the Allegion Operating System, our system of annual operation that supports governance, reporting processes and management of the business. Our performance management system includes annual performance reviews for all permanent salaried employees, where, in alignment with our values, an open feedback culture is encouraged, regardless of level or hierarchy. Inclusive talent development and succession planning takes place at all levels of the organization and is supported through the Allegion Leadership Behaviors, individual career mapping, assessment of performance and talent pipeline planning up to and including the executive leadership team ("ELT"). As part of their quarterly business review, the ELT reviews talent development, focusing on developing a diverse succession pipeline. These cross-functional reviews highlight individuals who are ready for new opportunities, individuals who are on a special assignment or project and individuals early in their career that demonstrate emerging leadership skills.

Learning and Development

Opportunities for on-going learning and development are delivered to employees through structured coursework, on-site and expert-led training and experiential, applied development. The Allegion Academy is offered globally, supporting multiple languages and providing more than 20,000 self-guided online courses, as well as learning community channels on targeted skills and topics like inclusion and diversity. We offer programs to provide successive levels of development, including reskilling and upskilling existing employees, as well as strengths-based leadership curriculum and global programs for employee mentoring and coaching. Enterprise excellence initiatives and sprint teams expand skills in lean manufacturing and quality principles and lead to redesigning workflow to boost productivity and reduce waste.

Engagement and Diversity, Equity and Inclusion ("DEI")

Engagement and DEI are also parts of the Allegion Operating System. Engagement surveys provide a mechanism to gather direct employee feedback, give team leaders insights on potential areas of focus and allow leaders to prioritize and take action on their teams' foundational, inclusion, growth and development needs. Strengths-based leadership is an element of our commitment to inclusion: the more employees understand their own strengths, the better equipped they are to add value and appreciate the contributions of diverse members of their teams.

Engagement and DEI are topics for learning communities, employee roundtables and ongoing, regular analysis and dialogue among people leaders, executive leadership and Board of Directors. We believe in fundamental standards that support our employees, including a commitment to building and maintaining diverse and inclusive workplaces, safe and healthy practices and competitive wages and benefits. We embrace all differences and similarities among colleagues and within the relationships we foster with customers, suppliers and the communities where we live and work. Employee led resource and affinity groups provide enrichment opportunities for women's leadership, early career professionals, allies and members of the LBGTQIA+, veteran and Hispanic communities, working parents, innovation, health and fitness, site-specific engagement and community volunteering and philanthropy. Whatever background, experience, race, color, national origin, religion, age, gender, gender identity, disability status, sexual orientation, protected veteran status or any other characteristic protected by law, we make sure that potential and current employees have every opportunity for application and the opportunity to give their best at work.

The efforts of Allegion's DEI Steering Committee, our ELT and the employee-led Inclusion Council, are driving expectations and accountability while creating role models and change champions. Our DEI strategy has three core pillars:

- Learn & listen deeply: Learn to recognize biases and mitigate them. Seek to first understand an individual's perspective rather than respond or act;
- Unite widely: Create a workplace where all employees feel welcomed, respected and valued, enabling customers to
 more easily connect with our brands through our people; and
- Take action: Identify the unique things that impact our organization, our communities and our industry.

During 2022, we updated our strategic action priorities, which center on: 1) Building and sustaining equitable policies and practices; 2) Creating an inclusive culture; and 3) Elevating the approach to DEI in our industry and having a positive impact on our communities. We are dedicated to fulfilling equal opportunity commitments in all decisions regarding all employment actions and at all levels of employment. In partnership with our Human Resources organization, our Equal Employment Opportunity Officer ensures that the applicable policy and procedures are appropriately established, implemented and disseminated, including those prohibiting discrimination, harassment, bullying and/or retaliation.

Civic Involvement

Civic involvement is part of the value proposition we offer employees and supports DEI, growth and development. We provide multi-faceted support for our communities, guided by three philanthropic pillars: safety and security; wellness; and addressing the unique needs of the communities where we live, learn, work and visit. Corporate sponsorships and voluntary employee payroll deductions support a wide range of non-profits, including those that address housing and school security and safety; children and youth programs; education and scholarships for people of color and those who are economically disadvantaged and support for Historically Black Colleges and Universities; community safety nets for basic needs (e.g., food, shelter, transportation) for underserved people and to break the cycle of poverty; wellness, mental health, health research, emergency relief and blood supply initiatives; and programs to advance equality, justice and address systemic bias. In addition to corporate sponsorships, site leaders and employees are encouraged to organize local volunteer and fundraising activities, provide grants to local organizations and serve on boards and committees.

Respect for Human Rights

Our respect for human rights is expressed in standards for our employees, our business partners, our customers and our communities. We uphold our Global Human Rights Policy, with standards that align with basic working conditions and human rights concepts advanced by international organizations such as the International Labor Organization and the United Nations. This policy also represents our own minimum standards for working conditions and human rights in our business and supply chains. In addition, we conduct risk assessments and continue to have conversations with the suppliers and companies we work with about the importance of human rights.

Employee Health and Safety

Employee health and safety are top priorities, and we consistently rank as the safest among leading competitors on core measures such as the total recordable incident rate. 'Be safe, be healthy' is a core organizational value in our proactive safety culture and has guided our response throughout the COVID-19 pandemic. We continue to adapt to changing health conditions at a local level and support a wide range of health and safety measures, including encouraging preventative measures such as COVID-19 and influenza vaccines and booster shots.

The ELT, with oversight from our Board of Directors, is responsible for risk management, employee accountability, safety hazard recognition and executing safety initiatives. We monitor leading and lagging indicators related to health and safety as part of our ongoing management of the Allegion Operating System and regularly update the Corporate Governance and Nominating Committee of the Board of Directors on key developments and employee health and safety topics. In recognition of our efforts to integrate sound environmental, health and safety ("EHS") management with our business operations, in 2021, we received the renowned Robert W. Campbell Award from the National Safety Council.

Regulatory Matters

We are subject to a variety of federal, state and local laws and regulations, both within and outside the U.S., relating to EHS matters. We are committed to conducting our business in a safe, environmentally responsible and sustainable manner, in compliance with all applicable EHS laws and regulations, and in a manner that helps promote and protect the health and safety of our environment, associates, customers, contractors and members of our local communities worldwide. We operate with principles that support our proactive commitments, including:

- Integrating sound EHS and sustainability strategies in all elements of our business functions, including objectives and measurements;
- Conducting periodic, formal evaluation of our compliance status and annual review of objectives and targets;
- Creating a workplace culture where all employees are responsible for safety;
- Making continuous improvements in EHS and sustainability management systems and performance, including the
 reduction in the usage of natural resources, waste minimization, prevention of pollution and prevention of workplace
 accidents, injuries and risks;

- Designing, operating and maintaining our facilities in a manner that minimizes negative EHS and sustainability impacts;
- Using materials responsibly, including the recycling and reuse of materials, where feasible; and
- Acting in a way that shows sensitivity to community concerns about EHS and sustainability issues.

We recognize that these principles are critical to our future success. We have a dedicated environmental program designed to reduce the utilization and generation of hazardous materials during the manufacturing process and to remediate any identified environmental concerns. As to the latter, we are currently engaged in site investigations and remediation activities to address environmental cleanup from past operations at current and former production facilities. We also regularly evaluate our remediation methods that are in addition to, or in replacement of, those we currently utilize based upon enhanced technology and regulatory changes. We are sometimes a party to environmental lawsuits and claims and have, from time to time, received notices of potential violations of environmental laws and regulations from the U.S. Environmental Protection Agency ("EPA") and similar state authorities. We have also been identified as a potentially responsible party ("PRP") for cleanup costs associated with off-site waste disposal at federal Superfund and state remediation sites. For all such sites, there are other PRPs and, in most instances, our involvement is minimal.

In estimating our liability, we have assumed that we will not bear the entire cost of remediation of any site to the exclusion of other PRPs who may be jointly and severally liable. The ability of other PRPs to participate has been taken into account, based on our understanding of the parties' financial condition and probable contributions on a per site basis. Additional lawsuits and claims involving environmental matters are likely to arise from time to time in the future. For a further discussion of our potential environmental liabilities, see Notes 2 and 21 to the Consolidated Financial Statements.

Environmental, social and governance ("ESG") factors important to our business are embedded into our values and our leadership's commitment to create a workplace culture committed to doing the right thing in the right way. Our Board of Directors oversees the Company's ESG strategies, goals and performance, and both our leadership and employees all have a responsibility to uphold excellence, as we believe our commitment to ESG matters helps advance engagement and business vitality. In 2022, Allegion was among the notable companies honored with a SEAL Business Sustainability Award, in recognition of our proactive water reduction project implemented across two of our production facilities in the Baja region of Mexico. Additional information about our ESG priorities and progress may be found in the ESG section of our website (found under the ESG tab at www.allegion.com). The website highlights our ongoing progress and advancements in ESG matters, and includes our materiality matrix of ESG priorities.

Available Information

We are required to file annual, quarterly and current reports, proxy statements and other documents with the SEC under the Exchange Act. The SEC maintains an Internet website that contains reports, proxy and information statements and other information regarding issuers that file electronically with the SEC. The public can obtain any documents that are filed by us at www.sec.gov.

In addition, the Company's Annual Report on Form 10-K, as well as future quarterly reports on Form 10-Q, current reports on Form 8-K and any amendments to all of the foregoing reports, are made available free of charge on our Internet website (www.allegion.com) as soon as reasonably practicable after such reports are electronically filed with or furnished to the SEC.

Throughout this Form 10-K, we refer to additional information that may be found or is available on our websites. The information contained on, or that may be accessed through, our websites is not incorporated by reference into, and is not part of, this Form 10-K.

Item 1A. RISK FACTORS

We are subject to future events, risks and uncertainties – many of which are beyond our control – that could materially and adversely affect our business, financial condition, results of operations and cash flows. You should carefully consider the risk factors discussed below, together with all the other information included in this Form 10-K, in evaluating us, our ordinary shares and our senior notes. If any of the events, risks or uncertainties below actually occurs, our business, financial condition, results of operations and cash flows could be materially and adversely affected. Any such adverse effect may cause the trading price of our ordinary shares to decline, and as a result, you could lose all or part of your investment in us. Our business, financial condition, results of operations and cash flows may also be materially and adversely affected by events, risks and uncertainties not known to us or events, risks and uncertainties that we currently believe to be immaterial.

Economic, Market and Financial Risks

Our business operations and performance have been, and are expected to continue to be, impacted by global macroeconomic factors. Ongoing macroeconomic challenges could adversely impact our business, results of operations, financial conditions and cash flows.

Macroeconomic challenges, including ongoing supply chain disruptions and delays, material, electronic component and labor shortages, cost inflation, rising interest rates and volatility in the capital markets, have impacted, and may continue to impact, our business, our customers and our suppliers. These challenges may also make it more challenging for us to manufacture and deliver products to our customers, could cause periodic production interruptions and supply constraints, impact our ability to forecast and plan for future business activities and, if not adequately managed, could have a material adverse impact on our business, results of operations, financial condition and cash flows.

Further, demand for our products and solutions is impacted by the strength of institutional, commercial and residential construction and remodeling markets, which are sensitive to national, regional and local economic conditions. As a result, deterioration of these macroeconomic conditions (or weakness in these conditions existing for an extended period of time), a decline in general economic activity or recession in the U.S. or global economy could slow demand for new construction or remodeling projects and result in our customers cancelling or delaying orders, which in turn could erode average selling prices and result in declines in our revenues, profitability and cash flows.

Increased prices and inflation could negatively impact our margin performance and our financial results.

Elevated levels of inflation, including rising prices for raw materials, parts and components, freight, packaging, labor and energy, increases our costs to manufacture and distribute our products and services, and we may be unable to pass these increased costs on to our customers. We do not currently use financial derivatives to hedge against volatility in commodity prices; however, we utilize firm purchase commitments, where possible, to help mitigate risk. The pricing of some materials, parts and components we use is based on market prices. To mitigate this exposure, we may use annual price contracts to minimize the impact of inflation and to benefit from deflation.

Additionally, we are exposed to fluctuations in other costs such as packaging, freight, labor and energy prices. If inflation in these costs increases beyond our ability to control for them through measures such as implementing operating efficiencies, or we are not able to increase prices to sufficiently offset the effect of various cost increases without negatively impacting customer demand, our margin performance and results of operations would be negatively impacted.

Our global operations subject us to economic risks.

Our businesses operate around the world in various geographic regions and product markets. Additionally, we procure various products, parts, components and services from supplier partners located throughout the world. Our global operations depend on products manufactured, purchased and sold in the U.S. and internationally, including in Australia, Canada, China, Europe, Mexico, New Zealand and the Middle East. The political, economic and regulatory environments in which we operate are becoming increasingly volatile and uncertain. Accordingly, we are subject to multiple risks that are inherent in operating and sourcing globally, including:

- Changes to trade agreements, sanctions, import and export regulations, including imposition of burdensome tariffs and quotas, and customs duties;
- Changes in applicable tax regulations and interpretations;
- Economic downturns;
- Social and political unrest, instability, national and international conflict, including war, border closures, civil disturbances, terrorist acts and other geographical disputes and uncertainties;
- Government measures to restrict business activity, for example, to prevent the spread of a communicable disease;
- Changes in laws and regulations or imposition of currency restrictions and other restraints in various jurisdictions;
- Limitation of ownership rights, including expropriation of assets by a local government, and limitation on the ability to repatriate earnings;

- Sovereign debt crises and currency instability in developed and developing countries;
- Difficulty in staffing and managing global operations;
- Difficulty in enforcing agreements, collecting receivables and protecting assets through non-U.S. legal systems; and
- Difficulty in transporting materials, components and products.

These risks have increased our cost of doing business in the U.S. and internationally. These risks may also increase our counterparty risk, disrupt our operations, disrupt the ability of suppliers and customers to fulfill their obligations, increase our effective tax rate, increase the cost of our products, limit our ability to sell products and services in certain markets, reduce our operating margin and cash flows and/or negatively impact our ability to compete.

Our business relies on the institutional, commercial and residential construction and remodeling markets.

Demand for our security products and solutions relies on the institutional, commercial and residential construction and remodeling markets, which are marked by cyclicality based on overall economic conditions, including consumer confidence and disposable income, corporate and government spending, work-from-home trends, availability of credit and demand for new housing and infrastructure. Weakness or instability in one or more of these markets may cause current and potential customers to delay or cancel major capital projects or otherwise choose not to make purchases, which could negatively impact the demand for our products and solutions and erode average selling prices.

Currency exchange rate fluctuations have had, and may continue to have, an adverse effect on our business, financial condition, results of operations and cash flows.

We are exposed to a variety of market risks, including the effects of changes in currency exchange rates. See "Part II, Item 7A. Management's Discussion and Analysis of Financial Condition and Results of Operations – Quantitative and Qualitative Disclosures About Market Risk."

Approximately 25% of our 2022 Net revenues were derived outside the U.S., and we expect sales to non-U.S. customers to continue to represent a significant portion of our consolidated Net revenues. Although we may enter into currency exchange contracts to reduce our risk related to currency exchange fluctuations, changes in the relative fair values of currencies occur from time to time and in some instances, as was the case in 2022, have had a significant impact on our Net revenues. We do not hedge against all our currency exposure, and therefore, our results of operations will continue to be susceptible to impacts from currency fluctuations.

We also translate assets, liabilities, revenues and expenses denominated in non-U.S. dollar currencies into U.S. dollars for our Consolidated Financial Statements based on applicable exchange rates. Consequently, fluctuations in the value of the U.S. dollar compared to other currencies may have a material impact on the value of these items in our Consolidated Financial Statements, even if their value has not changed in their original currency. Further, certain of our businesses may invoice customers in a currency other than its functional currency, or may be invoiced by suppliers in a currency other than its functional currency, which could result in unfavorable translation effects on these businesses and our results of operations.

We may be required to recognize impairment charges for our goodwill, indefinite-lived intangible assets and other long-lived assets.

At December 31, 2022, the net carrying value of our goodwill and other indefinite-lived intangible assets totaled approximately \$1.4 billion and \$110 million, respectively. Pursuant to U.S. generally accepted accounting principles ("GAAP"), we are required to annually assess our goodwill and indefinite-lived intangible assets for impairment. In addition, interim assessments must be performed for these and other long-lived assets whenever events or changes in circumstances indicate that an impairment may have occurred. Significant disruptions to our business or end market conditions, protracted economic weakness (including a potential economic downturn or recession), unexpected significant declines in operating results of reporting units, divestitures or market capitalization declines may result in recognition of impairment charges to our goodwill, indefinite-lived intangible or other long-lived assets. Any charges relating to such impairments could have a material adverse impact on our results of operations in the periods when recognized.

The capital and credit markets are important to our business.

Continued instability in U.S. and global capital and credit markets, including market disruptions, limited liquidity and interest rate volatility or reductions in the credit ratings assigned to us by independent ratings agencies, could reduce our access to capital markets, increase our costs of borrowing or adversely impact our ability to obtain favorable financing terms in the future. In particular, if we are unable to access capital and credit markets on terms that are acceptable to us, we may not be able to execute potential merger and acquisition plans, make other investments or fully execute our business plans and strategy.

Our suppliers and customers are also dependent upon the capital and credit markets. Limitations on the ability of customers, suppliers or financial counterparties to access credit could lead to insolvencies of key suppliers and customers, limit or prevent customers from obtaining credit to finance purchases of our products and services, delay institutional, commercial and/or residential construction and remodeling projects and cause delays in the delivery of key products from suppliers.

There are risks associated with our outstanding and future indebtedness.

We had approximately \$2.1 billion of outstanding indebtedness at December 31, 2022. Included in this total was \$69 million outstanding under our senior unsecured revolving credit facility (the "2021 Revolving Facility") that permits borrowings of up to \$500 million. A portion of our cash flows from operations is dedicated to servicing our indebtedness and will not be available for other purposes, including our operations, capital expenditures, payment of dividends, share repurchases or future business opportunities or other strategic investments.

Our ability to make scheduled payments or to refinance our debt obligations depends on our financial and operating performance, which is subject to prevailing economic and competitive conditions and to certain financial, business and other factors beyond our control, such as the credit ratings assigned to us by independent ratings agencies or our ability to access capital markets on acceptable terms. If our cash flows and capital resources are insufficient to fund our debt service obligations, we may be forced to reduce or delay capital expenditures, reduce or eliminate the payment of dividends, sell assets, seek additional capital or seek to restructure or refinance our indebtedness. These alternative measures may not be successful and may not permit us to meet our scheduled debt service obligations. In such event, we could face substantial liquidity problems and might be required to sell material assets or operations to attempt to meet our debt service and other obligations.

Additionally, at December 31, 2022, our borrowings included a variable rate term loan facility (the "2021 Term Facility", and together with the 2021 Revolving Facility, the "2021 Credit Facilities"). The 2021 Credit Facilities had a combined outstanding variable rate balance of \$306.5 million at December 31, 2022, which exposes us to variable interest rate risk. Applicable variable interest rates have increased throughout 2022, resulting in increased Interest expense. We are also exposed to the risk of continued rising interest rates to the extent we fund our short or long-term financing needs with variable-rate borrowings under the 2021 Revolving Facility. If variable base rates under the 2021 Credit Facilities continue to increase in the future, our Interest expense could increase as well. For more details about our interest rate exposure under the 2021 Credit Facilities, please see Part II. Item 7A.

Strategic and Operational Risks

Increased competition, including from technological developments, could adversely affect our business.

The markets in which we operate include a large number of participants, including multi-national, regional and small, local companies. We primarily compete on the basis of quality, innovation, expertise, effective channels to market, breadth of product offering and price. We may be unable to effectively compete on all these bases. Further, in a number of our product offerings, we compete with our retail customers and technology partners who use their own private labels. If we are unable to anticipate evolving trends in the market or the timing and scale of our competitors' activities and initiatives, including increased competition from private label brands, the demand for our products and services could be negatively impacted.

In addition, we compete in an industry that is experiencing the convergence of mechanical, electronic and digital products. Technology and innovation play significant roles in the competitive landscape. Our success depends, in part, upon the research, development and implementation of new technologies and products including obtaining, maintaining and enforcing necessary intellectual property protections. Securing and maintaining key partnerships and alliances, recruiting and retaining highly skilled and qualified employee talent and having access to technologies, services, intellectual property and solutions developed by others will play a significant role in our ability to effectively compete. The continual development of new technologies by existing and new competitors, including non-traditional competitors with significant resources, could adversely affect our ability to sustain operating margins and desirable levels of sales volumes. To remain competitive, we must develop new products and service offerings and respond to new technologies in a timely manner.

Our growth is dependent, in part, on the development, commercialization and acceptance of new products and services.

We must develop and commercialize new products and services that meet the varied and evolving needs of our customers and end-users in order to remain competitive in our current and future markets and in order to continue to grow our business. End users are continually adopting more advanced technologies in their facilities and homes, accelerated by the increasing adoption of IoT technologies and connected devices, which will require us to devote significant effort and resources to the development, maintenance and enhancement of the IT systems and other infrastructure required to support and/or enhance the functionality of our electronic products and solutions. The speed of development by our competitors and new market entrants is increasing. We cannot provide any assurance that any new product or service will be successfully commercialized in a timely manner, if ever, or, if commercialized, will result in returns greater than our investment. Investment in a product or service could divert our attention and resources from other projects that become more commercially viable in the market. We also cannot provide any assurance that any new product or service will be accepted by the market.

Changes in customer and consumer preferences and the inability to maintain beneficial relationships with large customers could adversely affect our business.

We have significant customers, particularly major retailers, although no one customer represented 10% or more of our total Net revenues in any of the past three fiscal years. The loss or material reduction of business, either due to a reduction in demand

from one or more of our significant customers, or our inability to timely meet any elevated level of customer demand for various reasons, the lack of success of sales initiatives or changes in customer preferences or loyalties for our products related to any such significant customer could have a material adverse impact on our business. In addition, major customers who are volume purchasers are much larger than us and have strong bargaining power with their suppliers. This limits our ability to recover cost increases through higher selling prices. Furthermore, unanticipated inventory adjustments by these customers can have a negative impact on sales.

We also sell our products through various trade channels, including traditional retail and e-commerce channels. If we or our major customers are not successful in navigating the shifting consumer preferences to distribution channels such as e-commerce, our expected future revenues may be negatively impacted.

If our products or solutions fail to meet certification and specification requirements, are defective, cause, or are alleged to have caused, bodily harm or injury, or otherwise fall short of end-users' needs and expectations, our business may be negatively impacted.

The security and access control product markets we serve often have unique certification and specification requirements, reflecting local regulatory requirements and highly variable end-user needs. While we strive to meet all certification and specification requirements, if any of our products or solutions do not meet such requirements, or contain, or are perceived to contain, defects or otherwise fall short of end-users' needs and expectations, fail to perform as intended, or are otherwise alleged to result in property damage, bodily injury and/or death we may become subject to personal injury lawsuits and/or product liability claims, and if found liable, may incur significant costs, which could negatively impact our business, results of operations or financial condition.

Additionally, electronic security products and solutions are increasingly more sophisticated and technologically complex than the mechanical security products we sell and have an increased risk of design, cybersecurity or manufacturing defects, which could lead to recalls, product replacements or modifications, write-offs of inventory or other assets and significant warranty and other expenses. Product quality issues could also adversely affect the end-user experience, resulting in reputational harm, loss of competitive advantage, poor market acceptance, reduced demand for products and solutions, delay in new product and service introductions and lost sales. Further, adverse publicity, whether or not justified, or allegations of product or service quality issues, even if false or unfounded, could damage our reputation and negatively affect our sales.

Our business and innovation strategies include making acquisitions of, and investments in, external companies. These acquisitions and investments could be unsuccessful, consume significant resources or increase our exposure to cybersecurity, data privacy or other regulatory risks, which could adversely affect our business, financial condition, results of operations and cash flows.

Our long-term growth strategies include the acquisition of businesses or product lines to strengthen our industry position, enhance our existing set of products and services offerings or expand into adjacent markets. For example, in July 2022, we completed the acquisition of the Access Technologies business. However, we cannot provide assurance that we will identify or successfully complete acquisitions with suitable candidates in the future, nor can we provide assurance that completed or future acquisitions will be successful or otherwise achieve the anticipated strategic and financial benefits, including cost and revenue synergies.

Acquisitions often place significant demands on management, operational and financial resources, which could decrease management's capacity to focus on other important business strategies or divert resources from other parts of our business. Further, the success of future or completed acquisitions will depend, in large part, on the successful integration of operations, sales and marketing, information technology, finance and administrative operations. We cannot provide assurance that we will be able to successfully integrate these new businesses. Additionally, the financing of future business acquisitions may increase our leverage, impact our credit rating and/or diminish our financial position and ability to re-invest in our existing businesses. Future acquisitions may also be dependent on our ability to access the capital and credit markets to obtain new debt or equity financing to fund the purchase price on terms that are acceptable to us.

Some of the businesses we may seek to acquire may be marginally profitable or unprofitable. For these businesses to achieve acceptable levels of profitability, we may need to improve their management, operations, products and market penetration or incur significant capital expenditures. We may not be successful in this regard, the costs of doing so may exceed our original estimates or we may encounter other potential difficulties.

Acquisitions also involve numerous other risks, including:

- Difficulties in obtaining and verifying the financial statements and other business information of acquired businesses;
- Inability to obtain regulatory approvals and/or required financing on favorable terms;
- Potential loss of key employees, key contractual relationships or key customers of acquired companies or of us;
- Difficulties competing in any new markets we may enter;
- Assumption of the liabilities and exposure to unforeseen liabilities (including, but not limited to, regulatory, legal and product or personal liability claims) of acquired companies;

- Cybersecurity related vulnerabilities or data security incidents that may be present in the IT Systems of acquired companies, or emerge when integrating the acquired company into our IT Systems;
- Dilution of interests of holders of our ordinary shares through the issuance of equity securities or equity-linked securities;
- Labor disruptions, work stoppages or other employee-related issues, particularly if employees of the acquired companies are represented by labor unions or trade councils; and
- Difficulty in integrating financial reporting systems and implementing controls, procedures and policies, including
 disclosure controls and procedures and internal control over financial reporting appropriate for public companies of
 our size at companies that, prior to the acquisition, had lacked such controls, procedures and policies.

Further, as part of our innovation strategy, from time to time we invest in start-up companies and/or development stage technology or other companies. In evaluating these opportunities, we follow a structured evaluation process that considers factors such as potential financial returns, new expertise in emerging technology and business benefits. Despite our best efforts to calculate potential return and risk, some or all of the companies we invest in may be unprofitable at the time of, and subsequent to, our investment. We may lose money in these investments, including the potential for future impairment charges on the investments, and the anticipated benefits of the technology and business relationships may be less than expected.

We may pursue business opportunities that diverge from our core business.

We may pursue business opportunities that diverge from our core business, including expanding our products or service offerings, seeking to expand our products and services into new international markets, investing in new and unproven technologies and forming new alliances with companies to develop and distribute our products and services. We can offer no assurance that any such business opportunities will prove successful. Certain international markets may be slower than our established markets in adopting our services and products, and our operations in such markets may not develop at a rate that supports our level of investment. Among other negative effects, our investment in new business opportunities may exceed the returns we realize. New investments could have higher cost structures than our current business, which could reduce operating margins and require more working capital. In the event that working capital requirements exceed operating cash flow, we may be required to draw on the 2021 Revolving Facility or pursue other external financing, which may not be readily available. Additionally, our pursuit of new business opportunities that diverge from our core business may expose us to different risks and uncertainties other than those described in this "Risk Factors" section or elsewhere in this Annual Report on Form 10-K. In addition to the risks outlined above, expansion into certain new markets may require us to compete with local businesses with greater knowledge of the market, including the tastes and preferences of end-users, and higher market shares.

Our strategic initiatives, including enterprise excellence efforts among other significant capital expenditure projects, may not achieve the improvements or financial returns we expect.

We utilize a number of tools to improve efficiency and productivity. Implementation of new processes to our operations could cause disruptions and may prove to be more difficult, costly or time consuming than expected. Additionally, from time to time we undertake substantial capital projects for varying reasons, such as to increase production capacity or to insource certain products, parts or components. We invest in areas we believe best align with our business strategies and that will optimize future returns. However, there can be no assurance that all our planned enterprise excellence projects or other capital expenditures will be fully implemented, or if implemented, will realize the expected improvements or financial returns.

We may not be able to effectively manage and implement restructuring initiatives or other organizational changes.

We have, from time to time, restructured or made other adjustments to our workforce and manufacturing footprint, and may need to do so in the future, in response to market or product changes, performance issues, changes in strategy, acquisitions and/or other internal or external considerations. These restructuring activities and other organizational changes often result in increased restructuring costs, diversion of management's time and attention from daily operations, cybersecurity and other operational risks and temporarily reduced productivity. If we are unable to successfully manage and implement restructuring and other organizational changes, we may not achieve or sustain the expected growth or cost savings benefits of these activities or do so within the expected timeframe. These effects could recur in connection with future acquisitions and other organizational changes and our results of operations could be negatively affected.

The effects of global climate change or other unexpected events, including global health crises, may disrupt our operations and have a negative impact on our business.

The effects of global climate change, such as extreme weather conditions and natural disasters occurring more frequently or with more intense effects, or the occurrence of unexpected events including wildfires, tornadoes, hurricanes, earthquakes, floods, tsunamis and other severe hazards in the countries where we operate or sell products and services, could adversely affect our business, financial condition, results of operations and cash flows. These events could disrupt our operations by impacting the availability and cost of materials needed for manufacturing, cause physical damage or closure of our manufacturing sites or distribution centers, lead to loss of human capital and/or cause temporary or long-term disruption in the manufacturing or delivery of products and services to customers. These events and disruptions could also adversely affect our customers' and

suppliers' financial condition or ability to operate, resulting in reduced customer demand, delays in payments received or supply chain disruptions. Further, these events and disruptions could increase insurance and other operating costs, including impacting our decisions regarding construction of new facilities to select areas less prone to climate change risks and natural disasters, which could result in indirect financial risks passed through the supply chain or other price modifications to our products and services.

Additionally, as we have experienced in recent years, the COVID-19 pandemic created significant volatility, uncertainty and economic disruption, both for our business (and many of our customers and suppliers) and the U.S. and global economy more generally. It also led, both directly and indirectly, to significant operating challenges, including disruptions to our and our suppliers' operations, shortages of electronic and other parts and components, freight delays, increased labor shortages and logistical challenges. Although most governments have eased or eliminated their restrictions on travel and social interactions, and lifted non-essential business closures, several jurisdictions in which we have operations, such as China, have public health and government mandates that restrict business activities. These mandates and restrictions have, and could continue to have, an impact on our business and operations, and on the operations of some of our suppliers.

Global health crises, such as the COVID-19 pandemic or any other actual or threatened epidemic, pandemic, or outbreak and spread of a communicable disease or virus in the countries where we operate or sell products and provide services could adversely affect our operations and financial performance. Further, any national, state or local government mandates or other orders taken to minimize the spread of a global health crisis could restrict our ability to conduct business as usual, as well as the business activities of our key customers and suppliers, including the potential for labor shortages. In particular, the ultimate extent of the impact of any epidemic, pandemic or other global health crisis on our business, financial condition and results of operations will depend on future developments which are highly uncertain and cannot be predicted.

We may be subject to risks relating to our information technology and operational technology systems.

We rely extensively on information technology and operational technology systems, networks and services including hardware, software, firmware and technological applications and platforms (collectively, "IT Systems") to manage and operate our business from end-to-end, including ordering and managing materials from suppliers, design and development, manufacturing, marketing, selling and shipping to customers, invoicing and billing, managing our banking and cash liquidity systems, managing our enterprise resource planning and other accounting and financial systems and complying with regulatory, legal and tax requirements. There can be no assurance that our current IT Systems will function properly. We have invested and will continue to invest in improving our IT Systems. Some of these investments are significant and impact many important operational processes and procedures. There is no assurance that newly implemented IT Systems will improve our current systems, improve our operations or yield the expected returns on the investments. In addition, the implementation of new IT Systems may be more difficult, costly or time consuming than expected and cause disruptions in our operations and, if not properly implemented and maintained, negatively impact our business. If our IT Systems cease to function properly or if these systems do not provide the anticipated benefits, our ability to manage our operations could be impaired.

We currently rely on third-party service providers for many of the critical elements of our global information and operational technology infrastructure, and their failure to provide effective support for such infrastructure could increase our cybersecurity risk or otherwise negatively impact our business and financial results.

We have outsourced many of the critical elements of our global information and operational technology infrastructure to third-party service providers in order to achieve efficiencies. If such service providers experience a disruption due to a cyberattack or other internal or external factors, or they do not perform or perform effectively, we may not be able to achieve the expected efficiencies and may have to incur additional costs to address failures in providing service by the service providers. Depending on the function involved, such non-performance, ineffective performance or failures of service may lead to business disruptions, processing inefficiencies or security breaches.

Disruptions or breaches of our information systems could adversely affect us.

Despite our implementation of cybersecurity measures, which have focused on prevention, mitigation, resilience and recovery, our network and products, including access solutions, may be vulnerable to cybersecurity attacks, computer viruses, malicious codes, malware, ransomware, phishing, social engineering, denial of service, hacking, break-ins and similar disruptions. Cybersecurity attacks and intrusion efforts are continuous and evolving, and in certain cases they have been successful at the most robust institutions. The scope and severity of risks that cyber threats present have increased dramatically and include, but are not limited to, malicious software, ransomware attacks, attempts to gain unauthorized access to data or premises, exploiting weaknesses related to vendors or other third parties that could be exploited to attack our systems, denials of service and other electronic security breaches that could lead to disruptions in systems, unauthorized release of confidential or otherwise protected information and corruption of data. Any such event could have a material adverse effect on our business, financial condition, results of operations and cash flows as we face regulatory, reputational and litigation risks resulting from potential cyber incidents, as well as the potential of incurring significant remediation costs. Further, while we maintain insurance coverage that may, subject to policy terms and exclusions, cover certain aspects of our cyber risks, such insurance coverage may be insufficient to cover our losses or all types of claims that may arise in the continually evolving area of cyber risk.

Our daily business operations also require us to collect and/or retain sensitive data such as intellectual property, proprietary business information and data related to customers, employees, suppliers and business partners within our networking infrastructure including data from individuals subject to the European Union's General Data Protection Regulation, that is subject to privacy and security laws, regulations and/or customer-imposed controls. Despite our efforts to protect such data, the loss or breach of such data due to various causes including material security breaches, catastrophic events, extreme weather, natural disasters, power outages, system failures, computer viruses, improper data handling, programming errors, unauthorized access and employee error or malfeasance could result in wide reaching negative impacts to our business. As such, the ongoing maintenance and security of this information is pertinent to the success of our business operations and our strategic goals.

In addition, we operate in an environment where there are different and potentially conflicting data privacy laws and regulations in effect or expected to go into effect in the future, including regulations related to devices connected through IoT, in the various jurisdictions in which we operate, and we must understand and comply with such laws and regulations while ensuring our data is secure.

Our networking infrastructure and related assets may be subject to unauthorized access by hackers, employee error or malfeasance or other unforeseen activities. Such issues could result in the disruption of business processes, network degradation and system downtime, along with the potential that a third party will exploit our critical assets such as intellectual property, proprietary business information and data related to our customers, suppliers and business partners. To the extent that such disruptions occur, and our business continuity plans do not effectively address these disruptions in a timely manner, they may cause delays in the manufacture or shipment of our products and the cancellation of customer orders and, as a result, our business operating results and financial condition could be materially and adversely affected, resulting in a possible loss of business or brand reputation.

Our ability to successfully grow and expand our business depends on our ability to recruit and retain a highly qualified and diverse workforce.

Our ability to successfully grow and expand our business is dependent upon our ability to recruit and retain a workforce with the skills necessary to develop, manufacture and deliver the products and services desired by our customers. We need highly skilled and qualified personnel in multiple areas, including engineering, sales, manufacturing, information technology, cybersecurity, business development, strategy and management. We must therefore continue to effectively recruit, retain and motivate highly qualified, skilled and diverse personnel to maintain our current business and support our projected growth. A shortage of these employees for various reasons, including intense competition for skilled employees, labor shortages, increased labor costs, candidates' preference to work remotely, changes in laws and policies regarding immigration and work authorizations or any government or public health mandates in jurisdictions where we have operations that may result in workforce attrition and difficulty with recruiting, may jeopardize our ability to grow and expand our business.

We continue to experience increased labor shortages at some of our production and distribution facilities. While we have historically experienced some level of ordinary course turnover of employees, the COVID-19 pandemic increased turnover and the ensuing negative macroeconomic environment exacerbated labor shortages and contributed to further increases in employee turnover. Labor shortages and increased turnover rates have led to, and could in the future lead to, increased costs, such as increased overtime to meet customer demand and increased wage rates to attract and retain employees and could negatively affect our ability to efficiently operate our production facilities or otherwise operate at full capacity. An overall or prolonged labor shortage, lack of skilled labor, increased turnover or sustained level of wage inflation could have a material adverse impact on our business, financial position, results of operations and cash flows.

Disruptions in our global supply chain, including product manufacturing and logistical services provided by our supplier partners, may negatively impact our business.

We procure certain products, including raw materials and other commodities, including steel, zinc, brass and other non-ferrous metals, as well as parts, components (including electronic components) and logistical services from supplier partners located throughout the world. Our ability to meet our customers' needs and achieve cost targets depends on our ability to maintain key manufacturing and supply arrangements, including supplier execution and certain sole supplier or sole manufacturing arrangements. Our reliance on these third parties reduces our control over the manufacturing and delivery process, exposing us to risks including reduced control over product costs and delivery. Additionally, because not all of our supply arrangements provide for guaranteed supply and some key parts and components may be available only from a single supplier or a limited group of suppliers, we are also subject to supply and pricing risks, which could negatively impact our margin performance, results of operations, inventory levels and cash flows.

If we are unable to effectively manage these relationships, or if these third parties experience delays, disruptions, shortages of materials, labor, electronic and other components, capacity constraints, regulatory issues or quality control problems in their operations, freight delays and other supply chain constraints and disruptions, or otherwise fail to meet our future requirements for timely delivery, our ability to ship and deliver certain of our products to our customers could be impaired and our business could be harmed.

Legal and Compliance Risks

We are subject to risks related to corporate social responsibility and reputational matters.

Our reputation and the reputation of our brands, including the perception held by our customers, end-users, business partners, investors, other key stakeholders and the communities in which we do business are influenced by various factors. There is an increased focus from our stakeholders, as well as regulatory authorities both within the U.S. and internationally, on ESG practices and disclosure. If we fail, or are perceived to have failed, in any number of ESG matters, such as environmental stewardship, DEI, good corporate governance, workplace conduct and support for local communities, or to effectively respond to changes in, or new, legal, regulatory or reporting requirements concerning climate change or other sustainability concerns, we may be subject to regulatory fines and penalties, and our reputation or the reputation of our brands may suffer. Further, we have made several public commitments regarding our intended reduction of carbon emissions, including a commitment to achieve carbon neutral emissions by 2050. Although we intend to meet these commitments, we may be required to expend significant resources to do so, which could increase our operational costs. Further, there can be no assurance of the extent to which any of our commitments will be achieved, or that any future investments we make to achieve such commitments will meet investor, legal and/or any other regulatory expectations and requirements. If we are unable to meet our commitments, we could incur adverse publicity and reaction from investors, advocacy groups or other stakeholders, which could adversely impact our reputation and brand perception. Such damage to our reputation and the reputation of our brands may negatively impact our business, demand for our products and services, our financial condition and results of operations.

In addition, negative or inaccurate postings or comments on social media or networking websites about our company or our brands could generate adverse publicity that could damage our reputation or the reputation of our brands. If we are unable to effectively manage real or perceived issues, including concerns about product quality, safety, corporate social responsibility or other matters, sentiments toward the Company or our products could be negatively impacted, and our financial results could suffer.

Our brands are important assets of our businesses, and violation of our trademark rights by imitators could negatively impact revenues and brand reputation.

Our brands and trademarks enjoy a reputation for quality and value and are important to our success and competitive position. Unauthorized use of our trademarks may not only erode sales of our products but may also cause significant damage to our brand name and reputation, interfere with relationships with our customers and increase litigation costs. There can be no assurance that our on-going effort to protect our brand and trademark rights will prevent all violations.

Material legal judgments, fines, penalties or settlements imposed against us or our assets could adversely affect our business, financial condition, results of operations and cash flows.

We are currently, and may in the future become, involved in legal proceedings, claims and disputes incidental to the operation of our business in the ordinary course. Our business may be adversely affected by the outcome of these proceedings and other contingencies (including, without limitation, environmental, product and warranty liability, claims for property damage, physical harm or bodily injury, antitrust, intellectual property, data protection, privacy and labor and employment matters) that cannot be predicted with certainty. As required by GAAP, we establish reserves based on our assessment of the probability of contingencies and whether we are able to reasonably estimate the expected range of loss. Subsequent developments in legal proceedings and other contingencies may affect our assessment and estimates of the loss contingency recorded as a reserve, and we may incur additional costs or be required to make material payments beyond our previously recorded reserves.

Allegations that we have infringed the intellectual property rights of third parties could negatively affect us.

We may be subject to claims of infringement of intellectual property rights by third parties. In particular, we often compete in areas having extensive intellectual property rights owned by others, and we have become subject to claims alleging infringement of intellectual property rights of others. In general, if it is determined that one or more of our technologies, products or services infringes the intellectual property rights owned by others, we may be required to cease marketing those products or services, to obtain licenses from the holders of the intellectual property at a material cost or to take other actions to avoid infringing such intellectual property rights. The litigation process is costly and subject to inherent uncertainties, and we may not prevail in litigation matters regardless of the merits of our position. Adverse intellectual property litigation or claims of infringement against us may become extremely disruptive if the plaintiffs succeed in blocking the trade of our products and services and may have a material adverse effect on our business.

Our reputation, ability to do business and results of operations could be impaired by improper conduct by any of our employees, agents or business partners.

We are subject to regulation under a variety of U.S. federal and state and non-U.S. laws, regulations and policies including laws related to anti-bribery and anti-corruption, export and import compliance, competition and anti-money laundering due to our global operations. We provide compliance training for our employees and have other controls and procedures in these areas. We cannot provide assurance that our internal controls will always protect us from the improper conduct of our employees, agents and business partners. Any improper conduct could damage our reputation and subject us to, among other things, civil and

criminal penalties, material fines, equitable remedies (including profit disgorgement and injunctions on future conduct), securities litigation, adverse publicity and a general loss of investor or public confidence.

Our operations are subject to regulatory risks.

Our U.S. and non-U.S. operations are subject to a number of laws and regulations, including fire and building codes and EHS standards. We have incurred, and will be required to continue to incur, significant expenditures to comply with these laws and regulations. Changes to, or changes in interpretations of, current laws and regulations, including climate change legislation or other environmental mandates, could require us to increase our compliance expenditures, cause us to significantly alter or discontinue offering existing products and services or cause us to develop new products and services. Altering current products and services or developing new products and services to comply with changes in the applicable laws and regulations could require significant research and development investments, increase the cost of providing the products and services and adversely affect the demand for our products and services. In the event a regulatory authority concludes that we are not or have not at all times been in full compliance with these laws or regulations, we could be fined, criminally charged or otherwise sanctioned.

Certain environmental laws assess liability on current or previous owners of real property or operators of manufacturing facilities for the costs of investigation, removal or remediation of hazardous substances or materials at such properties or at properties at which parties have disposed of hazardous substances. Liability for investigative, removal and remedial costs under certain U.S. federal and state laws and certain non-U.S. laws are retroactive, strict and joint and several. In addition to cleanup actions brought by governmental authorities, private parties could bring personal injury or other claims due to the presence of, or exposure to, hazardous substances. We have received notifications from U.S. and non-U.S. governmental agencies, including the EPA and similar state environmental agencies, that conditions at a number of current and formerly owned sites where we and others have disposed of hazardous substances require investigation, cleanup and other possible remedial action. These agencies may require that we reimburse the government for its costs incurred at these sites or otherwise pay for the costs of investigation and cleanup of these sites, including by providing compensation for natural resource damage claims from such sites. For more information, see "Item 1. Business – Regulatory Matters."

While we have planned for future capital and operating expenditures to maintain compliance with environmental laws and have accrued for costs related to current remedial efforts, our costs of compliance, or our liabilities arising from past or future releases of, or exposures to, hazardous substances, may exceed our estimates. We may also be subject to additional environmental claims for personal injury or cost recovery actions for remediation of facilities in the future based on our past, present or future business activities.

As a global business, we have a relatively complex tax structure, and there is a risk that tax authorities will disagree with our tax positions.

Since we conduct operations worldwide through our subsidiaries, we are subject to complex transfer pricing regulations in the countries in which we operate. Transfer pricing regulations generally require that, for tax purposes, transactions between us and our affiliates be priced on a basis that would be comparable to an arm's length transaction and that contemporaneous documentation be maintained to support the tax allocation. Although uniform transfer pricing standards are emerging in many of the countries in which we operate, there is still a relatively high degree of uncertainty and inherent subjectivity in complying with these rules. To the extent that any tax authority disagrees with our transfer pricing policies, we could become subject to significant tax liabilities and penalties. Our tax returns are subject to review by taxing authorities in the jurisdictions in which we operate. Although we believe we have provided for all tax exposures, the ultimate outcome of a tax review could differ materially from our provisions.

We could be subject to changes in tax rates, the adoption of new tax legislation or exposure to additional tax liabilities.

Our future effective tax rate and cash tax obligations could be adversely affected by shifts in our mix of earnings in countries with varying statutory tax rates, changes in the valuation of our deferred tax assets or liabilities or changes in tax laws, regulations, interpretations or accounting principles, as well as certain discrete items. In addition, we are subject to regular review and audit by tax authorities. As a result, we have received, and may in the future receive, assessments in multiple jurisdictions on various tax-related assertions. Any adverse outcome of such a review or audit could have a negative effect on our operating results and financial condition. In addition, the determination of our worldwide provision for income taxes and other tax liabilities requires significant judgment, and there are many transactions and calculations where the ultimate tax determination is uncertain. Although we believe our estimates are reasonable, the ultimate tax outcome may differ from the amounts recorded in our Consolidated Financial Statements and may materially affect our financial results in the period or periods for which such determination is made. Furthermore, due to shifting economic and political conditions, tax policies, laws, interpretations and rates in various jurisdictions may be subject to significant change, which could materially affect our financial position and results of operations. For example, many countries in Europe, as well as a number of other countries and organizations, have recently proposed, recommended or implemented changes to existing tax laws or have enacted new laws that could significantly increase our effective tax rate or cash tax obligations in countries where we do business or require us to change the manner in which we operate our business.

The Organization for Economic Cooperation and Development ("OECD") has led international efforts in recent years to devise a permanent two-pillar solution to address the tax challenges arising from the digitization of the economy. Pillar One focuses on nexus and profit allocation. Pillar Two provides for a global minimum effective corporate tax rate of 15%, applied on a jurisdiction-by-jurisdiction basis. We currently expect to be outside the scope of the Pillar One proposals. In December 2021, the OECD published detailed rules that define the scope of the Pillar Two proposal and, based on our current understanding of the minimum revenue thresholds contained in these rules, we expect to be within their scope and implementation. A number of countries are currently proposing to implement core elements of the Pillar Two proposal by the start of 2024, and on December 15, 2022, the European Union adopted a Council Directive which requires certain Pillar Two rules to be transposed into member states' national laws starting in 2024. As a consequence, our global effective tax rate could be materially impacted by such legislation, or any resulting local country legislation enacted in response to any potential global minimum tax rates. Additionally, the European Commission has been investigating whether various tax regimes or private tax rulings provided by a country to particular taxpayers may constitute State Aid.

We cannot currently predict the outcome of any of these potential changes or investigations in any jurisdiction, but if any of the above occurs and impacts us, this could increase our tax burden and/or effective tax rate. We continue to examine the impact the above items may have on our business, including their impact on the amount of tax we must pay.

Risks Related to Our Incorporation in Ireland

Irish law differs from the laws in effect in the United States and may afford less protection to holders of our securities.

The U.S. currently does not have a treaty with Ireland providing for the reciprocal recognition and enforcement of judgments in civil and commercial matters. As such, there is some uncertainty as to whether the courts of Ireland would recognize or enforce judgments of U.S. courts obtained against us or our directors or officers based on U.S. federal or state civil liability laws, including the civil liability provisions of the U.S. federal or state securities laws, or hear actions against us or those persons based on those laws.

As an Irish company, we are governed by the Companies Act 2014 of Ireland, as amended, which differs in some material respects from laws generally applicable to U.S. corporations and shareholders, including, among others, differences relating to interested director and officer transactions and shareholder lawsuits. Likewise, the duties of directors and officers of an Irish company generally are owed to the company only. Shareholders of Irish companies generally do not have a personal right of action against directors or officers of the company and may exercise such rights of action on behalf of the company only in limited circumstances. Accordingly, holders of our securities may have more difficulty protecting their interests than would holders of securities of a corporation incorporated in a jurisdiction of the U.S.

In addition, Irish law allows shareholders to authorize share capital which then can be issued by a board of directors without shareholder approval. Also, subject to specified exceptions, Irish law grants statutory preemptive rights to existing shareholders to subscribe for new issuances of shares for cash. At our annual general meeting of shareholders, our shareholders authorized our Board of Directors to issue up to 33% of our issued ordinary shares and further authorized our Board of Directors to issue up to 5% of such shares for cash without first offering them to our existing shareholders. Both of these authorizations will expire after a certain period unless renewed by our shareholders, and we cannot guarantee that the renewal of these authorizations will always be approved. If the Directors' authority to issue ordinary shares is not renewed, then we may be limited in our ability to use our shares, for example, as consideration for acquisitions.

Changes in tax laws, regulations or treaties, changes in our status under the tax laws of many jurisdictions or adverse determinations by taxing authorities could increase our tax burden or otherwise affect our financial condition or operating results, as well as subject our shareholders to additional taxes.

The realization of any tax benefit related to our incorporation and tax residence in Ireland could be impacted by changes in tax laws, tax treaties or tax regulations or the interpretation or enforcement thereof by the tax authorities of many jurisdictions. From time to time, proposals have been made and/or legislation introduced to change the tax laws of various jurisdictions or limit tax treaty benefits that if enacted could materially increase our tax burden and/or our effective tax rate. Moreover, other legislative proposals could have a material adverse impact on us by overriding certain tax treaties and limiting the treaty benefits on certain payments, which could increase our tax liability. We cannot predict the outcome of any specific legislation in any jurisdiction.

While we monitor proposals that would materially impact our tax burden and/or our effective tax rate and investigate our options, we could still be subject to increased taxation on a going forward basis no matter what action we undertake if certain proposals are enacted, certain tax treaties are amended and/or our interpretation of applicable tax law is challenged and determined to be incorrect. In particular, any changes and/or differing interpretations of applicable tax law that have the effect of disregarding our incorporation in Ireland, limiting our ability to take advantage of tax treaties between jurisdictions, modifying or eliminating the deductibility of various currently deductible payments or increasing the tax burden of operating or being resident in a particular country, could subject us to increased taxation.

Dividends received by our shareholders may be subject to Irish dividend withholding tax.

In certain circumstances, we are required to deduct Irish dividend withholding tax of 25% from dividends paid to our shareholders. In the majority of cases, shareholders residing in the U.S. will not be subject to Irish withholding tax, and shareholders resident in a number of other countries will not be subject to Irish withholding tax provided that they complete certain Irish dividend withholding tax forms. However, some shareholders may be subject to withholding tax, which could discourage the investment in our stock and adversely impact the price of our shares.

Dividends received by our shareholders may be subject to Irish income tax.

Dividends paid in respect of our shares generally are not subject to Irish income tax where the beneficial owner of these dividends is exempt from Irish dividend withholding tax, unless the beneficial owner of the dividend has some connection with Ireland other than his or her shareholding in Allegion.

Our shareholders who receive their dividends subject to Irish dividend withholding tax will generally have no further liability to Irish income tax on the dividends unless the beneficial owner of the dividend has some connection with Ireland other than his or her shareholding in Allegion.

Certain provisions in our Memorandum and Articles of Association, among other things, could prevent or delay an acquisition of us, which could decrease the trading price of our ordinary shares.

Our Memorandum and Articles of Association contains provisions to deter takeover practices, inadequate takeover bids and unsolicited offers. These provisions include, amongst others:

- A provision of our Articles of Association which generally prohibits us from engaging in a business combination with an interested shareholder (being (i) the beneficial owner, directly or indirectly, of 10% or more of our voting shares or (ii) an affiliate or associate of us that has at any time within the last five years been the beneficial owner, directly or indirectly, of 10% or more of our voting shares), subject to certain exceptions;
- Rules regarding how shareholders may present proposals or nominate directors for election at shareholder meetings;
- The right of our Board of Directors to issue preferred shares without shareholder approval in certain circumstances, subject to applicable law; and
- The ability of our Board of Directors to set the number of directors and to fill vacancies on our Board of Directors.

We believe these provisions will provide some protection to our shareholders from coercive or otherwise unfair takeover tactics. These provisions are not intended to make us immune from takeovers. However, these provisions will apply even if the offer may be considered beneficial by some shareholders and could delay or prevent an acquisition that our Board of Directors determines is in our best interests and our shareholders' best interests. These provisions may also prevent or discourage attempts to remove and replace incumbent directors.

In addition, several mandatory provisions of Irish law could prevent or delay an acquisition of us. For example, Irish law does not permit shareholders of an Irish public limited company to take action by written consent with less than unanimous consent. We also will be subject to various provisions of Irish law relating to mandatory bids, voluntary bids, requirements to make a cash offer and minimum price requirements, as well as substantial acquisition rules and rules requiring the disclosure of interests in our shares in certain circumstances. Also, Irish companies, including us, may alter their Memorandum of Association and Articles of Association only with the approval of at least 75% of the votes of the company's shareholders cast in person or by proxy at a general meeting of the company.

Item 1B. UNRESOLVED STAFF COMMENTS

None.

Item 2. **PROPERTIES**

We operate through a broad network of sales offices, engineering centers, 29 principal production and assembly facilities and several distribution centers throughout the world. Our active properties represent about 6.7 million square feet, of which approximately 41% is leased.

We own 16 of our production and assembly facilities, with the remainder under long-term lease arrangements. We believe that our plants have been well maintained, are generally in good condition and are suitable for the conduct of our business.

Item 3. LEGAL PROCEEDINGS

In the normal course of business, we are involved in a variety of lawsuits, claims and legal proceedings, including commercial and contract disputes, employment matters, product liability claims, environmental liabilities, intellectual property disputes and tax-related matters. In our opinion, pending legal matters are not expected to have a material adverse impact on our results of operations, financial condition, liquidity or cash flows.

This item should be read in conjunction with the Risk Factors set forth in Part I. Item 1A of this Form 10-K.

Item 4. MINE SAFETY DISCLOSURES

Not applicable.

INFORMATION ABOUT OUR EXECUTIVE OFFICERS

The following is a list of executive officers of the Company as of February 22, 2023.

John H. Stone, age 52, has served as our President and Chief Executive Officer since July 2022. Prior to joining Allegion, Mr. Stone served as President, Worldwide Construction, Forestry and Power Systems at Deere & Company, an agricultural machinery and heavy equipment company ("Deere"), from 2020 to 2022, and prior to that, served as Senior Vice President, Intelligent Solutions Group at Deere from 2016 to 2020.

Michael J. Wagnes, age 49, has served as our Senior Vice President and Chief Financial Officer since March 2022. Mr. Wagnes served as our Vice President and General Manager, Commercial Americas from 2020 to 2022 and as our Vice President – Investor Relations and Treasury from 2016 to 2020.

Jeffrey N. Braun, age 63, has served as our Senior Vice President and General Counsel since 2014. Mr. Braun also served as Secretary from July 2022 to February 2023 and from 2018 to 2020.

Timothy P. Eckersley, age 61, has served as our Senior Vice President – Allegion International since 2021. Mr. Eckersley served as our Senior Vice President – Americas from 2013 to 2020.

Cynthia D. Farrer, age 60, has served as our Senior Vice President – Global Operations and Integrated Supply Chain since June 2021. Ms. Farrer served as our Vice President – Global Operations and Integrated Supply Chain from 2020 to 2021 and as Vice President, Global Supply Management from 2017 to 2020.

David S. Ilardi, age 44, has served as our Senior Vice President – Allegion Americas since March 2022. Mr. Ilardi served as our General Manager, Allegion Home from 2019 to 2022 and Regional Vice President Sales, Central Region from 2017 to 2019.

Tracy L. Kemp, age 54, has served as our Senior Vice President – Chief Information and Digital Officer since December 2020. Ms. Kemp served as our Senior Vice President – Chief Customer and Digital Officer from 2019 to 2020 and Senior Vice President and Chief Information Officer from 2015 to 2019.

Robert C. Martens, age 52, has served as our Senior Vice President – Chief Innovation and Design Officer since December 2019 and Futurist and President of Allegion Ventures since 2017.

Nickolas A. Musial, age 42, has served as our Vice President, Controller and Chief Accounting Officer since March 2022. Mr. Musial served as our Vice President of Finance, Allegion Americas from 2017 to 2022.

Jennifer L. Preczewski, age 41, has served as our Senior Vice President – Chief Human Resources Officer since February 2023. Ms. Preczewski served as our Vice President – Chief Human Resources Officer from July 2022 to February 2023, as our Vice President, HR – Total Rewards and Global Talent from 2020 to 2022, Vice President, Global Talent from 2018 to 2020, and Vice President, Human Resources – Americas from 2016 to 2018.

Vincent M. Wenos, age 56, has served as our Senior Vice President – Chief Technology Officer since June 2019. Mr. Wenos served as our Vice President – Global Technology and Engineering from 2018 to 2019 and as both Vice President – Americas Engineering and Vice President – Global Mechanical Products from 2016 to 2018.

All above-listed executive officers except for Mr. Stone have been employed by the Company for more than the past five years. No family relationship exists between any of the above-listed executive officers or directors of the Company. All executive officers are elected to hold office for one year or until their successors are elected and qualified or their earlier death, resignation or removal from office by our Board of Directors.

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

Our ordinary shares are traded on the New York Stock Exchange under the symbol ALLE. As of February 16, 2023, the number of record holders of ordinary shares was 2.054.

Dividend Policy

Our Board of Directors declared dividends of \$0.41 per ordinary share on February 4, 2022, April 7, 2022, September 1, 2022 and December 1, 2022. On February 9, 2023, our Board of Directors declared a dividend of \$0.45 per ordinary share payable on March 31, 2023, to shareholders of record on March 15, 2023. We paid a total of \$143.9 million in cash for dividends to ordinary shareholders during the year ended December 31, 2022. Future dividends on our ordinary shares, if any, will be at the discretion of our Board of Directors and will depend on, among other things, our results of operations, cash requirements and surplus, financial condition, contractual restrictions (including under the agreements governing our indebtedness) and other factors that the Board of Directors may deem relevant, as well as our ability to pay dividends in compliance with the Irish Companies Act. Under the Irish Companies Act, dividends and distributions may only be made from distributable reserves. Distributable reserves, broadly, means the accumulated realized profits of Allegion plc ("ALLE-Ireland") which are unrelated to any GAAP reported amounts (e.g., retained earnings). As of December 31, 2022, we had distributable reserves of \$3.8 billion. In addition, no distribution or dividend may be made unless the net assets of ALLE-Ireland are equal to, or in excess of, the aggregate of ALLE-Ireland's called up share capital plus undistributable reserves, and the distribution or dividend does not reduce ALLE-Ireland's net assets below such aggregate.

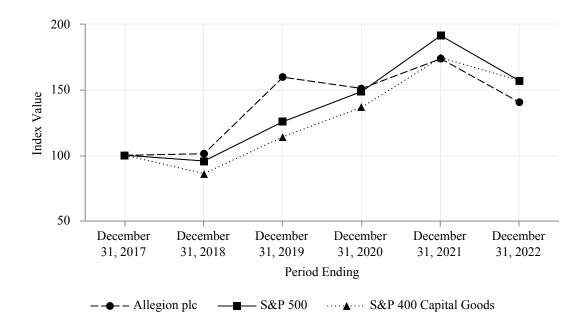
Issuer Purchases of Equity Securities

Period	Total number of shares purchased (000s)	Average price paid per share	Total number of shares purchased as part of the 2020 Share Repurchase Authorization (000s)	Approximate dollar value of shares still available to be purchased under the 2020 Share Repurchase Authorization (000s)
October 1 - October 31	_	\$ —	_	\$ 140,454
November 1 - November 30	_	_	_	140,454
December 1 - December 31				140,454
Total		\$		\$ 140,454

In February 2020, our Board of Directors approved a share repurchase authorization of up to, and including, \$800 million of the Company's ordinary shares (the "2020 Share Repurchase Authorization"). The 2020 Share Repurchase Authorization does not have a prescribed expiration date. Based on market conditions, share repurchases may be made from time to time in the open market at the discretion of management.

Performance Graph

The annual changes for the five-year period shown below are based on the assumption that \$100 had been invested in Allegion plc ordinary shares, the Standard & Poor's 500 Stock Index ("S&P 500") and the Standard & Poor's 400 Capital Goods Index ("S&P 400 Capital Goods") on December 31, 2017, and that all quarterly dividends were reinvested. The total cumulative dollar returns shown on the graph represent the value that such investments would have had on December 31, 2022.



December 31, December 31, December 31, December 31, December 31, 2017 2018 2019 2020 2021 2022 100.00 101.18 159.74 140.42 Allegion plc 151.14 173.89 S&P 500 100.00 95.62 125.72 148.85 191.58 156.88 **S&P 400 Capital Goods** 100.00 85.99 114.15 136.80 174.64 157.15

Item 6. [RESERVED]

Item 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following Management's Discussion and Analysis of Financial Condition and Results of Operations contains forward-looking statements that involve risks and uncertainties. Our actual results may differ materially from the results discussed in the forward-looking statements. Factors that might cause a difference include, but are not limited to, those discussed under Part I, Item 1A. Risk Factors in this Annual Report on Form 10-K. The following section is qualified in its entirety by the more detailed information, including our consolidated financial statements and the notes thereto, which appears elsewhere in this Annual Report on Form 10-K.

Overview

Organization

We are a leading global provider of security products and solutions operating in two segments: Allegion Americas and Allegion International. We sell a wide range of security products and solutions for end-users in commercial, institutional and residential facilities worldwide, including the education, healthcare, government, hospitality, retail, commercial office and single and multi-family residential markets. Our leading brands include CISA, Interflex, LCN, Schlage, SimonsVoss and Von Duprin.

Recent Developments

Industry Trends and Outlook

Throughout 2022 we experienced strong demand for our non-residential products and services in our Allegion Americas segment. Our ability to meet this elevated level of customer demand improved substantially as the year progressed, due in part to our actions taken to address industry-wide supply-chain challenges (particularly shortages of electronic components), as well as improving availability of non-electronic parts and materials. Further, in response to the persistent, elevated levels of inflation seen throughout the year, we implemented a series of pricing initiatives across our global businesses. Not only did these pricing initiatives significantly contribute to revenue growth in 2022, they also helped mitigate the inflationary pressures on our cost base. We expect this pricing momentum to continue to drive revenue growth and help offset the impact of inflation into 2023.

While 2022 began with similar strong demand for our residential products in our Allegion Americas segment, macroeconomic conditions had a more challenging impact on demand as the year progressed. A combination of elevated inflation and lower consumer sentiment impacted sales volumes of residential products within our Allegion Americas segment. We also experienced a softening of demand throughout many of the Eurozone economies during the second half of 2022, reflecting increased economic and geopolitical concerns in this region, which impacted several of our businesses in our Allegion International segment.

While supply chain challenges around the availability of electronic parts and components persist, and will likely continue to impact our ability to meet the elevated levels of demand for our electronic security products into 2023, we remain focused on providing exceptional service and innovation to our customers. Over the course of 2022, we began to realize the benefits from our measures taken to mitigate operational and logistical inefficiencies caused by the supply chain challenges, such as reengineering product designs and configurations to accept alternate electronic components and developing alternate sources of supply. We continue to invest in business initiatives to drive future growth and add value through seamless access and explore various options to enhance financial performance while minimizing disruption to customers and our overall business.

The macroeconomic and geopolitical trends and uncertainties noted above will likely continue to affect us in numerous and evolving ways, the full impact of which on our business, financial condition and results of operations will continue to depend on future developments that are beyond our control and we may not be able to accurately predict. These trends and uncertainties and their potential impact on our business, results of operations, financial condition and cash flows, as well as other risks, trends and uncertainties that could affect our business, financial condition and results of operations are described further under "Part I, Item 1A. Risk Factors".

2022 and 2021 Significant Events

Acquisition of the Access Technologies business

On July 5, 2022, we completed the acquisition of the Access Technologies business for a closing purchase price of \$923.1 million. This acquisition was financed by the net proceeds from the issuance of our 5.411% Senior Notes, together with borrowings under the 2021 Revolving Facility. The Access Technologies business has been integrated into our Allegion Americas segment

The Access Technologies business is a leading manufacturer, installer and service provider of automatic entrance solutions in North America, primarily in the U.S. and Canada. Its diversified customer base centers on non-residential settings, including retail, healthcare, education, commercial offices, hospitality and government. This acquisition helps us create a more comprehensive portfolio of access solutions, with the addition of automated entrance solutions. Additionally, the Access

Technologies business adds an expansive service and support network throughout the U.S. and Canada, broadening our solutions to national, regional and local customers, and complementing our existing strengths in these non-residential markets. Since the acquisition date and through December 31, 2022, the Access Technologies business generated \$185.9 million in Net revenues.

Divestiture of Milre

In September 2022, we sold Milre Systek Co. Ltd. ("Milre") in South Korea for an immaterial amount. As a result of the sale, we recorded a net loss on divestiture of \$7.6 million.

Financing activities

On June 22, 2022, Allegion US Holding Company Inc., a wholly-owned subsidiary of the Company ("Allegion US Hold Co"), issued \$600.0 million aggregate principal amount of its 5.411% Senior Notes due 2032 (the "5.411% Senior Notes"). The 5.411% Senior Notes require semi-annual interest payments on January 1 and July 1, beginning January 1, 2023, and will mature on July 1, 2032. We incurred and deferred \$5.9 million of discounts and financing costs associated with the 5.411% Senior Notes, which will be amortized to Interest expense over their 10-year term, as well as \$4.3 million of third party financing costs that were recorded within Interest expense on the Consolidated Statement of Comprehensive Income for the year ended December 31, 2022.

On November 18, 2021, we entered into a new \$750.0 million unsecured credit agreement, consisting of the \$250.0 million 2021 Term Facility and the \$500.0 million 2021 Revolving Facility. The proceeds of \$250.0 million from the 2021 Term Facility were primarily used to repay in full our previously outstanding unsecured Term Facility.

2022 Dividends and Share Repurchases

We paid quarterly dividends of \$0.41 per ordinary share to shareholders on record as of March 16, 2022, June 16, 2022, September 16, 2022, and December 16, 2022, for a total of \$143.9 million and repurchased approximately 0.5 million ordinary shares for approximately \$61.0 million during the year ended December 31, 2022.

Results of Operations - For the years ended December 31

Dollar amounts in millions, except per share amounts	2022	% of Net revenues	2021	% of Net revenues
Net revenues	\$ 3,271.9		\$ 2,867.4	
Cost of goods sold	1,949.5	59.6 %	1,662.5	58.0 %
Selling and administrative expenses	736.0	22.5 %	674.7	23.5 %
Operating income	586.4	17.9 %	530.2	18.5 %
Interest expense	75.9		50.2	
Loss on divestitures	7.6		_	
Other income, net	(11.6)		(44.0)	
Earnings before income taxes	514.5		524.0	
Provision for income taxes	56.2		40.7	
Net earnings	 458.3		483.3	
Less: Net earnings attributable to noncontrolling interests	0.3		0.3	
Net earnings attributable to Allegion plc	\$ 458.0		\$ 483.0	
Diluted net earnings per ordinary share attributable to Allegion plc ordinary shareholders:	\$ 5.19		\$ 5.34	

The discussions that follow describe the significant factors contributing to the changes in our results of operations for the years presented and form the basis used by management to evaluate the financial performance of the business. For a discussion of our results of operations for the year ended December 31, 2021, compared to the year ended December 31, 2020, see "Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations" of our 2021 Annual Report on Form 10-K filed with the SEC on February 15, 2022.

Net Revenues

Net revenues for the year ended December 31, 2022, increased by 14.1%, or \$404.5 million, as compared to the year ended December 31, 2021, due to the following:

Pricing	9.8 %
Volume	0.9 %
Acquisitions / divestitures	6.4 %
Currency exchange rates	(3.0)%
Total	14.1 %

The increase in Net revenues was driven by improved pricing across our major businesses, our acquisition of the Access Technologies business and higher volumes in our Allegion Americas segment. These increases were partially offset by unfavorable foreign currency exchange rate movements, lower volumes in our Allegion International segment and a divestiture in each of the prior and current year. Increased pricing was the result of multiple pricing initiatives implemented to help mitigate the impact of the persistent, elevated levels of inflation. We will continue to monitor the inflationary pressures to our businesses and address them through pricing initiatives where appropriate.

Pricing includes increases or decreases of price, including discounts, surcharges and/or other sales deductions, on our existing products and services. Volume includes increases or decreases of revenue due to changes in unit volume of existing products and services, as well as new products and services.

Cost of Goods Sold

For the year ended December 31, 2022, Cost of goods sold as a percentage of Net revenues increased to 59.6% from 58.0%, as compared to the year ended December 31, 2021, due to the following:

Inflation in excess of pricing and productivity	0.7 %
Volume / product mix	(0.9)%
Acquisitions / divestitures	0.7 %
Investment spending	0.2 %
Currency exchange rates	0.3 %
Restructuring / acquisition expenses	0.6 %
Total	1.6 %

Cost of goods sold as a percentage of Net revenues increased primarily due to the impact inflation had on Cost of goods sold, which exceeded the beneficial impacts from pricing and productivity, lower gross margins associated with our acquired Access Technologies business, increased investment spending, higher restructuring and acquisition and integration costs year-over-year and unfavorable foreign currency exchange rate movements. These increases to Cost of goods sold as a percentage of Net revenues were partially offset by favorable product mix, due to increased volumes in the Allegion Americas segment.

Inflation in excess of pricing and productivity includes the impact to Costs of goods sold from pricing, as defined above, in addition to productivity and inflation. Productivity represents improvements in unit costs of materials and cost reductions related to improvements to our manufacturing design and processes. Inflation includes unit costs for the current period compared to the average actual cost for the prior period, multiplied by current year volumes. Volume/product mix represents the impact due to increases or decreases of revenue due to changes in unit volume, including new products and services, including the effect of changes in the mix of products and services sold on Cost of goods sold.

Selling and Administrative Expenses

For the year ended December 31, 2022, Selling and administrative expenses as a percentage of Net revenues decreased to 22.5% from 23.5%, as compared to the year ended December 31, 2021, due to the following:

Productivity in excess of inflation	(1.5)%
Volume leverage	(0.2)%
Acquisitions / divestitures	(0.3)%
Investment spending	0.3 %
Restructuring / acquisition expenses	0.7 %
Total	(1.0)%

Selling and administrative expenses as a percentage of Net revenues decreased primarily due to productivity improvements exceeding the impact of inflation, as well as favorable volume leverage and the beneficial impact from current and prior year acquisition and divestiture activity. These decreases were partially offset by a year-over-year increase in acquisition and integration expenses, which were primarily related to our acquisition of the Access Technologies business, and increased investment spending.

Productivity in excess of inflation includes the impact from reductions in selling and administrative expenses due to productivity projects and current period costs of ongoing selling and administrative functions compared to the same ongoing expenses in the prior period. Volume leverage represents the contribution margin related to changes in sales volume, excluding the impact of price, productivity, mix and inflation. Expenses related to increased head count for strategic initiatives, new facilities or significant spending for strategic initiatives or new product and channel development, are captured in Investment spending in the table above.

Operating Income/Margin

Operating income for the year ended December 31, 2022, increased \$56.2 million as compared to the year ended December 31, 2021, and Operating margin decreased to 17.9% from 18.5%, due to the following:

In millions	Opera	ting Income	Operating Margin	
December 31, 2021	\$	530.2	18.5 %	
Pricing and productivity in excess of inflation		79.7	0.9 %	
Volume / product mix		36.5	1.1 %	
Currency exchange rates		(21.9)	(0.2)%	
Investment spending		(16.0)	(0.6)%	
Acquisitions/ divestitures		18.6	(0.4)%	
Restructuring / acquisition expenses		(40.7)	(1.4)%	
December 31, 2022	\$	586.4	17.9 %	

The increase in Operating income was driven by pricing improvements in excess of inflation and productivity, favorable volume/product mix and the contribution to Operating income from our acquired Access Technologies business. These increases were partially offset by unfavorable foreign currency exchange rate movements, increased investment spending and a year-over-year increase in restructuring and acquisition and integration expenses, which were primarily related to our acquisition of the Access Technologies business.

The decrease in Operating margin was primarily due to the year-over-year increase in restructuring and acquisition expenses, unfavorable foreign currency exchange rate movements, increased investment spending and the dilutive impact to Operating

margin from our Access Technologies business. These decreases were partially offset by pricing improvements in excess of inflation and productivity, favorable volume/product mix and the positive impact to operating margin from recent divestitures.

Interest Expense

Interest expense for the year ended December 31, 2022, increased \$25.7 million as compared to the year ended December 31, 2021, primarily due to interest on our 5.411% Senior Notes and the 2021 Revolving Facility, as well as \$4.3 million of third-party costs related to the financing of the Access Technologies business acquisition. The rise in interest rates over the course of 2022 also contributed to a higher weighted-average interest rate on our variable rate outstanding indebtedness.

Loss on Divestiture

As discussed above, in September 2022 we sold Milre for an immaterial amount, resulting in a net loss of \$7.6 million.

Other Income, net

The components of Other income, net, for the years ended December 31 were as follows:

In millions	 2022	2021
Interest income	\$ (1.3) \$	(0.4)
Foreign currency exchange loss	2.4	2.7
Earnings and gains from the sale of equity method investments, net	(0.8)	(6.4)
Net periodic pension and postretirement benefit income, less service cost	(9.4)	(7.1)
Other	(2.5)	(32.8)
Other income, net	\$ (11.6) \$	(44.0)

For the year ended December 31, 2022, Other income, net decreased \$32.4 million compared to 2021, primarily due to a non-operating investment gain of \$20.7 in 2021 that did not recur in 2022. This gain is included within Other in the table above. Also contributing to the decrease in Other income, net, are a prior year gain of \$6.4 million from the sale of an equity method investment that did not recur in 2022 and a decrease in other realized and unrealized investment gains year-over-year.

Provision for Income Taxes

For the year ended December 31, 2022, our effective tax rate was 10.9%, compared to 7.8% for the year ended December 31, 2021. The increase in the effective tax rate was primarily due to the favorable resolutions of uncertain tax positions, changes in jurisdictional tax rates and other discrete tax benefits in 2021 that have not recurred in 2022 and the mix of income earned in higher tax rate jurisdictions.

Review of Business Segments

We operate in and report financial results for two segments: Allegion Americas and Allegion International. These segments represent the level at which our chief operating decision maker reviews our financial performance and makes operating decisions.

Segment operating income is the measure of profit and loss that our chief operating decision maker uses to evaluate the financial performance of the business and as the basis for resource allocation, performance reviews and compensation. For these reasons, we believe Segment operating income represents the most relevant measure of Segment profit and loss. Our chief operating decision maker may exclude certain charges or gains, such as corporate charges and other special charges, to arrive at a Segment operating income that is a more meaningful measure of profit and loss upon which to base our operating decisions. We define Segment operating margin as Segment operating income as a percentage of the segment's Net revenues.

Segment Results of Operations - For the years ended December 31

In millions	2022		2021	% Change
Net revenues				
Allegion Americas	\$ 2,551.6	\$	2,072.2	23.1 %
Allegion International	 720.3		795.2	(9.4)%
Total	\$ 3,271.9	\$	2,867.4	
Segment operating income				
Allegion Americas	\$ 613.3	\$	525.0	16.8 %
Allegion International	68.3		82.4	(17.1)%
Total	\$ 681.6	\$	607.4	
Segment operating margin				
Allegion Americas	24.0 %	ó	25.3 %	
Allegion International	9.5 %	ó	10.4 %	

Allegion Americas

Our Allegion Americas segment is a leading provider of security products, services and solutions throughout North America. The segment sells a broad range of products and solutions including, locks, locksets, portable locks, key systems, door controls and systems, exit devices, doors, accessories, electronic security products, access control systems and software and service solutions to customers in commercial, institutional and residential facilities, including the education, healthcare, government, hospitality, retail, commercial office and single and multi-family residential markets. This segment's primary brands are LCN, Schlage, Von Duprin and Stanley Access Technologies, which we utilize with permission in accordance with the terms of the Access Technologies acquisition agreement ("Stanley" is the property of Stanley Logistics L.L.C).

Net revenues

Net revenues for the year ended December 31, 2022, increased by 23.1%, or \$479.4 million, as compared to the year ended December 31, 2021, due to the following:

Pricing	11.4 %
Volume	3.0 %
Acquisitions	9.0 %
Currency exchange rates	(0.3)%
Total	23.1 %

The increase in Net revenues was driven by significantly improved pricing, higher volumes for our non-residential products and our Access Technologies business acquisition. These increases were partially offset by unfavorable foreign currency exchange rate movements and lower volumes for our residential products. Increased pricing was the result of multiple pricing initiatives implemented to help mitigate the impact of persistent, elevated levels of inflation. We will continue to monitor the inflationary pressures to our businesses and address them through pricing initiatives where appropriate.

Net revenues from non-residential products (excluding Net revenues from our acquired Access Technologies business), increased by a low twenties percent compared to the prior year, driven by improved pricing and higher volumes. Strong demand throughout 2022 and improvements around the availability of materials and components, driven in part by our actions to mitigate these supply-chain challenges, helped drive the increase in volumes compared to 2021.

Net revenues from residential products decreased by a low single digits percent compared to the prior year. Increased pricing was offset by lower volumes during the year. During the second half of 2022, we experienced a softening in market demand for our residential products, due in part to elevated inflation and lower consumer sentiment, which resulted in reduced sales volumes. Further, market conditions for new residential construction deteriorated over the latter half of 2022, due in part to a rapid and substantial increase in mortgage rates. Given these factors, we anticipate softness in demand for our residential products to continue into 2023.

Growth in electronic security products and solutions is a metric monitored by management and a focus of our investors. Electronic products encompass both residential and non-residential products, and include all electrified product categories including, but not limited to, electronic and electrified locks, access control systems and electronic and electrified door controls and systems and exit devices. Net revenues from the sale of electronic products increased by a high teens percent compared to 2021, driven by improved pricing and higher volumes. While we continue to experience delays and shortages of electronic components from key suppliers, we expect continued growth from the sale of electronic products in 2023 given the combination of our pricing initiatives and our actions taken to mitigate these delays and shortages.

Operating income/margin

Segment operating income for the year ended December 31, 2022, increased \$88.3 million, and Segment operating margin decreased to 24.0% from 25.3% as compared to the year ended December 31, 2021, due to the following:

In millions	Operating Income		Operating Margin
December 31, 2021	\$	525.0	25.3 %
Pricing and productivity in excess of inflation		57.1	— %
Volume / product mix		52.2	1.7 %
Currency exchange rates		(4.4)	(0.1)%
Investment spending		(10.4)	(0.5)%
Acquisitions		16.4	(1.3)%
Acquisition expenses		(22.6)	(1.1)%
December 31, 2022	\$	613.3	24.0 %

The increase in Segment operating income was primarily driven by pricing improvements in excess of inflation and productivity, favorable volume/product mix and the contribution to Segment operating income from our acquired Access Technologies business. These increases were partially offset by unfavorable foreign currency exchange rate movements, increased investment spending and a year-over-year increase in acquisition and integration expenses, which were primarily related to our acquisition of the Access Technologies business.

The decrease in Segment operating margin was primarily due to the year-over-year increase in acquisition and integration expenses, the impact to Segment operating margin from our Access Technologies business, increased investment spending and unfavorable foreign currency exchange rate movements. These decreases were partially offset by favorable volume/product mix.

Allegion International

Our Allegion International segment provides security products, services and solutions primarily throughout Europe, Asia and Oceania. The segment offers end-users a broad range of products, services and solutions including locks, locksets, portable locks, key systems, door controls and systems, exit devices, doors, electronic security products, access control systems, time and attendance and workforce productivity solutions, among other software and service solutions. This segment's primary brands are AXA, Bricard, Briton, CISA, Gainsborough, Interflex and SimonsVoss.

Net revenues

Net revenues for the year ended December 31, 2022, decreased by 9.4%, or \$74.9 million, as compared to the year ended December 31, 2021, due to the following:

Pricing	5.6 %
Volume	(4.6)%
Acquisitions / divestitures	(0.3)%
Currency exchange rates	(10.1)%
Total	(9.4)%

The decrease in Net revenues was driven by lower volumes and unfavorable foreign currency exchange rate movements, due to the strengthening of the U.S. dollar relative to most of the currencies in which we do business throughout our Allegion International segment. Both a prior year and current year divestiture also contributed slightly to the decrease in Net revenues. These decreases were partially offset by improved pricing.

As discussed above, softening demand throughout much of the Eurozone in 2022 has impacted several of our businesses in our Allegion International segment. Additionally, COVID-19 related lockdowns in China throughout the year also contributed to lower volumes. While we anticipate pricing initiatives to continue to positively contribute to revenue growth in 2023, volume growth will likely continue to be tempered until prevailing macroeconomic and geopolitical conditions improve.

Operating income margin

Segment operating income for the year ended December 31, 2022, decreased \$14.1 million, and Segment operating margin decreased to 9.5% from 10.4% as compared to the year ended December 31, 2021, due to the following:

In millions	Opera	ting Income	Operating Margin	
December 31, 2021	\$	82.4	10.4 %	
Pricing and productivity in excess of inflation		23.7	2.4 %	
Volume / product mix		(15.6)	(1.5)%	
Currency exchange rates		(17.6)	(1.3)%	
Investment spending		(5.5)	(0.7)%	
Acquisitions / divestitures		2.1	0.3 %	
Restructuring / acquisition expenses		(1.2)	(0.1)%	
December 31, 2022	\$	68.3	9.5 %	

The decreases in Segment operating income and Segment operating margin were primarily driven by unfavorable volume/product mix, unfavorable foreign currency exchange rate movements, increased investment spending and a year-over-year increase in restructuring and acquisition expenses. These decreases were partially offset by pricing and productivity improvements in excess of inflation and both prior year and current year acquisition and divestiture activity.

Liquidity and Capital Resources

Liquidity Outlook, Sources and Uses

Our primary source of liquidity is cash provided by operating activities. Cash provided by operating activities is used to invest in new product development and fund capital expenditures and working capital requirements. Our ability to generate cash from our operating activities, our unused availability under the 2021 Revolving Facility and our access to the capital and credit markets enable us to fund these capital needs, execute our long-term growth strategies and return value to our shareholders. Further, our business operates with strong operating cash flows, low leverage and low capital intensity, providing financial flexibility, including sufficient access to credit markets.

Our short-term financing needs primarily consist of working capital requirements, restructuring initiatives, capital spending, dividend payments and principal and interest payments on our long-term debt. Long-term financing needs depend largely on potential growth opportunities, including potential acquisitions, repayment or refinancing of our long-term obligations and repurchases of our ordinary shares. Of our total outstanding indebtedness as of December 31, 2022, approximately 85% incurs fixed-rate interest and is therefore not exposed to the risk of rising variable interest rates.

Based upon our operations, existing cash balances and unused availability under the 2021 Revolving Facility, as of December 31, 2022, we expect cash flows from operations to be sufficient to maintain a sound financial position and liquidity and to meet our financing needs for at least the next 12 months. Further, we do not anticipate any covenant compliance challenges with any of our outstanding indebtedness for at least the next 12 months. We also believe existing availability under the 2021 Credit Facilities and access to credit and capital markets are sufficient to achieve our longer-term strategic plans.

The following table reflects the major categories of cash flows for the years ended December 31. For additional details, see the Consolidated Statements of Cash Flows in the Consolidated Financial Statements.

In millions	2022	 2021
Net cash provided by operating activities	\$ 459.5	\$ 488.6
Net cash used in investing activities	(994.1)	(31.6)
Net cash provided by (used in) financing activities	\$ 437.0	\$ (529.3)

Operating activities: Net cash provided by operating activities for the year ended December 31, 2022, decreased by \$29.1 million compared to 2021, driven primarily by changes in working capital.

Investing activities: Net cash used in investing activities for the year ended December 31, 2022, increased by \$962.5 million compared to 2021, primarily due to \$923.1 million of cash paid for our acquisition of the Access Technologies business, as well as an increase of \$18.6 million in capital expenditures compared to 2021.

Financing activities: Net cash provided by (used in) financing activities for the year ended December 31, 2022, changed by \$966.3 million compared to 2021, primarily due to the \$600.0 million issuance of our 5.411% Senior Notes to help finance the acquisition of the Access Technologies business. Additionally, cash used to repurchase shares was \$351.8 million lower in 2022 compared to 2021.

Capitalization

At December 31, long-term debt and other borrowings consisted of the following:

In millions	 2022	 2021
2021 Term Facility	\$ 237.5	\$ 250.0
2021 Revolving Facility	69.0	_
3.200% Senior Notes due 2024	400.0	400.0
3.550% Senior Notes due 2027	400.0	400.0
3.500% Senior Notes due 2029	400.0	400.0
5.411% Senior Notes due 2032	600.0	_
Other debt	0.2	0.3
Total borrowings outstanding	2,106.7	1,450.3
Discounts and debt issuance costs, net	(12.2)	(8.2)
Total debt	2,094.5	1,442.1
Less current portion of long-term debt	12.6	12.6
Total long-term debt	\$ 2,081.9	\$ 1,429.5

As of December 31, 2022, we have an unsecured Credit Agreement in place, consisting of the \$250.0 million 2021 Term Facility, of which \$237.5 million was outstanding at December 31, 2022, and the 2021 Revolving Facility (together with the 2021 Term Facility, the "2021 Credit Facilities"). The 2021 Credit Facilities mature on November 18, 2026. The 2021 Term Facility will amortize in quarterly installments at the following rates: 1.25% per quarter starting March 31, 2022 through March 31, 2025, 2.5% per quarter starting June 30, 2025 through September 30, 2026, with the balance due on November 18, 2026. Principal amounts repaid on the Term Facility may not be reborrowed.

The 2021 Revolving Facility provides aggregate commitments of up to \$500.0 million, which includes up to \$100.0 million for the issuance of letters of credit. On July 1, 2022, we borrowed \$340.0 million under the 2021 Revolving Facility to partially fund our acquisition of the Access Technologies business. We subsequently repaid \$271.0 million, resulting in \$69.0 million of borrowings outstanding on the 2021 Revolving Facility as of December 31, 2022. We also had \$13.2 million of letters of credit outstanding as of December 31, 2022. Outstanding borrowings under the 2021 Revolving Facility may be repaid at any time without premium or penalty, and amounts repaid may be reborrowed.

Outstanding borrowings under the 2021 Credit Facilities accrue interest at our option of (i) a Bloomberg Short-Term Bank Yield Index ("BSBY") rate plus an applicable margin, or (ii) a base rate (as defined in the Credit Agreement) plus an applicable margin. The applicable margin ranges from 0.875% to 1.375% depending on our credit ratings. At December 31, 2022, outstanding borrowings under the 2021 Credit Facilities accrued interest at BSBY plus a margin of 1.125%, resulting in an interest rate of 5.498%. The Credit Agreement also contains negative and affirmative covenants and events of default that, among other things, limit or restrict our ability to enter into certain transactions. In addition, the Credit Agreement requires us to comply with a maximum leverage ratio as defined within the agreement. As of December 31, 2022, our leverage ratio of approximately 2.5 was significantly below the covenant requirement, and we do not anticipate any potential concerns for at least the next 12 months.

On June 22, 2022, we issued \$600.0 million aggregate principal amount of 5.411% Senior Notes due 2032 (the "5.411% Senior Notes"). The 5.411% Senior Notes require semi-annual interest payments on January 1 and July 1, beginning January 1, 2023, and will mature on July 1, 2032. We incurred and deferred \$5.9 million of discounts and financing costs associated with the 5.411% Senior Notes, which will be amortized to Interest expense over their 10-year term, as well as \$4.3 million of third party financing costs that were recorded within Interest expense.

As of December 31, 2022, we also have \$400.0 million outstanding of 3.200% Senior Notes due 2024 (the "3.200% Senior Notes"), \$400.0 million outstanding of 3.550% Senior Notes due 2027 (the "3.550% Senior Notes") and \$400.0 million outstanding of 3.500% Senior Notes due 2029 (the "3.500% Senior Notes", and all four senior notes collectively, the "Senior Notes"). The 3.200% Senior Notes, 3.550% Senior Notes and 3.500% Senior Notes all require semi-annual interest payments on April 1 and October 1 of each year, and will mature on October 1, 2024, October 1, 2027, and October 1, 2029, respectively.

Historically, the majority of our earnings were considered to be permanently reinvested in jurisdictions where we have made, and intend to continue to make, substantial investments to support the ongoing development and growth of our global operations. At December 31, 2022, we analyzed our working capital requirements and the potential tax liabilities that would be incurred if certain subsidiaries made distributions and concluded that no material changes to our historic permanent reinvestment assertions were required.

Scheduled future principal repayments on our outstanding indebtedness can be found in Note 9 to the Consolidated Financial Statements. Expected principal and interest payments related to our long-term indebtedness in 2023 amount to \$12.6 million and \$90.9 million, respectively, given our current level of indebtedness and effective interest rates as of December 31, 2022.

Contractual Obligations and Other Commitments

In addition to the scheduled principal and interest payments discussed above, our material cash requirements include the following contractual and other obligations:

Purchase Commitments – We occasionally enter into short-term, firm purchase commitments to mitigate pricing risk related to certain of our commodity, parts and component purchases, which represent commitments under enforceable and legally binding agreements. Such purchase commitments are made in the normal course of business and are not anticipated to materially impact our liquidity or financial position over the next 12 months.

Leases – We have numerous real estate and equipment leasing arrangements for which we are a lessee. See Note 11 to the Consolidated Financial Statements for further information as to the short and long-term lease liabilities included within the Consolidated Balance Sheets, as well as future minimum lease payments for 2023 and future years.

Defined Benefit Plans – Our investment objective in managing defined benefit plan assets is to ensure that all present and future benefit obligations are met as they come due. We seek to achieve this goal while trying to mitigate volatility in plan funded status, contributions and expense by better matching the characteristics of the plan assets to that of the plan liabilities. Global asset allocation decisions are based on a dynamic approach whereby a plan's allocation to fixed income assets increases as the funded status increases. We monitor plan funded status, asset allocation and the impact of market conditions on our defined benefit plans regularly in addition to investment manager performance. None of our defined benefit plans have experienced a significant impact on their liquidity due to volatility in the markets.

At December 31, 2022, we had net pension liabilities of \$12.1 million, which consist of plan assets of \$490.7 million and benefit obligations of \$502.8 million. It is our objective to contribute to our pension plans in order to ensure adequate funds are available to make benefit payments to plan participants and beneficiaries when required. At December 31, 2022, the funded status of our U.S. pension plans increased to 97.8% from 97.2% at December 31, 2021. The funded status for our non-U.S. pension plans decreased to 97.4% at December 31, 2022 from 107.7% at December 31, 2021. The funded status for all of our pension plans at December 31, 2022 decreased to 97.6% from 103.0% at December 31, 2021. We currently expect to contribute approximately \$12 million to our plans worldwide in 2023.

Determining the costs and obligations associated with our defined benefit plans is dependent on various actuarial assumptions including discount rates, expected returns on plan assets, employee mortality and turnover rates. Changes in any of the assumptions can have an impact on the net periodic pension benefit cost. An estimated 0.5% rate decline in the discount rate would have increased net periodic pension benefit cost by approximately \$0.6 million in 2022, while a 0.5% rate decline in the estimated return on assets would have increased net periodic pension benefit cost by approximately \$2.4 million. For further details on defined benefit plan activity, see Note 12 to the Consolidated Financial Statements.

Income Taxes – At December 31, 2022, we have total unrecognized tax benefits for uncertain tax positions of \$45.2 million and \$11.0 million of related accrued interest and penalties, net of tax, although we are unable to reasonably estimate the timing over which these liabilities might be paid. See Note 18 to the Consolidated Financial Statements for additional information regarding matters relating to income taxes, including unrecognized tax benefits and tax authority disputes.

Contingent Liabilities – We are involved in various litigation, claims and administrative proceedings, including those related to environmental, asbestos-related and product liability matters. We believe that these liabilities are subject to the uncertainties inherent in estimating future costs for contingent liabilities and will likely be resolved over an extended period of time. See Note 21 to the Consolidated Financial Statements for additional information.

Guarantor Financial Information

Allegion US Hold Co is the issuer of the 3.200% Senior Notes, 3.550% Senior Notes and 5.411% Senior Notes and is the guarantor of the 3.500% Senior Notes. Allegion plc (the "Parent") is the issuer of the 3.500% Senior Notes and is the guarantor of the 3.200% Senior Notes, 3.550% Senior Notes and 5.411% Senior Notes. Allegion US Hold Co is directly or indirectly 100% owned by the Parent and each of the guarantees of Allegion US Hold Co and the Parent is full and unconditional and joint and several.

The 3.200% Senior Notes, 3.550% Senior Notes and 5.411% Senior Notes are senior unsecured obligations of Allegion US Hold Co and rank equally with all of Allegion US Hold Co's existing and future senior unsecured and unsubordinated indebtedness. The guarantee of the 3.200% Senior Notes, 3.550% Senior Notes and 5.411% Senior Notes is the senior unsecured obligation of the Parent and ranks equally with all of the Parent's existing and future senior unsecured and unsubordinated indebtedness. The 3.500% Senior Notes are senior unsecured obligations of the Parent and rank equally with all of the Parent's existing and future senior unsecured and unsubordinated indebtedness. The guarantee of the 3.500% Senior Notes is the senior unsecured obligation of Allegion US Hold Co and ranks equally with all of Allegion US Hold Co's existing and future senior unsecured and unsubordinated indebtedness.

Each guarantee is effectively subordinated to any secured indebtedness of the Guarantor to the extent of the value of the assets securing such indebtedness. The Senior Notes are structurally subordinated to indebtedness and other liabilities of the

subsidiaries of the Guarantor, none of which guarantee the notes. The obligations of the Guarantor under its Guarantee are limited as necessary to prevent such Guarantee from constituting a fraudulent conveyance under applicable law and, therefore, are limited to the amount that the Guarantor could guarantee without such Guarantee constituting a fraudulent conveyance; this limitation, however, may not be effective to prevent such Guarantee from constituting a fraudulent conveyance. If the Guarantee was rendered voidable, it could be subordinated by a court to all other indebtedness (including guarantees and other contingent liabilities) of the Guarantor, and, depending on the amount of such indebtedness, the Guarantor's liability on its Guarantee could be reduced to zero. In such an event, the notes would be structurally subordinated to the indebtedness and other liabilities of the Guarantor.

For further details, terms and conditions of the Senior Notes refer to the Company's Forms 8-K filed October 2, 2017, September 27, 2019, and June 22, 2022.

The following tables present the summarized financial information specified in Rule 1-02(bb)(1) of Regulation S-X for each issuer and guarantor. The summarized financial information has been prepared in accordance with Rule 13-01 of Regulation S-X.

Selected Condensed Statement of Comprehensive Income Information

	 Year ended December 31, 2022		
In millions	Allegion plc	Allegion US Hold Co	
Net revenues	\$ _	\$	
Gross profit	_	_	
Operating loss	(6.7)	(14.4)	
Equity earnings in affiliates, net of tax	505.9	195.5	
Transactions with related parties and subsidiaries ^(a)	(21.1)	(79.6)	
Net earnings	458.0	85.0	
Net earnings attributable to the entity	458.0	85.0	

(a) Transactions with related parties and subsidiaries include intercompany interest and fees.

Selected Condensed Balance Sheet Information

	December 31, 2022		2
In millions	Allegion plc	Allegi	on US Hold Co
Current assets:			
Amounts due from related parties and subsidiaries	\$ 	\$	380.2
Total current assets	3.3		417.4
Noncurrent assets:			
Amounts due from related parties and subsidiaries	_		1,523.9
Total noncurrent assets	1,792.6		1,596.6
Current liabilities:			
Amounts due to related parties and subsidiaries	\$ 45.9	\$	278.8
Total current liabilities	65.3		303.5
Noncurrent liabilities:			
Amounts due to related parties and subsidiaries	659.5		2,694.5
Total noncurrent liabilities	1,282.0		4,166.1

Critical Accounting Estimates

Management's Discussion and Analysis of Financial Condition and Results of Operations are based upon our Consolidated Financial Statements, which have been prepared in accordance with GAAP. The preparation of financial statements in accordance with GAAP requires management to use judgment in making estimates and assumptions based on the relevant information available at the end of each period. These estimates and assumptions have a significant effect on reported amounts of assets and liabilities, revenues and expenses as well as the disclosure of contingent assets and liabilities because they result primarily from the need to make estimates and assumptions on matters that are inherently uncertain. Actual results may differ from estimates. If updated information or actual amounts are different from previous estimates, the revisions are included in our results for the period in which they become known.

The following is a summary of certain accounting estimates and assumptions made by management that we consider critical:

• Goodwill – Goodwill is tested annually during the fourth quarter for impairment or when there is a significant change in events or circumstances that indicate the fair value of a reporting unit is, more likely than not, less than its carrying

amount. Recoverability of goodwill is measured at the reporting unit level and starts with a comparison of the carrying amount of a reporting unit to its estimated fair value. If the estimated fair value of a reporting unit exceeds its carrying amount, goodwill of the reporting unit is not impaired. To the extent that the carrying value of a reporting unit exceeds its estimated fair value, a goodwill impairment charge will be recognized for the amount by which the carrying value of the reporting unit exceeds its fair value, not to exceed the carrying amount of the reporting unit's goodwill.

As quoted market prices are not available for our reporting units, the calculation of their estimated fair values is based on two valuation techniques, a discounted cash flow model (income approach) and a market multiple of earnings (market approach), with each method being weighted in the calculation. The income approach relies on our estimates of revenue growth rates, margin assumptions and discount rates to estimate future cash flows and explicitly addresses factors such as timing, with due consideration given to forecasting risk. These assumptions are subject to varying degrees of judgment and complexity. Estimates of future revenue growth rates and margin assumptions represent our best estimates of future cash flows given our expectations of market growth for the security products industry in the specific markets in which we operate, as well as factors such as our market positioning, brand strength, pricing and marketing efforts and other growth and productivity opportunities and initiatives. Discount rate assumptions represent our best estimates of market participant adjusted weighted-average costs of capital. Although these assumptions represent our best estimates as of the assessment date, certain factors could potentially create variances in these estimates, including, but not limited to:

- Decreases in estimated market sizes or market growth rates due to greater than expected declines in volumes, pricing pressures or disruptive technology;
- Declines in our market share and penetration assumptions due to increased competition or an inability to develop or launch new products;
- The impacts of market volatility, including but not limited to, impacts of global pandemics, greater than
 expected inflation, supply chain disruption and delays, declines in pricing, reductions in volumes or fluctuations
 in foreign currency exchange rates;
- The level of success of on-going and future research and development efforts, including those related to
 acquisitions, and increases in the research and development costs necessary to obtain regulatory approvals and
 launch new products; and
- Volatility in market interest rates that could impact the selection of an appropriate discount rate.

The market approach requires determining an appropriate peer group, which is utilized to derive estimated fair values of our reporting units based on selected market multiples. The market approach reflects the market's expectations for future growth and risk, with adjustments to account for differences between the selected peer group companies and the subject reporting units. While market multiples are based on observable, arm's-length evidence of value, these assumptions are still subject to inherent uncertainty, as the peer-group companies may differ in significant ways from one or more of our reporting units in terms of size, growth or business characteristics.

The critical accounting estimates and assumptions discussed above, include our estimates of revenue growth rates and margin assumptions, discount rates, our selection of an appropriate peer group and selected market multiples. These estimates and assumptions are considered critical, as they are subject to a high degree of judgment and complexity. The selection of an applicable peer group has not significantly changed in recent years. Forecasted revenue growth rates and margin assumptions are updated annually and often fluctuate from year to year due to a myriad of factors, such as our assessment of the macroeconomic conditions throughout the major markets in which we do business, navigating the COVID-19 pandemic, supply chain challenges, elevated levels of inflation in recent years and pricing initiatives to offset inflation, market acceptance of new product innovation, investments in productivity projects, restructuring efforts, among other economic, strategic and operational factors impacting our businesses. Discount rate and market multiple assumptions are similarly updated annually, based on our best estimates of market participants, which typically include observable, arm's length-evidence of value, where possible. While we make every effort to estimate fair value as accurately as possible with the information available at the assessment date, changes in assumptions and estimates may affect the estimated fair value of the reporting unit and could result in impairment charges in future periods. During our most recent annual impairment analysis, none of our reporting units were determined to be at risk of impairment.

Indefinite-lived intangible assets – Similar to goodwill, indefinite-lived intangible assets are tested annually during the fourth quarter for impairment or when there is a significant change in events or circumstances that indicate the fair value of the asset is, more likely than not, less than its carrying amount. Recoverability of indefinite-lived intangible assets is determined on a relief from royalty methodology, which is based on the implied royalty paid, at an appropriate discount rate, to license the use of an asset rather than owning the asset. The present value of the after-tax cost savings (i.e. royalty relief) indicates the estimated fair value of the asset. Any excess of the carrying value over the estimated fair value is recognized as an impairment loss equal to that excess. The critical assumptions utilized in our annual impairment analysis for indefinite-lived intangible assets are the royalty rates and discount rates, which often differ amongst our various indefinite-lived assets. We assess the appropriateness of each royalty rate assumption annually, based on our assessment of observable market royalty rates and an analysis of the profitability of the primary business that owns or otherwise uses the indefinite-lived asset. Discount rate assumptions typically consider the discount rate conclusions for

the reporting unit in which an underlying business operates, plus an incremental spread, where appropriate, to consider size, country or other company-specific risk. A significant change in any or a combination of the assumptions used to estimate fair value of our indefinite-lived intangible assets could have a negative impact on the estimated fair values.

Income taxes — We account for income taxes in accordance with ASC Topic 740. Deferred tax assets and liabilities are determined based on temporary differences between financial reporting and tax bases of assets and liabilities, applying enacted tax rates expected to be in effect for the year in which the differences are expected to reverse. We recognize future tax benefits, such as net operating losses and non-U.S. tax credits, to the extent that realizing these benefits is considered in our judgment to be more likely than not. The recoverability of our deferred tax assets, which we consider to be a critical estimate, is reviewed regularly by considering our historic profitability, projected future taxable income, timing of the reversals of existing temporary differences and the feasibility of our tax planning strategies. Where appropriate, we record a valuation allowance with respect to future tax benefits. We establish valuation allowances against the realizability of any deferred tax assets based on our consideration of all available evidence, both positive and negative, using a "more likely than not" standard. This assessment considers the nature, frequency and amount of recent losses, the duration of statutory carryforward periods and tax planning strategies. Although our assessments of the valuation and recoverability of our deferred tax assets can change given a change in facts and circumstances (such as a change in a statutory tax rate), in making such judgments and estimates, significant weight is given to evidence that can be objectively verified.

The provision for income taxes also involves a significant amount of management judgment regarding interpretation of relevant facts and laws in the jurisdictions in which we operate. Future changes in applicable laws, projected levels of taxable income and tax planning could change the effective tax rate and tax balances recorded by us. In addition, tax authorities periodically review income tax returns filed by us and can raise issues regarding our filing positions, timing and amount of income or deductions and the allocation of income among the jurisdictions in which we operate. A significant period of time may elapse between the filing of an income tax return and the ultimate resolution of an issue raised by a tax authority with respect to that return. We believe we have adequately provided for any reasonably foreseeable resolution of these matters and will adjust our estimates if significant events so dictate. To the extent that the ultimate results differ from our original or adjusted estimates, the effect will be recorded in the Provision for income taxes in the period the matter is finally resolved.

Business combinations - The accounting for business combinations involves a considerable amount of judgment and estimation, including the identification of and fair values determined for acquired intangible assets, which typically include trade names, customer relationships and completed technologies. The determination of fair values of acquired intangible assets involves projections of future revenues and cash flows that are either discounted at an estimated discount rate or measured at an estimated royalty rate; fair values of other acquired assets and assumed liabilities, including potential contingencies; and the useful lives of the acquired assets. Due to the level of judgment and estimation required, in the case of significant acquisitions, we normally obtain the assistance of a third-party valuation specialist in estimating fair values of acquired tangible and intangible assets and assumed liabilities. An income approach or market approach (or both) is utilized in accordance with accepted valuation models to determine fair value. The determination of fair value of acquired assets typically requires the use of assumptions that include projections developed using historical information, internal forecasts, available industry and market data, estimates of revenue growth rates, profitability, customer attrition and discount and royalty rates, which are estimated at the time of acquisition, considering the perspective of marketplace participants. While we believe expectations and assumptions utilized for historical business combinations have been reasonable, they are inherently uncertain, and unanticipated market or macroeconomic events and circumstances occasionally do occur, and may occur in the future, which could affect the accuracy and validity of such assumptions.

For our acquisition of the Access Technologies business in 2022, we believe the critical assumptions that significantly impacted recorded amounts for identifiable intangible assets include the financial projections of future performance of the business, the royalty rate assumption utilized in determining the fair value of the finite-lived trade name asset and the allocation of revenues by customer type and attrition rate assumptions utilized in determining the fair value of the customer relationship asset. The royalty rate assumption utilized in the valuation of the trade name asset was determined based on a review of market royalty rates and an analysis of the Access Technologies business' profitability. An increase or decrease of 1% in the royalty rate assumption would have resulted in an approximate \$15 million change in the value ascribed to the trade name asset. The attrition rate assumption utilized in the valuation of the customer relationship asset was determined based on a detailed review of customer specific data for the Access Technologies business spanning multiple years, combined with our estimation of the likelihood of these trends continuing for the foreseeable future. An increase or decrease of 1% in the attrition rate assumption would have resulted in an approximate \$15-20 million change in the value ascribed to the customer relationship asset.

The impact of future business combinations on our financial condition or results of operations may also be materially impacted by the change in or initial selection of assumptions and estimates, in addition to events and circumstances

subsequent to the acquisition that are not reasonably anticipated when finalizing our purchase accounting estimates and assumptions.

Recent Accounting Pronouncements

See Note 2 to our Consolidated Financial Statements included in Item 8 herein for a discussion of recently issued and adopted accounting pronouncements.

Item 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We are exposed to fluctuations in currency exchange rates, commodity prices and interest rates which could impact our results of operations and financial condition.

Foreign Currency Exposures

We have operations throughout the world that manufacture and sell products in various international markets. As a result, we are exposed to movements in exchange rates of various currencies against the U.S. dollar as well as against other currencies throughout the world. We actively manage material currency exposures that are associated with purchases and sales and other assets and liabilities at the legal entity level; however, we do not hedge currency translation risk. We attempt to hedge exposures that cannot be naturally offset to an insignificant amount with foreign currency derivatives. Derivative instruments utilized in our hedging activities are viewed as risk management tools, involve little complexity and are not used for trading or speculative purposes. To minimize the risk of counter party non-performance, derivative instrument agreements are made only through major financial institutions with significant experience in such derivative instruments.

We evaluate our exposure to changes in currency exchange rates on our foreign currency derivatives using a sensitivity analysis. The sensitivity analysis is a measurement of the potential loss in fair value based on a percentage change in exchange rates. Based on the firmly committed currency derivative instruments in place at December 31, 2022, a hypothetical change in fair value of those derivative instruments assuming a 10% adverse change in exchange rates would result in an additional unrealized loss of approximately \$1.5 million. This amount, when realized, would be partially offset by changes in the fair value of the underlying transactions.

Commodity Price Exposures

We purchase a wide range of raw material, including steel, zinc, brass and other non-ferrous metals, and are exposed to volatility in the prices of these and other commodities used in our products. We use fixed price contracts to manage this exposure where appropriate. We do not have committed commodity derivative instruments in place at December 31, 2022.

Interest Rate Exposure

Of our total outstanding indebtedness of \$2.1 billion as of December 31, 2022, approximately 85% incurs fixed-rate interest and is therefore not exposed to the risk of rising variable interest rates. However, outstanding borrowings under the 2021 Credit Facilities do accrue variable rate interest at our option of (i) a BSBY rate plus the applicable margin or (ii) a base rate plus the applicable margin. The applicable margin ranges from 0.875% to 1.375% depending on our credit ratings. At December 31, 2022, the outstanding borrowings of \$306.5 million under the 2021 Credit Facilities accrue interest at BSBY plus a margin of 1.125%, resulting in an interest rate of 5.498%. Applicable variable interest rates increased throughout 2022, resulting in increased Interest expense. We are also exposed to the risk of rising interest rates to the extent that we fund our operations with short-term or variable-rate borrowings, as we currently have unused availability of \$417.8 million under the 2021 Revolving Facility as of December 31, 2022. If the BSBY or other applicable base rates of the 2021 Credit Facilities increase in the future, our Interest expense could increase.

Item 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

(a) The following Consolidated Financial Statements and Financial Statement Schedule and the report thereon of PricewaterhouseCoopers LLP dated February 22, 2023, are presented following Item 16 of this Annual Report on Form 10-K.

Consolidated Financial Statements:

Report of independent registered public accounting firm (PCAOB ID 238)

Consolidated Statements of Comprehensive Income for the years ended December 31, 2022, 2021 and 2020

Consolidated Balance Sheets at December 31, 2022 and 2021

For the years ended December 31, 2022, 2021 and 2020:

Consolidated Statements of Equity

Consolidated Statements of Cash Flows

Notes to Consolidated Financial Statements

Financial Statement Schedule:

Schedule II - Valuation and Qualifying Accounts for the years ended December 31, 2022, 2021 and 2020

Item 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

Item 9A. CONTROLS AND PROCEDURES

(a) Evaluation of Disclosure Controls and Procedures

The Company's management, including its Chief Executive Officer and Chief Financial Officer, have conducted an evaluation of the effectiveness of the Company's disclosure controls and procedures (as such term is defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, as of the end of the period covered by this Annual Report on Form 10-K. Based on that evaluation, the Chief Executive Officer and Chief Financial Officer concluded as of December 31, 2022, that the Company's disclosure controls and procedures were effective in ensuring that information required to be disclosed by the Company in reports that it files or submits under the Exchange Act has been recorded, processed, summarized and reported, within the time periods specified in the Commission's rules and forms, and that such information has been accumulated and communicated to the Company's management including its Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure.

(b) Management's Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as defined under Exchange Act Rules 13a-15(f) and 15d-15(f). Our internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. Internal control over financial reporting includes those policies and procedures that:

- pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the Company's assets;
- provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that the Company's receipts and expenditures are being made only in accordance with authorizations of the Company's management and directors; and
- provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the Company's assets that could have a material effect on the financial statements.

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

Management assessed the effectiveness of our internal control over financial reporting as of December 31, 2022. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in *Internal Control-Integrated Framework (2013)*. We concluded that our internal control over financial reporting was effective as of December 31, 2022. Management's assessment of and conclusion on the effectiveness of internal controls over financial reporting did not include the internal controls of the Access Technologies business, which we acquired

in July 2022. Due to the timing of this acquisition, and as permitted by SEC guidance, management excluded the Access Technologies business from its December 31, 2022, assessment of internal control over financial reporting.

The effectiveness of our internal control over financial reporting has been audited by PricewaterhouseCoopers LLP, the independent registered public accounting firm, as stated in their report herein.

(c Changes in Internal Control Over Financial Reporting

There were no changes in the Company's internal control over financial reporting that occurred during the quarter ended December 31, 2022 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. OTHER INFORMATION

None.

Item 9C. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS

Not applicable.

PART III

Item 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information regarding our executive officers is included in Part I under the caption "Executive Officers of the Registrant."

The other information required by this item is incorporated herein by reference to the information contained under the headings "Item 1. Election of Directors," "Delinquent Section 16(a) Reports" and "Corporate Governance" in our Proxy Statement.

Item 11. EXECUTIVE COMPENSATION

The information required by this item is incorporated herein by reference to the information contained under the headings "Compensation Discussion and Analysis," "Executive Compensation" and "Compensation Committee Report" in our Proxy Statement.

<u>Item 12.</u> <u>SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS</u>

The information required by this item is incorporated herein by reference to the information contained under the headings "Security Ownership of Certain Beneficial Owners and Management" and "Equity Compensation Plan Information" of our Proxy Statement.

Item 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required by this item is incorporated herein by reference to the information contained under the headings "Corporate Governance" and "Certain Relationships and Related Person Transactions" of our Proxy Statement.

Item 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The information required by this item is incorporated herein by reference to the information contained under the caption "Fees of the Independent Auditors" in our Proxy Statement.

PART IV

Item 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

<u>Financial statements and financial statement schedule</u> <u>See Item 8.</u> (a) 1. and 2.

3. Exhibits

The exhibits listed on the accompanying index to exhibits are filed as part of this Annual Report on Form 10-K.

ALLEGION PLC INDEX TO EXHIBITS (Item 15(a))

Description

Certain agreements filed as exhibits to this Annual Report on Form 10-K may contain representations and warranties by the parties thereto. These representations and warranties have been made solely for the benefit of the parties to such agreements and (i) may have been qualified by confidential disclosures made by parties in connection with such agreements, (ii) were made only as of the date of such agreements or such other date(s) as may be specified in such agreements and are subject to more recent developments, which may or may not be fully reflected in our public disclosure, (iii) were included in such agreements solely to reflect the allocation of risk among the parties to such agreements and (iv) may apply materiality standards different from what may be viewed as material to investors. Investors are not third-party beneficiaries under such agreements, and accordingly, should not rely on these representations and warranties as characterizations of our actual state of affairs at the date thereof or hereof.

(a) Exhibits

Exhibit Number	Exhibit Description	Method of Filing
2.1	Separation and Distribution Agreement between Ingersoll-Rand plc and Allegion plc, dated November 29, 2013.	Incorporated by reference to Exhibit 2.1 of the Company's Form 8-K filed with the SEC on December 2, 2013 (File No. 001-35971).
3.1	Amended and Restated Memorandum and Articles of Association of Allegion plc.	Incorporated by reference to Exhibit 3.1 of the Company's Form 8-K filed with the SEC on June 13, 2016 (File No. 001-35971).
4.1	Indenture, dated as of October 2, 2017, among Allegion US Holding Company Inc., Allegion plc and Wells Fargo Bank, National Association.	Incorporated by reference to Exhibit 4.1 of the Company's Form 8-K filed October 2, 2017 (File No. 001-35971).
4.2	First Supplemental Indenture, dated as of October 2, 2017, among Allegion US Holding Company Inc., Allegion plc and Wells Fargo Bank, National Association.	Incorporated by reference to Exhibit 4.2 of the Company's Form 8-K filed October 2, 2017 (File No. 001-35971).
4.3	Form of Global Note representing the 3.200% Senior Notes due 2024.	Incorporated by reference to Exhibit 4.3 of the Company's Form 8-K filed October 2, 2017 (included in Exhibit 4.2) (File No. 001-35971).
4.4	Second Supplemental Indenture, dated as of October 2, 2017, among Allegion US Holding Company Inc., Allegion ple and Wells Fargo Bank, National Association.	Incorporated by reference to Exhibit 4.4 of the Company's Form 8-K filed October 2, 2017 (File No. 001-35971).
4.5	Form of Global Note representing the 3.550% Senior Notes due 2027.	Incorporated by reference to Exhibit 4.5 of the Company's Form 8-K filed October 2, 2017 (included in Exhibit 4.4) (File No. 001-35971).
4.6	Third Supplemental Indenture, dated as of September 27, 2019, among Allegion plc, Allegion US Holding Company Inc. and Wells Fargo Bank, National Association.	Incorporated by reference to Exhibit 4.2 of the Company's Form 8-K filed September 27, 2019 (File No. 001-35971).
4.7	Form of Global Note representing the 3.500% Senior Notes due 2029.	Incorporated by reference to Exhibit 4.3 of the Company's Form 8-K filed September 27, 2019 (included in Exhibit 4.2) (File No. 001-35971).
4.8	Fourth Supplemental Indenture, dated as of June 22, 2022, among Allegion plc, Allegion US Holding Company Inc., and Computershare Trust Company, N.A. as successor to Wells Fargo Bank National Association.	Incorporated by reference to Exhibit 4.2 of the Company's Form 8-K filed June 22, 2022 (File No. 001-35971).
4.9	Form of Global Note representing the 5.411% Senior Notes due 2032.	Incorporated by reference to Exhibit 4.3 of the Company's Form 8-K filed June 22,2022 included in Exhibit 4.2) (File No. 001-35971).
4.10	Description of the Registrant's Securities registered pursuant to Section 12 of the Securities Exchange Act of 1934.	Incorporated by reference to Exhibit 4.8 of the Company's Form 10-K filed with the SEC on February 18, 2020 (File No. 001-35971).

10.1	Form of Separation Agreement and Release. *	Incorporated by reference to Exhibit 10.1 of the Company's Form 10-K filed with the SEC on February 19, 2019 (File No. 001-35971).
10.2	Tax Matters Agreement between Ingersoll-Rand plc and Allegion plc.	Incorporated by reference to Exhibit 10.1 of the Company's Form 8-K filed with the SEC on December 2, 2013 (File No. 001-35971).
10.3	Credit Agreement, dated as of November 18, 2021.	Incorporated by reference to Exhibit 10.1 of the Company's Form 8-K filed November 18, 2021 (File No. 001-35971).
10.4	Employee Matters Agreement between Ingersoll-Rand plc and Allegion plc.	Incorporated by reference to Exhibit 10.2 of the Company's Form 8-K filed with the SEC on December 2, 2013 (File No. 001-35971).
10.5	2013 Incentive Stock Plan. *	Incorporated by reference to Exhibit 10.5 of the Company's Registration Statement on Form 10 filed with the SEC on June 17, 2013, as amended (File No. 001-35971).
10.6	Executive Deferred Compensation Plan. *	Incorporated by reference to Exhibit 10.6 of the Company's Registration Statement on Form 10 filed with the SEC on June 17, 2013, as amended (File No. 001-35971).
10.7	Supplemental Employee Savings Plan. *	Incorporated by reference to Exhibit 10.7 of the Company's Form 10-K filed with the SEC on February 18, 2020 (File No. 001-35971).
10.8	Elected Officer Supplemental Program. *	Incorporated by reference to Exhibit 10.8 of the Company's Registration Statement on Form 10 filed with the SEC on June 17, 2013, as amended (File No. 001-35971).
10.9	Key Management Supplemental Program. *	Incorporated by reference to Exhibit 10.9 of the Company's Registration Statement on Form 10 filed with the SEC on June 17, 2013, as amended (File No. 001-35971).
10.10	Supplemental Pension Plan. *	Incorporated by reference to Exhibit 10.10 of the Company's Registration Statement on Form 10 filed with the SEC on June 17, 2013, as amended (File No. 001-35971).
10.11	Senior Executive Performance Plan. *	Incorporated by reference to Exhibit 10.11 of the Company's Registration Statement on Form 10 filed with the SEC on June 17, 2013, as amended (File No. 001-35971).
10.12	David D. Petratis Offer Letter, dated June 19, 2013. *	Incorporated by reference to Exhibit 10.14 of the Company's Registration Statement on Form 10 filed with the SEC on June 17, 2013, as amended (File No. 001-35971).
10.13	Patrick S. Shannon Offer Letter, dated April 9, 2013. *	Incorporated by reference to Exhibit 10.15 of the Company's Registration Statement on Form 10 filed with the SEC on June 17, 2013, as amended (File No. 001-35971).
10.14	Timothy P. Eckersley Offer Letter, dated March 3, 2021. *	Incorporated by reference to Exhibit 10.1 of the Company's Form 8-K filed with the SEC on March 10, 2021 (File No. 001-35971).
10.15	Jeffrey N. Braun Offer Letter, dated June 13, 2014. *	Incorporated by reference to Exhibit 10.15 of the Company's Form 10-K filed with the SEC on February 17, 2017 (File No. 001-35971).
10.16	Form of Allegion plc Deed Poll Indemnity.	Incorporated by reference to Exhibit 10.21 of the Company's Registration Statement on Form 10 filed with the SEC on June 17, 2013, as amended (File No. 001-35971).

10.17	Form of Allegion US Holding Company, Inc. Deed Poll Indemnity.	Incorporated by reference to Exhibit 10.22 of the Company's Registration Statement on Form 10 filed with the SEC on June 17, 2013, as amended (File No. 001-35971).
10.18	Form of Allegion Irish Holding Company Limited Deed Poll Indemnity.	Incorporated by reference to Exhibit 10.23 of the Company's Registration Statement on Form 10 filed with the SEC on June 17, 2013, as amended (File No. 001-35971).
10.19	Annual Incentive Plan. *	Incorporated by reference to Exhibit 10.1 of the Company's Form 10-K filed with the SEC on March 10, 2014 (File No. 001-35971).
10.20	Change in Control Severance Plan. *	Incorporated by reference to Exhibit 10.2 of the Company's Form 10-K filed with the SEC on March 10, 2014 (File No. 001-35971).
10.21	Form of Special Global Restricted Stock Unit Award Agreement. *	Incorporated by reference to Exhibit 10.21 of the Company's Form 10-K filed with the SEC on February 15, 2022 (File No. 001-35971).
10.22	Form of 2020 Global Restricted Stock Unit Award Agreement. *	Incorporated by reference to Exhibit 10.22 of the Company's Form 10-K filed with the SEC on February 18, 2020 (File No. 001-35971).
10.23	Form of 2020 Global Stock Option Award Agreement. *	Incorporated by reference to Exhibit 10.23 of the Company's Form 10-K filed with the SEC on February 18, 2020 (File No. 001-35971).
10.24	Form of 2020 Global Performance Stock Unit Award Agreement. *	Incorporated by reference to Exhibit 10.24 of the Company's Form 10-K filed with the SEC on February 18, 2020 (File No. 001-35971).
10.25	Form of 2021 Global Restricted Stock Unit Award Agreement. *	Incorporated by reference to Exhibit 10.22 of the Company's Form 10-K filed with the SEC on February 16, 2021 (File No. 001-35971).
10.26	Form of 2021 Global Stock Option Award Agreement. *	Incorporated by reference to Exhibit 10.23 of the Company's Form 10-K filed with the SEC on February 16, 2021 (File No. 001-35971).
10.27	Form of 2021 Global Performance Stock Unit Award Agreement. *	Incorporated by reference to Exhibit 10.24 of the Company's Form 10-K filed with the SEC on February 16, 2021 (File No. 001-35971).
10.28	Form of 2022 Global Restricted Stock Unit Award Agreement. *	Incorporated by reference to Exhibit 10.31 of the Company's Form 10-K filed with the SEC on February 15, 2022 (File No. 001-35971).
10.29	Form of 2022 Global Stock Option Award Agreement. *	Incorporated by reference to Exhibit 10.32 of the Company's Form 10-K filed with the SEC on February 15, 2022 File No. 001-35971).
10.30	Form of 2022 Global Performance Stock Unit Award Agreement. *	Incorporated by reference to Exhibit 10.33 of the Company's Form 10-K filed with the SEC on February 15, 2022 (File No. 001-35971).
10.31	Form of Non-Employee Director Restricted Stock Unit Award Agreement. *	Incorporated by reference to Exhibit 10.1 of the Company's Form 10-Q filed with the SEC on April 30, 2015 (File No. 001-35971).
10.32	Share Purchase Agreement dated June 26, 2015 between SimonsVoss Luxco S.à r.l., SimonsVoss Co-Invest GmbH & Co. KG, Mr Frank Rövekamp and Allegion Luxembourg Holding & Financing S.à r.l.	Incorporated by reference to Exhibit 10.1 of the Company's Form 10-Q filed with the SEC on July 30, 2015 (File No. 001-35971).
10.33	Timothy P. Eckersley Restricted Stock Unit Award Agreement, dated March 10, 2021. *	Incorporated by reference to Exhibit 10.6 of the Company's Form 10-Q filed with the SEC on April 22, 2021 (File No. 001-35971).

10.34	Timothy P. Eckersley Performance Stock Unit Award Agreement, dated March 10, 2021. *	Incorporated by reference to Exhibit 10.7 of the Company's Form 10-Q filed with the SEC on April 22, 2021 (File No. 001-35971).
10.35	Michael J. Wagnes Offer Letter, dated February 14, 2022.	Incorporated by reference to Exhibit 10.1 of the Company's Form 8-K filed with the SEC on February 15, 2022 (File No. 001-35971).
10.36	John H. Stone Offer Letter, dated May 24, 2022. *	Incorporated by reference to Exhibit 10.1 of the Company's Form 8-K filed with the SEC on May 31, 2022 (File No. 001-35971).
10.37	John H. Stone Restricted Stock Unit Award Agreement, dated August 1, 2022. *	Incorporated by reference to Exhibit 10.1 of the Company's Form 10-Q filed with the SEC on October 27, 2022 (File No. 001-35971).
10.38	John H. Stone Stock Option Award Agreement, dated August 1, 2022. *	Incorporated by reference to Exhibit 10.2 of the Company's Form 10-Q filed with the SEC on October 27, 2022 (File No. 001-35971).
10.39	David S. Ilardi Offer Letter, dated February 14, 2022. *	Filed herewith.
10.40	Transaction Agreement, dated as of April 22, 2022, by and between Allegion US Holding Company Inc. Stanley Black & Decker, Inc., Stanley Black & Decker Canada Corporation, various entities thereto and Stanley Access Technologies LLC.	Incorporated by reference to Exhibit 10.1 of the Company's Form 8-K filed with the SEC on April 22, 2022 (File No. 001-35971).
21.1	List of subsidiaries of Allegion plc.	Filed herewith.
23.1	Consent of Independent Registered Public Accounting Firm.	Filed herewith.
31.1	Certification of Chief Executive Officer Pursuant to Rule 13a-14(a) or Rule 15d-14(a), as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.	Filed herewith.
31.2	Certification of Chief Financial Officer Pursuant to Rule 13a-14(a) or Rule 15d-14(a), as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.	Filed herewith.
32.1	Certifications of Chief Executive Officer and Chief Financial Officer Pursuant to Rule 13a-14(b) or Rule 15d-14(b) and 18U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.	Furnished herewith.
101.INS	XBRL Instance Document.	The instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.
101.SCH	XBRL Taxonomy Extension Schema Document.	Filed herewith.
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document.	Filed herewith.
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document.	Filed herewith.
101.LAB	XBRL Taxonomy Extension Labels Linkbase Document.	Filed herewith.
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document.	Filed herewith.
104	Cover Page Interactive Data File.	Formatted as Inline XBRL and contained in Exhibit 101.
+ 0		

^{*} Compensatory plan or arrangement.

Item 16. **FORM 10-K SUMMARY**

Not applicable.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

ALLEGION PLC

(Registrant)

By: /s/ John H. Stone

John H. Stone

Chief Executive Officer

Date: February 22, 2023

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

Signature	Title	Date
/s/ John H. Stone (John H. Stone)	President and Chief Executive Officer (Principal Executive Officer)	February 22, 2023
/s/ Michael J. Wagnes (Michael J. Wagnes)	Senior Vice President and Chief Financial Officer (Principal Financial Officer)	February 22, 2023
/s/ Nickolas A. Musial (Nickolas A. Musial)	Vice President, Controller and Chief Accounting Officer (Principal Accounting Officer)	February 22, 2023
/s/ Kirk S. Hachigian (Kirk S. Hachigian)	Chairman of the Board and Director	February 22, 2023
/s/ Steven C. Mizell (Steven C. Mizell)	Director	February 22, 2023
/s/ Nicole Parent Haughey (Nicole Parent Haughey)	Director	February 22, 2023
/s/ Lauren B. Peters (Lauren B. Peters)	Director	February 22, 2023
/s/ Dean I. Schaffer (Dean I. Schaffer)	Director	February 22, 2023
/s/ Dev Vardhan (Dev Vardhan)	Director	February 22, 2023
/s/ Martin E. Welch III (Martin E. Welch III)	Director	February 22, 2023

ALLEGION PLC Index to Consolidated Financial Statements

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Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of Allegion Public Limited Company

Opinions on the Financial Statements and Internal Control over Financial Reporting

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

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

As described in Management's Report on Internal Control over Financial Reporting, management has excluded the acquisition of Stanley Access Technologies LLC and assets related to the automatic entrance solutions business from Stanley Black & Decker, Inc. (the "Access Technologies business") from its assessment of internal control over financial reporting as of December 31, 2022, because it was acquired by the Company in a purchase business combination during 2022. We have also excluded the Access Technologies business from our audit of internal control over financial reporting. The Access Technologies business is wholly owned and has total assets and total revenues excluded from management's assessment and our audit of internal control over financial reporting that represent approximately 25% and 6%, respectively, of the related consolidated financial statement amounts as of and for the year ended December 31, 2022.

Basis for Opinions

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

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

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

Definition and Limitations of Internal Control over Financial Reporting

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

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

Critical Audit Matters

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

Acquisition of the Access Technologies business – Valuation of Customer Relationships

As described in Notes 2 and 3 to the consolidated financial statements, on July 5, 2022, the Company completed the acquisition of the Access Technologies business for total preliminary cash consideration of \$923.1 million. Of the acquired intangible assets, \$137.4 million of customer relationships were recorded. The fair value of consideration paid in a business combination is allocated to the tangible and identifiable intangible assets acquired, liabilities assumed and goodwill using the acquisition method of accounting. As disclosed by management, accounting for business combinations involves a considerable amount of judgment and estimation, including the identification of and fair values determined for acquired intangible assets. The determination of fair values of the acquired intangible assets involves projections of future revenues and cash flows that are discounted at an estimated discount rate. An income approach was utilized to determine fair value. The assumptions used by management to determine the fair value of the acquired intangible assets include projections developed using historical information, internal forecasts, available industry and market data, estimates of revenue growth rates, profitability, customer attrition, discount rates, and the allocation of revenues by customer type which are estimated at the time of acquisition.

The principal considerations for our determination that performing procedures relating to the valuation of the customer relationships acquired in connection with the acquisition of the Access Technologies business is a critical audit matter are (i) the significant judgment by management when developing the fair value estimate of the customer relationships acquired; (ii) a high degree of auditor judgment, subjectivity, and effort in performing procedures and evaluating management's significant assumptions related to the revenue growth rate, profitability, customer attrition, discount rate, and the allocation of revenues by customer type; and (iii) the audit effort involved the use of professionals with specialized skill and knowledge.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to the acquisition accounting, including controls over management's valuation of the customer relationships acquired. These procedures also included, among others (i) reading the acquisition agreement; (ii) testing management's process for developing the fair value estimate of the customer relationships acquired; (iii) evaluating the appropriateness of the income approach; (iv) testing the completeness and accuracy of the underlying data used in the income approach; and (v) evaluating the reasonableness of the significant assumptions used by management related to the revenue growth rate, profitability, customer attrition rate, discount rate, and the allocation of revenues by customer type. Evaluating the reasonableness of management's significant assumptions related to the revenue growth rate, profitability, and the allocation of revenues by customer type involved evaluating whether the assumptions used by management were reasonable considering (i) the current and past performance of the Access Technologies business, (ii) the consistency with external market and industry data, and (iii) whether these significant assumptions were consistent with evidence obtained in other areas of the audit. Professionals with specialized skill and knowledge were used to assist in evaluating the appropriateness of the Company's income approach and evaluating the reasonableness of the discount rate and customer attrition significant assumptions.

/s/ PricewaterhouseCoopers LLP Indianapolis, Indiana February 22, 2023

We have served as the Company's auditor since 2013.

Allegion plc

Consolidated Statements of Comprehensive Income

In millions, except per share amounts

For the years ended December 31,	 2022	 2021	2020
Net revenues	\$ 3,271.9	\$ 2,867.4	\$ 2,719.9
Cost of goods sold	1,949.5	1,662.5	1,541.1
Selling and administrative expenses	736.0	674.7	635.7
Impairment of goodwill and intangible assets	_		101.7
Loss on assets held for sale	 	 	 37.9
Operating income	 586.4	 530.2	403.5
Interest expense	75.9	50.2	51.1
Loss on divestitures	7.6		_
Other income, net	(11.6)	(44.0)	(13.0)
Earnings before income taxes	514.5	524.0	365.4
Provision for income taxes	56.2	40.7	50.9
Net earnings	458.3	483.3	314.5
Less: Net earnings attributable to noncontrolling interests	0.3	0.3	0.2
Net earnings attributable to Allegion plc	\$ 458.0	\$ 483.0	\$ 314.3
Amounts attributable to Allegion plc ordinary shareholders:			
Earnings per share attributable to Allegion plc ordinary shareholders:			
Basic net earnings:	\$ 5.20	\$ 5.37	\$ 3.41
Diluted net earnings:	\$ 5.19	\$ 5.34	\$ 3.39
Net earnings	\$ 458.3	\$ 483.3	\$ 314.5
Other comprehensive (loss) income, net of tax:			
Currency translation	(76.2)	(63.3)	57.3
Cash flow hedges:		<u> </u>	
Unrealized net gains arising during period	5.7	2.6	3.9
Net gains reclassified into earnings	(0.3)	(0.2)	(5.8)
Tax (expense) benefit	(0.2)	(0.6)	0.5
Total cash flow hedges, net of tax	5.2	1.8	(1.4)
Defined benefit plan adjustments:			
Prior service (costs) gains and net actuarial (losses) gains, net	(38.7)	25.7	4.9
Amortization reclassified into earnings	0.5	4.8	5.0
Settlements/curtailments reclassified into earnings	_	0.5	0.1
Currency translation and other	7.7	1.0	(2.1)
Tax benefit (expense)	9.4	(7.7)	(2.0)
Total defined benefit plan adjustments, net of tax	(21.1)	24.3	5.9
Other comprehensive (loss) income, net of tax	(92.1)	(37.2)	61.8
Total comprehensive income, net of tax	366.2	446.1	376.3
Less: Total comprehensive (loss) income attributable to noncontrolling interests	(0.4)	0.4	0.5
Total comprehensive income attributable to Allegion plc	\$ 366.6	\$ 445.7	\$ 375.8

Allegion plc

Consolidated Balance Sheets

In millions, except share amounts

As of December 31,	2022	2021
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 288.0	\$ 397.9
Accounts and notes receivable, net	395.6	283.3
Inventories	479.0	380.4
Current tax receivable	8.3	29.1
Other current assets	40.2	26.9
Assets held for sale	3.5	_
Total current assets	1,214.6	1,117.6
Property, plant and equipment, net	308.7	283.7
Goodwill	1,413.1	803.8
Intangible assets, net	608.9	447.5
Deferred and noncurrent income taxes	227.6	154.5
Other noncurrent assets	218.3	243.9
Total assets	\$ 3,991.2	\$ 3,051.0
LIABILITIES AND EQUITY		
Current liabilities:		
Accounts payable	\$ 280.7	\$ 259.1
Accrued compensation and benefits	134.7	117.7
Accrued expenses and other current liabilities	247.9	199.9
Current tax payable	27.7	11.9
Short-term borrowings and current maturities of long-term debt	12.6	12.6
Total current liabilities	703.6	601.2
Long-term debt	2,081.9	1,429.5
Postemployment and other benefit liabilities	40.1	69.2
Deferred and noncurrent income taxes	101.6	100.8
Other noncurrent liabilities	119.5	87.9
Total liabilities	 3,046.7	2,288.6
Equity:		
Allegion plc shareholders' equity		
Ordinary shares, \$0.01 par value (87,852,777 and 88,215,625 shares issued and outstanding at December 31, 2022 and 2021, respectively)	0.9	0.9
Capital in excess of par value	13.9	_
Retained earnings	1,212.8	952.6
Accumulated other comprehensive loss	 (285.8)	(194.4)
Total Allegion plc shareholders' equity	941.8	759.1
Noncontrolling interests	 2.7	3.3
Total equity	944.5	762.4
Total liabilities and equity	\$ 3,991.2	\$ 3,051.0

Allegion plc Consolidated Statements of Equity

In millions, except per share amounts

in minions, except per share amor			A	llegion plc shareh	olders' equity		
	Total	Ordinar	<u> </u>	Capital in excess of par	Retained	Accumulated other comprehensive	Noncontrolling
	equity	Amount	Shares	value	earnings	loss	interests
Balance at December 31, 2019	\$ 760.4	\$ 0.9	92.7	\$ —	\$ 975.1	\$ (218.6)	\$ 3.0
Cumulative effect of adoption of ASC 326, Financial Instruments – Credit Losses	(2.2)	_	_	_	(2.2)	_	_
Net earnings	314.5	_	_	_	314.3	_	0.2
Other comprehensive income, net	61.8	_	_	_	_	61.5	0.3
Repurchase of ordinary shares	(208.8)	_	(1.9)	(24.8)	(184.0)	_	_
Share-based compensation activity	24.8	_	0.4	24.8	_	_	_
Dividends declared to noncontrolling interests	(0.3)	_	_	_	_	_	(0.3)
Cash dividends declared (\$1.28 per share)	(117.9)	_	_	_	(117.9)	_	_
Other	0.3	_	_	_	0.3	_	_
Balance at December 31, 2020	832.6	0.9	91.2		985.6	(157.1)	3.2
Net earnings	483.3	_	_	_	483.0	_	0.3
Other comprehensive (loss) income, net	(37.2)	_	_	_	_	(37.3)	0.1
Repurchase of ordinary shares	(412.8)	_	(3.3)	(25.8)	(387.0)	_	_
Share-based compensation activity	25.8	_	0.3	25.8	_	_	_
Dividends declared to noncontrolling interests	(0.3)	_	_	_	_	_	(0.3)
Cash dividends declared (\$1.44 per share)	(129.0)	_	_	_	(129.0)	_	_
Balance at December 31, 2021	762.4	0.9	88.2		952.6	(194.4)	3.3
Net earnings	458.3	_	_	_	458.0	_	0.3
Other comprehensive loss, net	(92.1)	_	_	_	_	(91.4)	(0.7)
Repurchase of ordinary shares	(61.0)	_	(0.5)	(7.5)	(53.5)	_	_
Share-based compensation activity	21.4	_	0.2	21.4	_	_	_
Dividends declared to noncontrolling interests	(0.2)	_	_	_	_	_	(0.2)
Cash dividends declared (\$1.64 per share)	(144.3)	_	_	_	(144.3)	_	_
Balance at December 31, 2022	\$ 944.5	\$ 0.9	87.9	\$ 13.9	\$ 1,212.8	\$ (285.8)	\$ 2.7

Allegion plc

Consolidated Statements of Cash Flows

In millions

For the years ended December 31,	2022	2021	2020
Cash flows from operating activities:			
Net earnings	\$ 458.3	\$ 483.3	\$ 314.5
Adjustments to arrive at net cash provided by operating activities:			
Depreciation and amortization	97.9	83.1	81.0
Impairment of goodwill and intangible assets	_	_	101.7
Loss on assets held for sale	_	_	37.3
Loss on divestitures	7.1	_	_
Share-based compensation	24.5	23.4	20.8
Unrealized losses (gains) on investments, net	0.2	(25.6)	2.0
Deferred income taxes	(71.3)	(43.8)	(24.4)
Other items	12.6	8.4	(6.4)
Changes in other assets and liabilities:			
Accounts and notes receivable	(53.4)	31.7	(1.9)
Inventories	(61.7)	(105.6)	(7.8)
Accounts payable	2.5	40.0	(1.6)
Other assets and liabilities	42.8	(6.3)	(24.9)
Net cash provided by operating activities	459.5	488.6	490.3
Cash flows from investing activities:			
Capital expenditures	(64.0)	(45.4)	(47.1)
Acquisition of and equity investments in businesses, net of cash acquired	(923.1)	(6.5)	(12.5)
Proceeds from sale of equity method investment	_	7.6	_
Other investing activities, net	(7.0)	12.7	2.9
Net cash used in investing activities	(994.1)	(31.6)	(56.7)
Cash flows from financing activities:			
Debt repayments, net	(12.6)	(238.9)	(0.2)
Proceeds from 2021 Revolving Facility	340.0	_	
Repayments of 2021 Revolving Facility	(271.0)	_	_
Proceeds from issuance of 2021 Term Facility		250.0	
Proceeds from issuance of senior notes	600.0		
Proceeds from (repayments of) debt, net	656.4	11.1	(0.2)
Debt financing costs	(10.2)	(1.9)	_
Dividends paid to ordinary shareholders	(143.9)	(129.0)	(117.3)
Repurchase of ordinary shares	(61.0)	(412.8)	(208.8)
Other financing activities, net	(4.3)	3.3	4.4
Net cash provided by (used in) financing activities	437.0	(529.3)	(321.9)
Effect of exchange rate changes on cash, cash equivalents and restricted cash	(12.3)	(10.2)	10.0
Net (decrease) increase in cash, cash equivalents and restricted cash	(109.9)	(82.5)	121.7
Cash, cash equivalents and restricted cash – beginning of period	397.9	480.4	358.7
Cash, cash equivalents and restricted cash – end of period	\$ 288.0	\$ 397.9	\$ 480.4

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

NOTE 1 – DESCRIPTION OF COMPANY AND BASIS OF PRESENTATION

Allegion plc, an Irish public limited company, and its consolidated subsidiaries ("Allegion" or "the Company") are a leading global company that provides security products and solutions that keep people and assets safe and secure in the places they live, learn, work and visit. Allegion creates peace of mind by pioneering safety and security with a vision of seamless access and a safer world. The Company offers an extensive and versatile portfolio of security and access control products and solutions across a range of market-leading brands including CISA®, Interflex®, LCN®, Schlage®, SimonsVoss® and Von Duprin®.

Basis of presentation: The Consolidated Financial Statements were prepared in accordance with generally accepted accounting principles in the United States of America ("GAAP") as defined by the Financial Accounting Standards Board ("FASB") within the FASB Accounting Standards Codification ("ASC").

NOTE 2 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The following is a summary of significant accounting policies used in the preparation of the accompanying Consolidated Financial Statements:

Principles of Consolidation: The Consolidated Financial Statements include all controlled subsidiaries of the Company. A noncontrolling interest in a subsidiary is considered an ownership interest in a controlled subsidiary that is not attributable to the Company. The Company includes noncontrolling interests as a component of Total equity in the Consolidated Balance Sheets and the Net earnings attributable to noncontrolling interests are presented as an adjustment from Net earnings used to arrive at Net earnings attributable to Allegion plc in the Consolidated Statements of Comprehensive Income.

Equity method affiliates represent unconsolidated entities over which the Company demonstrates significant influence but does not have a controlling interest. The Company is also required to consolidate variable interest entities in which it bears a majority of the risk to the entity's potential losses or stands to gain from a majority of the entity's expected returns.

Use of Estimates: The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosures of contingent assets and liabilities at the date of the financial statements, as well as the reported amounts of revenues and expenses during the reporting period. Estimates are based on several factors including the facts and circumstances available at the time the estimates are made, historical experience, risk of loss, general economic conditions and trends and the assessment of the probable future outcome. Some of the more significant estimates include useful lives of property, plant and equipment and intangible assets, purchase price allocations of acquired businesses, valuation of assets and liabilities including goodwill and other intangible assets, product warranties, sales allowances, assets and liabilities related to defined benefit plans, taxes, lease related assets and liabilities, share-based compensation, environmental costs, product liability and other contingencies. Actual results could differ from the Company's estimates. Estimates and assumptions are reviewed periodically, and the effects of changes, if any, are reflected in the Consolidated Statements of Comprehensive Income in the period they are determined.

Currency Translation: Assets and liabilities where the functional currency is not the U.S. dollar have been translated at year-end exchange rates, and income and expense accounts have been translated using average exchange rates throughout the year. Adjustments resulting from the process of translating a subsidiary's financial statements into the U.S. dollar are recorded to Accumulated other comprehensive loss.

Foreign currency transaction gains and losses are a result of the effect of exchange rate changes on transactions denominated in currencies other than the functional currency. Transaction gains and losses are recognized in Other income (expense), net, in the Consolidated Statements of Comprehensive Income in the period they are incurred.

Cash and Cash Equivalents: Cash and cash equivalents include cash on hand, demand deposits and all highly liquid investments with original maturities at the time of purchase of three months or less.

Allowance for Doubtful Accounts: The Company provides for an allowance for doubtful accounts and notes receivable, which represents the best estimate of expected lifetime credit losses inherent in the Company's accounts and notes receivable portfolios. The Company's estimates are influenced by a continuing credit evaluation of customers' financial condition, trade accounts and notes receivable aging and historical loss experience, as well as reasonable and supportable forecasts of future economic conditions. The Company has reserved \$6.0 million and \$5.4 million for doubtful accounts and notes receivable as of December 31, 2022 and 2021, respectively.

Inventories: Inventories are stated at the lower of cost and net realizable value using the first-in, first-out (FIFO) method.

Property, Plant and Equipment: Property, plant and equipment are stated at cost, less accumulated depreciation. Assets placed in service are recorded at cost and depreciated using the straight-line method over the estimated useful life of the asset except for leasehold improvements, which are depreciated over the shorter of their economic useful life or their lease term.

Repair and maintenance costs that do not extend the useful life of the asset are expensed as incurred. Major replacements and significant improvements that increase asset values and/or extend useful lives are capitalized. The range of useful lives used to depreciate property, plant and equipment is as follows:

Buildings	10	to	50 years
Machinery and equipment	2	to	12 years
Software	2	to	7 years

The Company assesses the recoverability of the carrying value of its property, plant and equipment whenever events or changes in circumstances indicate that the carrying amount of the asset may not be fully recoverable. Recoverability is measured by a comparison of the carrying amount of an asset to the future net undiscounted cash flows expected to be generated by the asset. If the undiscounted cash flows are less than the carrying amount of the asset, an impairment loss is recognized for the amount by which the carrying value of the asset exceeds its fair value.

Investments: The Company periodically invests in debt or equity securities of start-up companies and/or development stage technology or other companies without acquiring a controlling interest. The Company applies the equity method of accounting when the Company has the ability to exercise significant influence over the operating and financial decision making of the investee. Investments in equity method affiliates totaled \$11.8 million and \$11.0 million as of December 31, 2022 and 2021, respectively. Equity investments that have readily determinable fair values in which the Company does not have significant influence are measured at fair value, with any unrealized holding gains and losses being recorded to earnings. Investments without readily determinable fair values are measured at cost minus impairment, if any, plus or minus changes resulting from observable price changes in orderly transactions for the identical or similar investment of the same issuer and are qualitatively assessed for impairment indicators each reporting period. Investments in debt and equity securities not accounted for under the equity method of accounting totaled \$46.8 million and \$35.8 million as of December 31, 2022 and 2021, respectively. The Company's investments are recorded within Other noncurrent assets within the Consolidated Balance Sheets.

Leases: As a lessee, the Company categorizes its leases into two general categories: real estate and equipment leases. The Company's real estate leases include leased production and assembly facilities, warehouses and distribution centers and office space, while the Company's equipment leases primarily include vehicles, material handling and other equipment utilized in the Company's production and assembly facilities, warehouses and distribution centers and laptops and other IT equipment. The Company records a right-of-use ("ROU") asset and lease liability for substantially all leases for which it is a lessee. At inception of a contract, the Company considers all relevant facts and circumstances to assess whether or not the contract represents a lease by determining whether or not the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration. The Company assesses the specific terms and conditions of each lease to determine the appropriate classification as either an operating or finance lease and the lease term. Substantially all of the Company's leases for which the Company is a lessee are classified as operating leases. If at lease commencement date, a lease has a term of less than 12 months and does not include a purchase option that is reasonably certain to be exercised, the Company does not include the lease as part of its ROU asset or lease liability. If the Company enters into a large number of leases in the same month with the same terms and conditions, these are considered a group (portfolio). There are no material residual value guarantees provided by the Company nor any restrictions or covenants imposed by any leases to which the Company is a party.

The Company assesses the specific terms and conditions of each real estate lease, which can vary significantly from lease to lease, to determine the amount of the lease payments and the length of the lease term, which includes the minimum period over which lease payments are required plus any renewal options that are both within the Company's control to exercise and reasonably certain of being exercised upon lease commencement. When available, the Company will utilize the rate implicit in the lease as the discount rate to determine the lease liability; however, as this rate is not available for most leases, the Company will use its incremental borrowing rate for debt instruments with terms approximating the weighted-average term of its real estate or equipment leases to discount the future lease payments over the lease term to present value. The Company does incur variable lease payments for certain of its real estate leases, such as reimbursements of property taxes, maintenance and other operational costs to the lessor. In general, these variable lease payments are not captured as part of the lease liability or ROU asset, but rather are expensed as incurred. Most of the Company's equipment leases are for terms ranging from two to five years, although terms and conditions can vary from lease to lease. The Company applies similar estimates and judgments to its equipment lease portfolio in determining the lease payments, lease term and incremental borrowing rate as it does to its real estate lease portfolio. The Company does not typically incur variable lease payments related to its equipment leases.

Goodwill: The Company records as goodwill the excess of the purchase price of an acquired business over the fair value of the net assets acquired. Once the final valuation has been performed for each acquisition, adjustments may be recorded. Goodwill is tested and reviewed annually for impairment during the fourth quarter or whenever there is a significant change in events or circumstances that indicate the fair value of a reporting unit is more likely than not less than its carrying amount. Recoverability of goodwill is measured at the reporting unit level. The carrying amount of a reporting unit is compared to its estimated fair value. If the estimated fair value of a reporting unit exceeds its carrying amount, goodwill of the reporting unit is

not impaired. To the extent that the carrying value of the reporting unit exceeds its estimated fair value, a goodwill impairment charge will be recognized for the amount by which the carrying value of the reporting unit exceeds its fair value, not to exceed the carrying amount of the reporting unit's goodwill. Estimated fair value of the Company's reporting units is based on two valuation techniques, a discounted cash flow model (income approach) and a market multiple of earnings (market approach), with each method being weighted in the calculation.

Intangible Assets: Similar to Goodwill, indefinite-lived intangible assets are not amortized, but are tested and reviewed annually for impairment during the fourth quarter or whenever there is a significant change in events or circumstances that indicate the asset is more likely than not less than its carrying amount. Recoverability of indefinite-lived intangible assets (i.e. Trade names) is determined on a relief from royalty methodology, which is based on the implied royalty paid, at an appropriate discount rate, to license the use of an asset rather than owning the asset. The present value of the after-tax cost savings (i.e. royalty relief) indicates the estimated fair value of the asset. Any excess of the carrying value over the estimated fair value is recognized as an impairment loss equal to that excess.

Intangible assets such as completed technologies, patents, customer-related intangible assets and other intangible assets with finite useful lives are amortized on a straight-line basis over their estimated economic lives. The weighted-average useful lives approximate the following:

Customer relationships	20 years
Trade names (finite-lived)	15 years
Completed technologies/patents	10 years
Other	5 years

Recoverability of intangible assets with finite useful lives is assessed in the same manner as property, plant and equipment, as described above.

Business Combinations: The fair value of consideration paid in a business combination is allocated to the tangible and identifiable intangible assets acquired, liabilities assumed and goodwill using the acquisition method of accounting. Acquired intangible assets typically include trade names, customer relationships and completed technologies. The accounting for business combinations involves a considerable amount of judgment and estimation, and as a result, for significant acquisitions the Company normally obtains the assistance of a third-party valuation specialist in estimating fair values of acquired tangible and intangible assets and assumed liabilities. The allocation of consideration paid to assets acquired and liabilities assumed may be subject to revision based on the final determination of fair values during the measurement period, which in some cases, may be up to one year from the acquisition date. Business acquisition and integration costs are expensed as incurred.

Income Taxes: The calculation of the Company's income taxes involves considerable judgment and the use of both estimates and allocations. Deferred tax assets and liabilities are determined based on temporary differences between financial reporting and tax bases of assets and liabilities, applying enacted tax rates expected to be in effect for the year in which the differences are expected to reverse. The Company recognizes future tax benefits, such as net operating losses and tax credits, to the extent that realizing these benefits is considered in its judgment to be more likely than not. The Company regularly reviews the recoverability of its deferred tax assets considering its historic profitability, projected future taxable income, timing of the reversals of existing temporary differences and the feasibility of its tax planning strategies. Where appropriate, the Company records a valuation allowance with respect to future tax benefits.

Cash paid for income taxes, net of refunds, for the twelve months ended December 31, 2022, 2021 and 2020 was \$81.7 million, \$89.1 million and \$82.6 million, respectively.

Product Warranties: The Company offers a standard warranty with most product sales, and the value of such warranty is included in the contractual sales price. Standard product warranty accruals are recorded at the time of sale and are estimated based upon product warranty terms and historical experience. The Company regularly assesses the adequacy of its liabilities and makes adjustments as necessary based on known or anticipated warranty claims, or as new information becomes available.

Revenue Recognition: Net revenues are recognized based on the satisfaction of performance obligations under the terms of a contract. A performance obligation is a promise in a contract to transfer control of a distinct product or to provide a service, or a bundle of products or services, to a customer. The Company has two principal revenue streams, tangible product sales and services. Product sales involve contracts with a single performance obligation, the transfer of control of a product or bundle of products to a customer. Transfer of control typically occurs when goods are shipped from the Company's facilities or at other predetermined control transfer points (for instance, destination terms). Service offerings include inspection, maintenance and repair, aftermarket, design and installation and locksmith services, as well as software as a service ("SaaS") solutions. Unlike the single performance obligation to ship a product or bundle of products, revenue recognition related to services is delayed until the service based performance obligations are satisfied. In some instances, customer acceptance provisions are included in sales arrangements to give the buyer the ability to ensure the service meets any established criteria. In these instances, revenue

recognition is deferred until the performance obligations are satisfied, which could include acceptance terms specified in the arrangement being fulfilled through customer acceptance or a demonstration that established criteria have been satisfied.

Net revenues are measured as the amount of consideration expected to be received in exchange for transferring control of the products or providing the services and takes into account variable consideration, such as sales incentive programs including discounts and volume rebates. The existence of these programs does not preclude revenue recognition but does require the Company's best estimate of the variable consideration to be made based on expected activity, as these items are reserved for as a deduction to Net revenues based on the Company's historical rates of providing these incentives and annual forecasted sales volumes. Sales returns and customer disputes involving a question of quantity or price are accounted for as variable consideration, and therefore, as a reduction to Net revenues and as a contra receivable. At December 31, 2022 and 2021, the Company had a reserve for customer claims of \$43.5 million and \$47.7 million, respectively. All other incentives or incentive programs where the customer is required to reach a certain level of purchases, remain a customer for a certain period, provide a rebate form or is subject to additional requirements are also considered variable consideration and are accounted for as a reduction of revenue and a liability. At December 31, 2022 and 2021, the Company had a sales incentive accrual of \$60.4 million and \$38.0 million, respectively. These estimates are reviewed regularly for accuracy, and if updated information or actual amounts are different from previous estimates, the revisions are included in the Company's results for the period in which they become known.

As a practical expedient, the Company recognizes incremental costs of obtaining a contract, if any, as an expense when incurred if the amortization period of the asset would have been one year or less. The Company also applies the practical expedients allowed under ASC 606, "Revenue from Contracts with Customers", to omit the disclosure of remaining performance obligations for contracts with an original expected duration of one year or less and for contracts where the Company has the right to invoice for performance completed to date. The transaction price is not adjusted for the effects of a significant financing component, as the time period between control transfer of goods and services is less than one year. Sales, value-added and other similar taxes collected by the Company are excluded from Net revenues. The Company has also elected to account for shipping and handling activities that occur after control of the related goods transfers as fulfillment activities instead of performance obligations. These activities are included in Cost of goods sold in the Consolidated Statements of Comprehensive Income. The Company's payment terms are generally consistent with the industries in which its businesses operate.

Environmental Costs: The Company is subject to laws and regulations relating to protecting the environment and is dedicated to an environmental program to reduce the utilization and generation of hazardous materials during the manufacturing process and to remediate identified environmental concerns. The Company is currently engaged in site investigations and remediation activities to address environmental cleanup from past operations at current and former production facilities. The Company is also sometimes a party to environmental lawsuits and claims and has, from time to time, received notices of potential violations of environmental laws and regulations from the U.S. Environmental Protection Agency and similar state authorities. It has also been identified as a potentially responsible party ("PRP") for cleanup costs associated with off-site waste disposal at federal Superfund and state remediation sites for past operations. For all such sites, there are other PRPs and, in most instances, the Company's involvement is minimal. In estimating its liability, the Company has assumed it will not bear the entire cost of remediation of any site to the exclusion of other PRPs who may be jointly and severally liable. The ability of other PRPs to participate has been taken into account, based on the Company's understanding of the parties' financial condition and probable contributions on a per site basis. The Company regularly evaluates its remediation programs and considers alternative remediation methods that are in addition to, or in replacement of, those currently utilized by the Company based upon enhanced technology and regulatory changes.

Environmental expenditures relating to current operations are expensed or capitalized as appropriate. Expenditures relating to existing conditions caused by past operations, which do not contribute to current or future revenues, are expensed. Liabilities for remediation costs are recorded when they are probable and can be reasonably estimated, generally no later than the completion of feasibility studies or the Company's commitment to a plan of action. The assessment of this liability, which is calculated based on existing technology, does not reflect any offset for possible recoveries from insurance companies and is not discounted.

Research and Development Costs: The Company conducts research and development activities for the purpose of developing and improving new products and services. These costs are expensed when incurred. For the years ended December 31, 2022, 2021 and 2020, expenses related to research and development activities amounted to approximately \$74.5 million, \$73.3 million and \$54.4 million, respectively, and primarily consisted of salaries, wages, benefits, facility costs and other overhead expenses.

Defined Benefit Plans: The Company provides a range of U.S. and non-U.S. defined benefit plan benefits to eligible current and former employees. Noncontributory defined benefit pension plans covering non-collectively bargained U.S. employees provide benefits based on an average pay formula while most plans for collectively bargained U.S. employees provide benefits based on a flat dollar benefit formula. The non-U.S. defined benefit plans generally provide benefits based on earnings and years of service. Determining the costs associated with such benefits is dependent on various actuarial assumptions, including

discount rates, expected returns on plan assets, employee mortality and turnover rates. Actuarial valuations are performed to determine the plan obligations and expense in accordance with GAAP. Actual results may differ from the actuarial estimates and assumptions, and when they do, are generally recorded to Accumulated other comprehensive loss and amortized into Net earnings over future periods.

The Company reviews its actuarial assumptions at each measurement date and makes modifications to the assumptions as appropriate. Discount rates are generally established using hypothetical yield curves based on the yields of corporate bonds rated AA quality. Spot rates are developed from the yield curve and used to discount future benefit payments. The expected return on plan assets reflects the average rate of returns expected on the funds invested or to be invested to provide for the benefits included in the projected benefit obligation. The expected return on plan assets is based on what is achievable given the plan's investment policy, the types of assets held and the target asset allocation.

Share-Based Compensation: The Company records share-based compensation awards using a fair value method and recognizes compensation expense for an amount equal to the fair value of the share-based payment award issued. The Company's share-based compensation plans include programs for stock options, restricted stock units ("RSUs"), performance stock units ("PSUs") and deferred compensation. The fair value of each of the Company's stock option and RSU awards is expensed on a straight-line basis over the required service period, which is generally the 3-year vesting period. However, for stock options and RSUs granted to retirement eligible employees, the Company recognizes expense for the fair value of these awards at the grant date. The Company's Performance Stock Program ("PSP") provides awards for key employees in the form of PSUs based on performance against pre-established objectives. The annual target award level is expressed as a number of the Company's ordinary shares. All PSUs are settled in the form of ordinary shares.

Loss Contingencies: Liabilities are recorded for various contingencies arising in the normal course of business, including litigation and administrative proceedings, environmental matters, product liabilities, product warranties, workers' compensation and other claims. The Company has recorded reserves in the financial statements related to these matters, which are developed using inputs derived from actuarial estimates and historical and anticipated experience data, depending on the nature of the reserve and, in certain instances, with consultation of legal counsel, internal and external consultants and engineers. Amounts recorded for identified contingent liabilities are estimates, which are reviewed periodically and adjusted to reflect additional information when it becomes available.

Financial Instruments: The Company uses various financial instruments, including derivative instruments, to manage the risks associated with interest and currency rate exposures. These financial instruments are not used for trading or speculative purposes. When a derivative contract is entered into, the Company designates the derivative instrument as a cash flow hedge of a forecasted transaction, a cash flow hedge of a recognized asset or liability or as an undesignated derivative. The Company formally documents its hedge relationships, including identification of the derivative instruments and the hedged items, as well as its risk management objectives and strategies for undertaking the hedge transaction. This process includes linking derivative instruments that are designated as hedges to specific assets, liabilities or forecasted transactions.

The Company assesses at inception and at least quarterly thereafter, whether the derivatives used in cash flow hedging transactions are effective in offsetting the changes in the cash flows of the hedged item. To the extent the derivative is deemed to be an effective hedge, the fair market value changes of the instrument are recorded to Accumulated other comprehensive loss and subsequently reclassified to Net earnings when the hedged transaction affects earnings. Changes in the fair market value of derivatives not deemed to be an effective hedge are recorded in Net earnings in the period of change. The Company recognizes all derivative instruments on the Consolidated Balance Sheets at their fair value, which is determined through market-based valuations and may not be representative of the actual gains or losses that will be recorded when these instruments mature due to future fluctuations in the markets in which they are traded. If the hedging relationship ceases to be effective subsequent to inception, or it becomes probable that a forecasted transaction will no longer occur, the hedging relationship will be undesignated, and any future gains or losses on the derivative instrument will be recorded in Net earnings.

Recent Accounting Pronouncements

Recently Adopted Accounting Pronouncements:

In October 2021, the FASB issued ASU No. 2021-08, "Business Combinations (Topic 805): Accounting for Contract Assets and Contract Liabilities from Contracts with Customers." This ASU requires contract assets and contract liabilities (e.g., deferred revenue) acquired in a business combination to be recognized and measured by the acquirer on the acquisition date in accordance with ASC 606, "Revenue from Contracts with Customers". Generally, this new guidance will result in the acquirer recognizing contract assets and contract liabilities at the same amounts recorded by the acquiree. Historically, such amounts were recognized by the acquirer at fair value in purchase accounting. This ASU is effective for fiscal years beginning after December 15, 2022, including interim periods within those fiscal years. Early adoption is permitted, including in interim periods, for any financial statements that have not yet been issued. The Company elected to early adopt ASU 2021-08 on January 1, 2022, and as such, applied this new guidance to the Access Technologies business combination (see Note 3), which did not result in a material impact to the Consolidated Financial Statements for the year ended December 31, 2022.

NOTE 3 - ACQUISITIONS

On July 5, 2022, the Company, through its subsidiaries, completed the acquisition of Stanley Access Technologies LLC and assets related to the automatic entrance solutions business from Stanley Black & Decker, Inc. (the "Access Technologies business"). The total preliminary cash consideration paid for the acquisition was \$923.1 million, and the acquisition was accounted for as a business combination.

The Access Technologies business is a leading manufacturer, installer and service provider of automatic entrance solutions in North America, primarily in the U.S. and Canada. Its diversified customer base centers on non-residential settings, including retail, healthcare, education, commercial offices, hospitality and government. This acquisition helps the Company create a more comprehensive portfolio of access solutions with the addition of automated entrances. Additionally, the Access Technologies business adds an expansive service and support network throughout the U.S. and Canada, broadening the Company's solutions to national, regional and local customers and complementing the Company's existing strengths in these non-residential markets. The Access Technologies business has been integrated into the Allegion Americas segment.

The following table summarizes the preliminary allocation of the purchase price to assets acquired and liabilities assumed as of the acquisition date:

In millions

In Interview	
Accounts receivable, net	\$ 69.9
Inventories	50.8
Other current assets	0.3
Property, plant and equipment	14.7
Goodwill	631.5
Intangible assets	222.5
Other noncurrent assets	8.8
Accounts payable	(20.8)
Accrued expenses and other current liabilities	(31.5)
Other noncurrent liabilities	(23.1)
Total net assets acquired and liabilities assumed	\$ 923.1

The valuation of assets acquired and liabilities assumed has not yet been finalized as of December 31, 2022. Finalization of the valuation during the measurement period could result in a change in the amounts recorded for acquired working capital balances, goodwill, income tax assets and liabilities, among other items. The completion of the valuation will occur no later than one year from the acquisition date. Intangible assets recognized as of the acquisition date were comprised of the following:

	Value (in millions)	Useful life (<i>in</i> years)
Completed technologies/patents	\$ 6.2	2 5
Customer relationships	137.4	1 23
Trade names (finite-lived)	56.8	5
Backlog revenue	22.3	2

Goodwill results from several factors, including Allegion-specific synergies that were excluded from the cash flow projections used in the valuation of intangible assets and intangible assets that do not qualify for separate recognition, such as an assembled workforce. Goodwill resulting from this acquisition is expected to be deductible for tax purposes.

The following unaudited pro forma financial information for the years ended December 31, 2022 and 2021, reflects the consolidated results of operations of the Company as if this acquisition had taken place on January 1, 2021:

In millions	2022	2021
Net revenues	\$ 3,449.0	\$ 3,203.2
Net earnings attributable to Allegion plc	479.3	437.6

The unaudited pro forma financial information is presented for informational purposes only and does not purport to be indicative of results of operations that would have occurred had the pro forma events taken place on the date indicated or the future consolidated results of operations of the combined company. The unaudited pro forma financial information has been calculated after applying the Company's accounting policies and adjusting the historical financial results to reflect additional items directly attributable to the acquisition that would have been incurred assuming the acquisition had occurred on January 1, 2021. Adjustments to historical financial information for the years ended December 31, 2022 and 2021, include:

In millions	 2022	2021
Intangible asset amortization expense, net of tax	\$ (10.1)	\$ (23.3)
Interest expense, net of tax	(9.4)	(27.7)
Acquisition and integration costs, net of tax	21.6	(21.6)
Inventory fair value step-up amortization, net of tax	4.5	(4.5)

The following financial information reflects the Net revenues and Earnings before income taxes generated by the Access Technologies business since the acquisition date included within the Company's Consolidated Statement of Comprehensive Income for the year ended December 31, 2022:

In millions

Net revenues	\$ 185.9
Earnings before income taxes	1.5

Intangible asset amortization of \$18.1 million and amortization of \$6.0 million related to a fair value of inventory step-up are included in the Earnings before income taxes amount presented above, while acquisition and integration related expenses and Interest expense related to acquisition financing are excluded from this amount.

In July 2021, the Company acquired, through its subsidiaries, certain assets of Astrum Benelux B.V. ("Astum Benelux") and 100% of the equity of WorkforceIT B.V. in the Netherlands ("WorkforceIT"), both of which were previously held under common control and offer workforce management technology products and solutions in the Benelux region of Europe. Neither the assets from Astrum Benelux nor the acquisition of WorkforceIT had a material impact on the Consolidated Financial Statements. Both WorkforceIT and the assets acquired from Astrum Benelux were accounted for as a business combination and have been integrated into the Allegion International segment.

In December 2020, the Company acquired the remaining interest of Yonomi, Inc. ("Yonomi"), a U.S. based smart home integration platform provider and innovation leader in IoT Cloud platforms, through one of its subsidiaries. Prior to acquisition, the Company held a noncontrolling interest in Yonomi that was considered an equity method investment. This acquisition was accounted for as a business combination and did not have a material impact on the Consolidated Financial Statements. Yonomi has been integrated into the Allegion Americas segment.

During the years ended December 31, 2022, 2021 and 2020, the Company incurred \$30.5 million, \$4.4 million and \$2.3 million, respectively, of acquisition and integration related expenses, which are included in Selling and administrative expenses in the Consolidated Statement of Comprehensive Income.

NOTE 4 – INVENTORIES

At December 31, the major classes of Inventories were as follows:

In millions	 2022	2021
Raw materials	\$ 212.2	\$ 144.4
Work-in-process	41.7	42.2
Finished goods	 225.1	193.8
Total	\$ 479.0	\$ 380.4

NOTE 5 - PROPERTY, PLANT AND EQUIPMENT

At December 31, the major classes of property, plant and equipment were as follows:

In millions	 2022		2021
Land	\$ 18.3	\$	16.5
Buildings	173.2		177.0
Machinery and equipment	463.8		451.1
Software	160.2		152.6
Construction in progress	60.1		30.5
Total property, plant and equipment	875.6		827.7
Accumulated depreciation	(566.9)		(544.0)
Property, plant and equipment, net	\$ 308.7	\$	283.7

Depreciation expense for the years ended December 31, 2022, 2021 and 2020, was \$45.7 million, \$45.2 million and \$46.5 million, which includes amounts for software depreciation of \$12.3 million, \$11.5 million and \$13.5 million, respectively.

NOTE 6 - GOODWILL

The changes in the carrying amount of Goodwill were as follows:

In millions	Alleg	gion Americas	Allegio	n International	 Total
December 31, 2020 (gross)	\$	501.1	\$	891.5	\$ 1,392.6
Accumulated impairment		_		(573.6)	(573.6)
December 31, 2020 (net)		501.1		317.9	819.0
Acquisitions and adjustments		0.1		4.6	4.7
Currency translation				(19.9)	(19.9)
December 31, 2021 (net)		501.2		302.6	803.8
Acquisitions and adjustments		631.5		_	631.5
Currency translation		(4.6)		(17.6)	(22.2)
December 31, 2022 (net)	\$	1,128.1	\$	285.0	\$ 1,413.1

As previously disclosed, as a result of the global economic disruption and uncertainty due to the COVID-19 pandemic arising during the first quarter of 2020, the Company concluded a triggering event had occurred as of March 31, 2020, and performed interim impairment tests on the goodwill balances, at that time, of its previous EMEA and Asia Pacific reporting units (which were combined to form the new Allegion International segment effective January 1, 2021). The results of the interim impairment testing indicated that the estimated fair value of the former Asia Pacific reporting unit was less than its carrying value. Consequently, a goodwill impairment charge of \$88.1 million was recorded, which is included in Impairment of goodwill and intangible assets in the Consolidated Statement of Comprehensive Income for the year ended December 31, 2020.

NOTE 7 – INTANGIBLE ASSETS

At December 31, the gross amount of the Company's intangible assets and related accumulated amortization were as follows:

	2022							2021								
In millions	Gross carrying amount			cumulated ortization		carrying mount		ss carrying amount		cumulated ortization	Net carrying amount					
Completed technologies/patents	\$	63.0	\$	(32.1)	\$	30.9	\$	57.9	\$	(28.8)	\$	29.1				
Customer relationships		515.0		(155.8)		359.2		395.9		(141.6)		254.3				
Trade names (finite-lived)		135.7		(62.6)		73.1		84.0		(56.9)		27.1				
Other		71.2		(35.9)		35.3		45.8		(22.7)		23.1				
Total finite-lived intangible assets		784.9	\$	(286.4)		498.5		583.6	\$	(250.0)		333.6				
Trade names (indefinite-lived)		110.4				110.4		113.9				113.9				
Total	\$	895.3			\$	608.9	\$	697.5			\$	447.5				

Intangible asset amortization expense for the years ended December 31, 2022, 2021 and 2020, was \$49.4 million, \$34.0 million and \$31.5 million, respectively. Intangible asset amortization expense for the year ended December 31, 2022, included \$18.1 million related to intangible assets acquired as part of the Access Technologies business acquisition.

Future estimated amortization expense on existing intangible assets in each of the next five years amounts to approximately \$58.8 million for 2023, \$54.1 million for 2024, \$48.3 million for 2025, \$45.1 million for 2026 and \$38.2 million for 2027.

No intangible asset impairment charges were recorded in either of the years ended December 31, 2022 and 2021. However, as previously disclosed, as a result of the global economic disruption and uncertainty due to the COVID-19 pandemic, the Company concluded a triggering event had occurred as of March 31, 2020, and performed interim impairment testing on certain indefinite-lived trade names. Impairment charges of \$8.2 million were recorded as a result of these interim tests. Additional intangible asset impairment charges of \$5.4 million were recorded in 2020, relating to supply chain disruptions, which reduced a brand's expected future cash flows, and declines in volumes and pricing pressure for a separate subsidiary. Intangible asset impairment charges are included in Impairment of goodwill and intangible assets in the Consolidated Statements of Comprehensive Income for the year ended December 31, 2020.

NOTE 8 - DIVESTITURES

In September 2022, the Company sold Milre Systek Co. Ltd. ("Milre") in South Korea for an immaterial amount. As a result of the sale, the Company recorded a Loss on divestiture of \$7.6 million, of which \$1.6 million related to the reclassification of accumulated foreign currency translation adjustments to earnings upon sale. This divestiture is not expected to have a material impact on the Company's future results of operations or cash flows.

During the fourth quarter of 2020, the net assets of the Company's Qatar Metal Industries ("QMI") business, met the criteria to be classified as held for sale, and accordingly, were written down to fair value, resulting in a Loss on assets held for sale in 2020 of \$37.9 million. On February 28, 2021, the Company completed its divestiture of QMI. The completion of the divestiture did not have a material impact to the Consolidated Financial Statements for the year ended December 31, 2021.

NOTE 9 – DEBT AND CREDIT FACILITIES

At December 31, long-term debt and other borrowings consisted of the following:

In millions		2022		2021	
2021 Term Facility	\$	237.5	\$	250.0	
2021 Revolving Facility		69.0		_	
3.200% Senior Notes due 2024		400.0		400.0	
3.550% Senior Notes due 2027		400.0	400.		
3.500% Senior Notes due 2029		400.0		400.0	
5.411% Senior Notes due 2032		600.0		_	
Other debt		0.2		0.3	
Total borrowings outstanding	-	2,106.7		1,450.3	
Discounts and debt issuance costs, net		(12.2)		(8.2)	
Total debt		2,094.5		1,442.1	
Less current portion of long-term debt		12.6		12.6	
Total long-term debt	\$	2,081.9	\$	1,429.5	

Unsecured Credit Facilities

As of December 31, 2022, the Company has an unsecured Credit Agreement in place, consisting of a \$250.0 million term loan facility (the "2021 Term Facility"), of which \$237.5 million was outstanding at December 31, 2022, and a \$500.0 million revolving credit facility (the "2021 Revolving Facility" and, together with the 2021 Term Facility, the "2021 Credit Facilities"). Borrowings under the 2021 Credit Facilities mature on November 18, 2026, and are unconditionally guaranteed jointly and severally on an unsecured basis by Allegion plc and Allegion US Holding Company Inc. ("Allegion US Hold Co"), the Company's wholly-owned subsidiary. The 2021 Term Facility amortizes in quarterly installments at the following rates: 1.25% per quarter starting March 31, 2022 through March 31, 2025, 2.5% per quarter starting June 30, 2025 through September 30, 2026, with the balance due on November 18, 2026. The Company may voluntarily prepay outstanding amounts under the 2021 Term Facility at any time without premium or penalty, subject to customary breakage costs. Amounts borrowed under the 2021 Term Facility that are repaid may not be reborrowed. The Company repaid \$12.5 million of principal on the 2021 Term Facility during the year ended December 31, 2022.

The 2021 Revolving Facility provides aggregate commitments of up to \$500.0 million, which includes up to \$100.0 million for the issuance of letters of credit. On July 1, 2022, the Company borrowed \$340.0 million under the 2021 Revolving Facility to partially fund the acquisition of the Access Technologies business. The Company subsequently repaid \$271.0 million, resulting in \$69.0 million of borrowings outstanding on the 2021 Revolving Facility as of December 31, 2022. The Company also had \$13.2 million of letters of credit outstanding at December 31, 2022. Outstanding borrowings under the 2021 Revolving Facility may be repaid at any time without premium or penalty, and amounts repaid may be reborrowed. The Company pays certain fees with respect to the 2021 Revolving Facility, including an unused commitment fee on the undrawn portion of between 0.090% and 0.200% per year, depending on the Company's credit ratings, as well as certain other fees.

Outstanding borrowings under the 2021 Credit Facilities accrue interest, at the option of the Company, of (i) a Bloomberg Short-Term Bank Yield Index ("BSBY") rate plus an applicable margin, or (ii) a base rate (as defined in the Credit Agreement) plus an applicable margin. The applicable margin ranges from 0.875% to 1.375% depending on the Company's credit ratings. At December 31, 2022, the Company's outstanding borrowings under the 2021 Credit Facilities accrued interest at BSBY plus a margin of 1.125%, resulting in an interest rate of 5.498%. The Credit Agreement also contains negative and affirmative covenants and events of default that, among other things, limit or restrict the Company's ability to enter into certain transactions. In addition, the Credit Agreement requires the Company to comply with a maximum leverage ratio as defined within the agreement. As of December 31, 2022, the Company was in compliance with all covenants.

Senior Notes

On June 22, 2022, Allegion US Hold Co issued \$600.0 million aggregate principal amount of its 5.411% Senior Notes due 2032 (the "5.411% Senior Notes") to partially fund the acquisition of the Access Technologies business, in addition to the \$340.0 million drawn on the 2021 Revolving Facility, as discussed above. The 5.411% Senior Notes require semi-annual interest payments on January 1 and July 1, beginning January 1, 2023, and will mature on July 1, 2032. The Company incurred and deferred \$5.9 million of discounts and financing costs associated with the 5.411% Senior Notes, which will be amortized to

Interest expense over their 10-year term, as well as \$4.3 million of third party financing costs that were recorded within Interest expense on the Consolidated Statement of Comprehensive Income. The 5.411% Senior Notes are senior unsecured obligations of Allegion US Hold Co and rank equally with all of Allegion US Hold Co's existing and future senior unsecured and unsubordinated indebtedness. The guarantee of the 5.411% Senior Notes is the senior unsecured obligation of Allegion plc and ranks equally with all of the Company's existing and future senior unsecured and unsubordinated indebtedness.

As of December 31, 2022, Allegion US Hold Co also has \$400.0 million outstanding of its 3.200% Senior Notes due 2024 (the "3.200% Senior Notes") and \$400.0 million outstanding of its 3.550% Senior Notes due 2027 (the "3.550% Senior Notes"), while Allegion plc has \$400.0 million outstanding of its 3.500% Senior Notes due 2029 (the "3.500% Senior Notes", and all four senior notes collectively, the "Senior Notes"). The 3.200% Senior Notes, 3.550% Senior Notes and 3.500% Senior Notes all require semi-annual interest payments on April 1 and October 1 of each year and will mature on October 1, 2024, October 1, 2027, and October 1, 2029, respectively. The 3.200% Senior Notes and the 3.550% Senior Notes are senior unsecured obligations of Allegion US Hold Co and rank equally with all of Allegion US Hold Co's existing and future senior unsecured and unsubordinated indebtedness. The guarantee of the 3.200% Senior Notes and the 3.550% Senior Notes is the senior unsecured obligation of Allegion plc and ranks equally with all of the Company's existing and future senior unsecured by Allegion US Hold Co and rank equally with all of the Company's existing and future senior unsecured indebtedness.

Future Repayments

Future required principal payments on indebtedness as of December 31, 2022 were as follows:

In millions	
2023	\$ 12.6
2024	412.6
2025	21.9
2026	259.6
2027	400.0
Thereafter	1,000.0
Total	\$ 2,106.7

Cash paid for interest for the years ended December 31, 2022, 2021 and 2020 was \$56.9 million, \$45.1 million and \$47.3 million, respectively.

NOTE 10 – FINANCIAL INSTRUMENTS

Currency Hedging Instruments

The gross notional amount of the Company's currency derivatives was \$161.5 million and \$164.9 million at December 31, 2022 and 2021, respectively. Neither the fair values of currency derivatives, which are determined based on a pricing model that uses spot rates and forward prices from actively quoted currency markets that are readily observable (Level 2 inputs under the fair value hierarchy described in Note 13), nor the balances included in Accumulated other comprehensive loss, were material as of December 31, 2022 and 2021. Currency derivatives designated as cash flow hedges did not have a material impact to either Net earnings or Other Comprehensive (loss) income during any of the years ended December 31, 2022, 2021 or 2020, nor is the amount to be reclassified into Net earnings over the next twelve months expected to be material, although the actual amounts that will be reclassified to Net earnings may vary as a result of future changes in market conditions. At December 31, 2022, the maximum term of the Company's currency derivatives, both those that are designated as cash flow hedges and those that are not, was less than one year.

Concentration of Credit Risk

The counterparties to the Company's forward contracts consist of a number of investment grade major international financial institutions. The Company could be exposed to losses in the event of nonperformance by the counterparties. However, the credit ratings and the concentration of risk in these financial institutions are monitored on a continuous basis and present no significant credit risk to the Company.

NOTE 11 - LEASES

Total rental expense for the years ended December 31, 2022, 2021 and 2020, was \$48.9 million, \$45.4 million and \$44.2 million, respectively, and is classified within Cost of goods sold and Selling and administrative expenses within the Consolidated Statements of Comprehensive Income. Rental expense related to short-term leases, variable lease payments or other leases or lease components not included within the ROU asset or lease liability totaled \$9.6 million, \$8.2 million and

\$9.1 million, respectively, for the years ended December 31, 2022, 2021 and 2020. No material lease costs have been capitalized on the Consolidated Balance Sheets as of December 31, 2022 or 2021.

Amounts included within the Consolidated Balance Sheets related to the Company's ROU asset and lease liability were as follows:

		De	ecember 31, 20)22	De	ecember 31, 20)21
In millions	Balance Sheet classification	Real estate	Equipment	Total	Real estate	Equipment	Total
ROU asset	Other noncurrent assets	\$ 69.3	\$ 28.8	\$ 98.1	\$ 58.2	\$ 31.7	\$ 89.9
Lease liability - current	Accrued expenses and other current liabilities	17.7	14.1	31.8	15.5	13.6	29.1
Lease liability - noncurrent	Other noncurrent liabilities	54.8	14.7	69.5	45.1	18.2	63.3
Other information:							
Weighted-average ren	naining term (years)	5.9	2.4		6.5	2.8	
Weighted-average dis	count rate	3.5 %	2.1 %		3.4 %	2.1 %	

The following table summarizes additional information related to the Company's leases for the years ended December 31:

	2022										
In millions	Rea	al estate	Eq	uipment		Total	Rea	al estate	Equ	uipment	Total
Cash paid for amounts included in the measurement of lease liabilities	\$	20.6	\$	18.7	\$	39.3	\$	19.1	\$	17.4	\$ 36.5
ROU assets obtained in exchange for new lease liabilities		32.2		13.2		45.4		16.7		12.8	29.5

Future Repayments

Future minimum lease payments required under non-cancellable operating leases for both the real estate and equipment lease portfolios for the next five years and thereafter as of December 31, 2022, were as follows:

In millions	2	2023	2024			2025	 2026	 2027	Th	ereafter	Total	
Real estate leases	\$	19.8	\$	15.8	\$	13.4	\$ 10.1	\$ 7.4	\$	14.4	\$	80.9
Equipment leases		14.5		9.5		4.5	 0.9	 0.1				29.5
Total	\$	34.3	\$	25.3	\$	17.9	\$ 11.0	\$ 7.5	\$	14.4	\$	110.4

The difference between the total undiscounted minimum lease payments and the combined current and noncurrent lease liabilities as of December 31, 2022, is due to imputed interest of \$9.1 million. Additionally, leases to commence in 2023 have been signed for two new manufacturing and assembly facilities in our Allegion Americas segment. Although not included in the amounts above, upon commencement these leases are expected to add new ROU assets and lease liabilities of approximately \$35 million to \$40 million.

NOTE 12 – DEFINED BENEFIT PLANS

The Company sponsors several U.S. and non-U.S. defined benefit plans to eligible employees and retirees and also maintains other supplemental plans for officers and other key employees. The following table details information regarding the Company's defined benefit plans at December 31:

	U.S.			NON	N-U.S.	.S.	
In millions	2022		2021	2022		2021	
Change in benefit obligations:							
Benefit obligation at beginning of year	\$ 335.9	\$	361.4	\$ 417.1	\$	455.7	
Service cost	5.9		6.7	1.4		2.0	
Interest cost	8.1		6.8	6.7		5.1	
Employee contributions	_		_	0.2		0.3	
Amendments	_		_	_		(0.1)	
Actuarial gains ^(a)	(84.5)		(18.7)	(116.4)		(21.9)	
Benefits paid	(17.7)		(20.0)	(13.3)		(14.8)	
Foreign currency exchange rate changes	_		_	(39.0)		(5.4)	
Curtailments and settlements	_		_	(1.6)		(3.0)	
Divestitures	_		_	_		(0.8)	
Other, including expenses paid	_		(0.3)	_		_	
Benefit obligation at end of year	\$ 247.7	\$	335.9	\$ 255.1	\$	417.1	
Change in plan assets:							
Fair value at beginning of year	\$ 326.5	\$	333.0	\$ 449.4	\$	463.9	
Actual return on plan assets	(65.6)		8.9	(146.8)		3.7	
Company contributions	0.5		6.2	5.5		6.0	
Employee contributions	_		_	0.2		0.3	
Benefits paid	(17.7)		(20.0)	(13.3)		(14.8)	
Foreign currency exchange rate changes	_		_	(43.4)		(4.8)	
Curtailment and settlements	_		_	(1.6)		(3.0)	
Other, including expenses paid	(1.4)		(1.6)	(1.6)		(1.9)	
Fair value of assets at end of year	\$ 242.3	\$	326.5	\$ 248.4	\$	449.4	
Funded status:							
Plan assets (less than) exceeding benefit obligations	\$ (5.4)	\$	(9.4)	\$ (6.7)	\$	32.3	
Amounts included in the balance sheet:							
Other noncurrent assets	\$ 14.9	\$	13.9	\$ 12.6	\$	55.9	
Accrued compensation and benefits	(15.7)		(0.5)	(0.8)		(0.7)	
Postemployment and other benefit liabilities	(4.6)		(22.8)	(18.5)		(22.9)	
Net amount recognized	\$ (5.4)	\$	(9.4)	\$ (6.7)	\$	32.3	

(a) The significant actuarial gains during the year ended December 31, 2022, are primarily driven by discount rate increases.

It is the Company's objective to contribute to the pension plans to ensure adequate funds are available in the plans to make benefit payments to plan participants and beneficiaries when required. However, certain plans are not funded due to either legal, accounting or tax requirements in certain jurisdictions. As of December 31, 2022, approximately 6% of the Company's projected benefit obligation relates to plans that are not funded, of which the majority are non-U.S. plans.

The pretax amounts recognized in Accumulated other comprehensive loss were as follows:

	U.S.					
In millions	Prior s	service cost	Net actuarial losses		Total	
December 31, 2020	\$	(1.0)	\$ (57.4)	\$	(58.4)	
Current year changes recorded to Accumulated other comprehensive loss		_	13.5		13.5	
Amortization reclassified to earnings		0.3	3.4		3.7	
December 31, 2021	\$	(0.7)	\$ (40.5)	\$	(41.2)	
Current year changes recorded to Accumulated other comprehensive loss		_	5.4		5.4	
Amortization reclassified to earnings		0.2	1.1		1.3	
December 31, 2022	\$	(0.5)	\$ (34.0)	\$	(34.5)	

			NO	ON-U.S.	
In millions	Prior s	ervice cost	Net ac	tuarial losses	Total
December 31, 2020	\$	(4.1)	\$	(75.0)	\$ (79.1)
Current year changes recorded to Accumulated other comprehensive loss		0.1		11.8	11.9
Amortization reclassified to earnings		0.1		1.4	1.5
Settlements/curtailments reclassified to earnings		_		0.5	0.5
Currency translation and other		0.1		2.0	2.1
December 31, 2021	\$	(3.8)	\$	(59.3)	\$ (63.1)
Current year changes recorded to Accumulated other comprehensive loss		0.1		(44.7)	(44.6)
Amortization reclassified to earnings		0.1		(0.5)	(0.4)
Currency translation and other		0.5		7.3	7.8
December 31, 2022	\$	(3.1)	\$	(97.2)	\$ (100.3)

Weighted-average discount rate assumptions utilized in determining benefit obligations as of December 31, were as follows:

	2022	2021
U.S. plans	5.4 %	2.8 %
Non-U.S. plans	4.9 %	1.9 %

The accumulated benefit obligation for all U.S. defined benefit pension plans was \$247.7 million and \$333.4 million at December 31, 2022 and 2021, respectively. The accumulated benefit obligation for all non-U.S. defined benefit pension plans was \$249.8 million and \$410.2 million at December 31, 2022 and 2021, respectively.

Information regarding pension plans with accumulated benefit obligations more than plan assets were:

	U.S.				NON-U.S.			
In millions		2022		2021		2022		2021
Projected benefit obligation	\$	20.2	\$	23.3	\$	29.1	\$	33.7
Accumulated benefit obligation		20.2		23.0		24.3		28.2
Fair value of plan assets	\$	_	\$	_	\$	9.8	\$	10.1

Future pension benefit payments are expected to be paid as follows:

In millions	U.S.	NON-U.S.
2023	\$ 36.9	\$ 14.4
2024	19.5	15.1
2025	18.2	15.8
2026	19.6	16.5
2027	18.1	17.3
2028 - 2032	85.8	99.0

The components of the Company's net periodic pension benefit cost (income) for the years ended December 31, were as follows:

		U.S.	
In millions	2022	2021	2020
Service cost	\$ 5.9	\$ 6.7	\$ 6.7
Interest cost	8.1	6.8	9.6
Expected return on plan assets	(13.5)	(14.0)	(14.5)
Administrative costs and other	1.1	1.2	1.6
Net amortization of:			
Prior service costs	0.2	0.3	0.2
Plan net actuarial losses	1.1	3.4	3.6
Net periodic pension benefit cost	\$ 3 2.9	\$ 4.4	\$ 7.2

	NON-U.S.								
In millions	2022			2021		2020			
Service cost	\$	1.4	\$	2.0	\$	1.7			
Interest cost		6.7		5.1		6.6			
Expected return on plan assets		(14.3)		(13.8)		(12.7)			
Administrative costs and other		1.5		1.9		1.6			
Net amortization of:									
Prior service costs		0.1		0.1		0.1			
Plan net actuarial (gains) losses		(0.5)		1.4		1.3			
Net curtailment and settlement losses		_		0.5		0.1			
Net periodic pension benefit income	\$	(5.1)	\$	(2.8)	\$	(1.3)			

The Service cost component of Net periodic pension benefit cost (income) is recorded in Cost of goods sold and Selling and administrative expenses, while the remaining components are recorded within Other income, net within the Consolidated Statements of Comprehensive Income.

Net periodic pension benefit expense for 2023 is projected to be approximately \$3 million, utilizing the assumptions for calculating the pension benefit obligations at the end of 2022.

Weighted-average assumptions utilized in determining net periodic pension benefit cost (income) for the years ended December 31, were as follows:

Discount rate:		2022	2021	2020
II C mlans	iscount rate:			
U.S. plans 2.8 % 2.5 % 3.3	U.S. plans	2.8 %	2.5 %	3.3 %
Non-U.S. plans 1.9 % 1.3 % 1.9	Non-U.S. plans	1.9 %	1.3 %	1.9 %
Rate of compensation increase:	ate of compensation increase:			
U.S. plans 3.0 % 3.0 % 3.0	U.S. plans	3.0 %	3.0 %	3.0 %
Non-U.S. plans 3.5 % 3.0 % 3.0	Non-U.S. plans	3.5 %	3.0 %	3.0 %
Expected return on plan assets:	xpected return on plan assets:			
U.S. plans 4.3 % 4.3 % 5.0	U.S. plans	4.3 %	4.3 %	5.0 %
Non-U.S. plans 3.5 % 3.0 % 3.3	Non-U.S. plans	3.5 %	3.0 %	3.3 %

The Company generally estimates the service and interest cost components of net periodic benefit cost utilizing a full yield-curve approach. Under this approach, the Company applies discounting using the applicable spot rates derived from the yield curve to discount the cash flows used to measure the benefit obligation. These spot rates align to each of the projected benefit obligation cash flows and service cost cash flows. The expected return on plan assets reflects the average rate of returns expected on the funds invested or to be invested to provide for the benefits included in the projected benefit obligation and is based on what is achievable given the plan's investment policy, the types of assets held and target asset allocations. The expected long-term rate of return is determined as of the measurement date. Each plan is reviewed, along with its historical returns and target asset allocations, to determine the appropriate expected return on plan assets to be used.

The Company's overall objective in managing its defined benefit plan assets is to ensure that all present and future benefit obligations are met as they come due. The goal is to achieve this while trying to mitigate volatility in plan funded status, contributions and expense by better matching the characteristics of the plan assets to that of the plan liabilities. Each plan's funded status and asset allocation is monitored regularly in addition to investment manager performance.

The fair values of the Company's U.S. pension plan assets at December 31, 2022, by asset category, were as follows:

	Fa	ir value measurem			
In millions	Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)	Assets measured at NAV	Total
Cash, cash equivalents and short-term investments	\$ —	\$ —	\$ —	\$ 4.2	\$ 4.2
Common collective trusts	_	_		167.7	167.7
Other ^(a)	_	_	_	70.4	70.4
Total U.S. pension plan assets	\$	\$ —	\$	\$ 242.3	\$ 242.3

(a) Includes group trust diversified credit and real asset funds.

The fair values of the Company's U.S. pension plan assets at December 31, 2021, by asset category, were as follows:

	Fair value measurements							
In millions	in a mark identic	d prices ctive tets for al assets vel 1)	obse obse in	ificant ther ervable puts evel 2)	unol i	nificant oservable nputs evel 3)	Assets easured at NAV	Total
Cash, cash equivalents and short-term investments	\$	_	\$	_	\$	_	\$ 4.5	\$ 4.5
Common collective trusts						_	252.3	252.3
Other ^(a)							69.7	69.7
Total U.S. pension plan assets	\$		\$		\$		\$ 326.5	\$ 326.5

(a) Includes group trust diversified credit and real asset funds.

No material transfers in or out of Level 3 occurred during the years ended December 31, 2022 or 2021.

The Company's U.S. pension plan assets are valued using the following methodologies:

- Cash, cash equivalents and short-term investments Short-term investments are valued at their daily net asset value
 (NAV) per share or the equivalent based upon the fair value of the underlying investments. NAV per share or the
 equivalent is used for fair value purposes as a practical expedient and is calculated by the investment manager or
 sponsor of the fund. These investments primarily consist of short-term investment funds.
- Common collective trusts Common collective trust ("CCT") funds are not publicly traded and are valued at NAV per share or the equivalent based upon the fair value of the underlying investments. NAV per share or the equivalent is used for fair value purposes as a practical expedient and is calculated by the investment manager or sponsor of the applicable fund. CCT funds consist of a variety of publicly traded securities, including equity mutual funds, U.S. government and agency obligations, corporate and non-U.S. bonds, securitized credit and emerging market debt. There are no unfunded commitments, redemption frequency restrictions or other redemption restrictions related to such investments.

The fair values of the Company's non-U.S. pension plan assets at December 31, 2022, by asset category, were as follows:

	Fai	r value measurem			
In millions	Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)	Assets measured at NAV	Total
Cash, cash equivalents and short-term investments	\$ —	\$ —	\$ —	\$ 30.5	\$ 30.5
Equity mutual funds	_	2.7	_	47.3	50.0
Corporate and non-U.S. bonds	_	2.9	_	122.1	125.0
Other ^(a)	_	0.3	4.1	38.5	42.9
Total non-U.S. pension plan assets	\$ —	\$ 5.9	\$ 4.1	\$ 238.4	\$ 248.4

a) Primarily includes a core diversified credit fund, a credit opportunity fund and derivative contracts.

The fair values of the Company's non-U.S. pension plan assets at December 31, 2021, by asset category, were as follows:

		Fair value measurements							
In millions	Quoted prices in active markets for identical asset (Level 1)		other observable		Significant unobservable inputs (Level 3)		Assets measured at NAV		Total
Cash, cash equivalents and short-term investments	\$	0.3	\$	_	\$	_	\$	103.9	\$ 104.2
Equity mutual funds				3.1		_		112.5	115.6
Corporate and non-U.S. bonds		_		3.0		_		166.4	169.4
Other ^(a)		_		0.5		3.8		55.9	60.2
Total non-U.S. pension plan assets	\$	0.3	\$	6.6	\$	3.8	\$	438.7	\$ 449.4

(a) Primarily includes a core diversified credit fund, a credit opportunity fund and derivative contracts.

No material transfers in or out of Level 3 occurred during the years ended December 31, 2022 or 2021.

The Company's non-U.S. pension plan assets are valued using the following methodologies:

- Cash, cash equivalents and short-term investments Cash equivalents are valued using a market approach with inputs including quoted market prices for either identical or similar instruments. Short-term investments are valued at the closing price or amount held on deposit by the custodian bank, at fair value by discounting the related cash flows based on current yields of similar instruments with comparable durations considering the credit-worthiness of the issuer, or at NAV per share or the equivalent based upon the fair value of the underlying investments. NAV per share or the equivalent is used for fair value purposes as a practical expedient and is calculated by the investment manager or sponsor of the fund. These investments primarily consist of short-term investment funds.
- Equity mutual funds Equity mutual funds are primarily valued at NAV per share or the equivalent. NAV per share or the equivalent is used for fair value purposes as a practical expedient and is calculated by the investment manager or sponsor of the fund.
- Corporate and non-U.S. bonds Quoted market prices are not available for these securities. Fair values are either estimated using pricing models and/or quoted prices of securities with similar characteristics or discounted cash flows, in which instances such securities are classified as Level 2, or valued at NAV per share or the equivalent. NAV per share or the equivalent is used for fair value purposes as a practical expedient and is calculated by the investment manager or sponsor of the fund.

The Company made employer contributions of \$0.5 million, \$6.2 million and \$6.3 million to the U.S. pension plans in 2022, 2021 and 2020, respectively. Additionally, the Company prefunded \$8.2 million of supplemental plan payments to a former executive as of December 31, 2022, to satisfy an obligation due in early 2023. The Company made employer contributions to its non-U.S. pension plans of \$5.5 million, \$6.0 million and \$5.1 million in 2022, 2021 and 2020, respectively.

The Company currently projects that approximately \$12 million will be contributed to its plans worldwide in 2023. The Company's policy allows it to fund an amount, which could be in excess of or less than the pension cost expensed, subject to the limitations imposed by current tax regulations. The Company anticipates funding the plans in 2023 in accordance with contributions required by funding regulations or the laws of each jurisdiction.

Most of the Company's U.S. employees are covered by defined contribution plans. Employer contributions are determined based on criteria specific to the individual plans and amounted to approximately \$23.0 million, \$18.3 million and \$17.9 million in 2022, 2021 and 2020, respectively. The Company's contributions relating to non-U.S. defined contribution plans and other non-U.S. benefit plans were \$8.8 million, \$8.6 million and \$7.0 million in 2022, 2021 and 2020, respectively.

Deferred Compensation Plan

The Company maintains an Executive Deferred Compensation Plan ("EDCP"), which is an unfunded, nonqualified plan that, prior to 2019, permitted certain employees to defer up to 50% of their annual salary and up to 100% of their annual bonus awards, performance stock plan awards and restricted stock units into a number of investment choices, including its ordinary share equivalents, until conclusion of their employment with the Company. As of December 31, 2022 and 2021, the deferred compensation liability balance was \$13.8 million and \$18.2 million, respectively, the majority of which was recorded within Postemployment and other benefit liabilities in the Consolidated Balance Sheets. Amounts invested in ordinary share equivalents of the Company are not included in the deferred compensation liability balance, as these amounts will be settled in ordinary shares of the Company at the time of distribution.

NOTE 13 – FAIR VALUE MEASUREMENTS

Fair value is defined as the exchange price that would be received to sell an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. Fair value measurements are based on a framework that utilizes the inputs market participants use to determine the fair value of an asset or liability and establishes a fair value hierarchy to prioritize those inputs. The fair value hierarchy is comprised of the three levels described below:

- Level 1 Inputs based on quoted prices in active markets for identical assets or liabilities.
- Level 2 Inputs other than Level 1 quoted prices, such as quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the asset or liability.
- Level 3 Unobservable inputs based on little or no market activity and that are significant to the fair value of the
 assets and liabilities.

The fair value hierarchy requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. Observable inputs are obtained from independent sources and can be validated by a third party, whereas unobservable inputs reflect assumptions regarding what a third party would use in pricing an asset or liability based on the best information available under the circumstances. A financial instrument's categorization within the fair value hierarchy is based upon the lowest level of input that is significant to the fair value measurement.

Assets and liabilities measured at fair value at December 31, 2022, were as follows:

	ents					
In millions	Quoted prices in active markets for identical assets (Level 1)		Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)	_	Total fair value
Recurring fair value measurements						
Assets:						
Investments	\$	- \$	19.9	\$ —	\$	19.9
Total asset recurring fair value measurements	\$ -	- \$	19.9	\$ —	\$	19.9
Liabilities:						
Deferred compensation and other retirement plans	\$	- \$	\$ 20.3	\$ —	\$	20.3
Total liability recurring fair value measurements	\$ —	- \$	5 20.3	\$ —	\$	20.3
Financial instruments not carried at fair value						
Total debt	\$	- \$	1,978.4	\$ —	\$	1,978.4
Total financial instruments not carried at fair value	\$	- 5	1,978.4	\$ —	\$	1,978.4

Assets and liabilities measured at fair value at December 31, 2021, were as follows:

	F					
In millions Recurring fair value measurements	Quoted prices in active markets for identical assets (Level 1)		nificant other observable outs (Level 2)	unobservable		Total fair value
Assets:						
Assets.						
Investments	\$ —	\$	24.5	\$ —	\$	24.5
Total asset recurring fair value measurements	<u> </u>	\$	24.5	<u> </u>	\$	24.5
Liabilities:						
Deferred compensation and other retirement plans	\$ —	\$	25.9	\$ —	\$	25.9
Total liability recurring fair value measurements	<u> </u>	\$	25.9	s —	\$	25.9
Financial instruments not carried at fair value						
Total debt	\$ —	\$	1,510.4	\$ —	\$	1,510.4
Total financial instruments not carried at fair value	<u> </u>	\$	1,510.4	<u> </u>	\$	1,510.4

The Company determines the fair value of its financial assets and liabilities using the following methodologies:

- *Investments* These instruments include equity mutual funds and corporate bond funds. The fair value is obtained based on observable market prices quoted on public exchanges for similar instruments.
- Deferred compensation and other retirement plans These include obligations related to deferred compensation and other retirement plans adjusted for market performance. The fair value is obtained based on observable market prices quoted on public exchanges for similar instruments.
- Debt These instruments are recorded at cost and include the 2021 Credit Facilities and Senior Notes maturing through 2032. The fair value of these debt instruments is obtained based on observable market prices quoted on public exchanges for similar instruments.

The carrying values of Cash and cash equivalents, Accounts and notes receivable, net, Accounts payable, Accrued compensation and benefits and Accrued expenses and other current liabilities are a reasonable estimate of their fair values due to the short-term nature of these instruments. As discussed in Note 2, the Company also has investments in debt and equity securities without readily determinable fair values, which are measured at cost minus impairment, if any, plus or minus changes resulting from observable price changes in orderly transactions for identical or similar investments of the same issuer and are qualitatively assessed for impairment indicators at each reporting period. As these investments are considered to be nonrecurring fair value measurements, they are not included in the fair value tables above.

The methodologies used by the Company to determine the fair value of its financial assets and liabilities at December 31, 2022, are the same as those used at December 31, 2021.

NOTE 14 – EQUITY

Ordinary Shares

The changes in Ordinary shares outstanding for the year ended December 31, 2022, were as follows:

In millions	Total
December 31, 2021	88.2
Shares issued under equity incentive plans	0.2
Repurchase of ordinary shares	(0.5)
December 31, 2022	87.9

Allegion had 400.0 million ordinary shares authorized and 10.0 million preferred shares, \$0.001 par value per share, authorized (with none outstanding) at December 31, 2022.

In February 2020, the Company's Board of Directors approved a share repurchase authorization of up to, and including, \$800 million of the Company's ordinary shares (the "2020 Share Repurchase Authorization"). The 2020 Share Repurchase Authorization does not have a prescribed expiration date. During the year ended December 31, 2022, the Company paid \$61.0 million to repurchase 0.5 million ordinary shares on the open market under the 2020 Share Repurchase Authorization. As of December 31, 2022, the Company has approximately \$140.5 million still available to be repurchased under the 2020 Share Repurchase Authorization.

Accumulated Other Comprehensive Loss

The changes in Accumulated other comprehensive loss were as follows:

In millions	sh flow edges	Defined benefi plan items	-	Foreign rency items	 Total
December 31, 2019	\$ 0.5	\$ (126.2	(2) \$	(92.9)	\$ (218.6)
Other comprehensive (loss) income, net of tax ^(a)	(1.4)	5.9)	57.0	61.5
December 31, 2020	 (0.9)	(120.3	5)	(35.9)	(157.1)
Other comprehensive income (loss), net of tax	 1.8	24.3		(63.4)	(37.3)
December 31, 2021	 0.9	(96.0	<u>)</u>	(99.3)	(194.4)
Other comprehensive income (loss), net of tax	 5.2	(21.1)	(75.5)	(91.4)
December 31, 2022	\$ 6.1	\$ (117.1) \$	(174.8)	\$ (285.8)

(a) During 2020, the Company reclassified \$12.8 million of accumulated foreign currency translation adjustments to earnings upon the liquidation of two legal entities in the Allegion International segment, which is included in Foreign currency items in the table above.

All amounts of Other comprehensive income (loss), net attributable to noncontrolling interests on the Consolidated Statements of Equity relate to foreign currency items.

NOTE 15 - SHARE-BASED COMPENSATION

Under the Company's shareholder-approved equity incentive plan, a maximum of 8.0 million ordinary shares are authorized for issuance, of which 2.2 million remained available for issuance as of December 31, 2022, for future equity incentive awards.

Compensation Expense

Share-based compensation expense is included in Cost of goods sold and Selling and administrative expenses within the Consolidated Statements of Comprehensive Income. The following table summarizes the expenses recognized for the years ended December 31:

In millions	2	2022	2021	2020
Stock options	\$	4.4	\$ 3.9	\$ 3.8
RSUs		14.2	13.6	11.4
PSUs		5.9	5.9	5.6
Deferred compensation		(3.1)	2.1	2.4
Pre-tax expense		21.4	25.5	23.2
Tax benefit ^(a)		(1.8)	(3.0)	(2.9)
After-tax expense	\$	19.6	\$ 22.5	\$ 20.3

(a) Tax benefit reflected in the table above does not include the excess benefit from exercises and vesting of share-based compensation of \$0.5 million, \$2.1 million and \$4.5 million for the years ended December 31, 2022, 2021 and 2020, respectively.

Stock Options / RSUs

The weighted-average fair value of stock options granted for the years ended December 31, 2022, 2021 and 2020, was estimated to be \$28.24, \$24.99 and \$25.62 per share, respectively, using the Black-Scholes option-pricing model. The weighted-average assumptions used were as follows:

	2022	2021	2020
Dividend yield	1.46 %	1.32 %	0.99 %
Volatility	27.12 %	27.14 %	20.70 %
Risk-free rate of return	2.13 %	0.75 %	1.41 %
Expected life	6.0 years	6.0 years	6.0 years

Volatility is based on the Company's historic volatility. The risk-free rate of return is based on the yield curve of a zero-coupon U.S. Treasury bond on the date the award is granted with a maturity equal to the expected term of the award. The expected life of the Company's stock option awards is derived from the simplified approach based on the weighted-average time to vest and the remaining contractual term and represents the period of time that awards are expected to be outstanding.

Changes in options outstanding under the plans for the years ended December 31, 2022, 2021 and 2020, were as follows:

	Shares subject to option	Weighted- average exercise price ^(a)	Aggregate intrinsic value (millions)	Weighted-average remaining life (years)
December 31, 2019	863,622	\$ 67.57		
Granted	161,600	129.26		
Exercised	(256,704)	52.89		
Canceled	(8,376)	107.23		
December 31, 2020	760,142	85.18		
Granted	179,743	109.14		
Exercised	(156,063)	66.98		
Canceled	(26,042)	109.36		
December 31, 2021	757,780	93.76		
Granted	234,809	112.18		
Exercised	(52,641)	58.63		
Canceled	(7,366)	115.55		
Outstanding December 31, 2022	932,582	\$ 100.21	\$ 10.4	6.5
Exercisable December 31, 2022	548,222	\$ 90.92	\$ 10.4	5.2

⁽a) The weighted-average exercise price of awards represents the exercise price of the awards on the grant date converted to ordinary shares of the Company.

The following table summarizes information concerning currently outstanding and exercisable options:

			Options outstanding			Op	tions exercisable	
	Range of exercise price		Number outstanding at December 31, 2022	Weighted- average remaining life (years)	Weighted- average exercise price	Number exercisable at December 31, 2022	Weighted- average remaining life (years)	Weighted- average exercise price
25.01	_	50.00	2,415	0.1	32.33	2,415	0.1	32.33
50.01	_	75.00	146,123	3.3	65.06	146,123	3.3	65.06
75.01	_	100.00	247,484	5.2	87.61	247,484	5.2	87.61
100.01	_	125.00	390,654	8.5	110.89	55,200	7.6	109.30
125.01	_	150.00	145,906	6.5	129.33	97,000	6.5	129.33
			932,582	6.5	\$ 100.21	548,222	5.2	\$ 90.92

At December 31, 2022, there was \$3.3 million of total unrecognized compensation cost from stock option arrangements granted under the plan, which is primarily related to unvested stock options held by non-retirement eligible employees. The aggregate intrinsic value of stock options exercised during the years ended December 31, 2022 and 2021, was \$2.9 million and \$10.5 million, respectively. Generally, stock options expire ten years from their date of grant.

The following table summarizes RSU activity for the years ended December 31, 2022, 2021 and 2020:

	RSUs	Weighted-average grant date fair value ^(a)
Outstanding and unvested at December 31, 2019	236,519	\$ 86.37
Granted	81,796	124.91
Vested	(113,776)	85.40
Canceled	(9,249)	91.73
Outstanding and unvested at December 31, 2020	195,290	102.52
Granted	134,543	112.75
Vested	(124,347)	100.52
Canceled	(10,083)	109.31
Outstanding and unvested at December 31, 2021	195,403	112.35
Granted	187,363	111.64
Vested	(114,987)	110.00
Canceled	(6,731)	115.04
Outstanding and unvested at December 31, 2022	261,048	\$ 112.79

⁽a) The weighted-average grant date fair value represents the fair value of the awards on the grant date converted to ordinary shares of the Company.

At December 31, 2022, there was \$10.9 million of total unrecognized compensation cost from RSU arrangements granted under the plan, which is primarily related to unvested RSUs held by non-retirement eligible employees.

Performance Stock

In February 2020, 2021 and 2022, the Compensation Committee of the Company's Board of Directors granted PSUs that vested based 50% upon a performance condition, measured at each reporting period by earnings per share ("EPS") performance during a three-year performance period in relation to pre-established targets set by the Compensation Committee, and 50% upon a market condition, measured by the Company's relative total shareholder return ("TSR") against the S&P 400 Capital Goods Index over a three-year performance period. The fair values of the market conditions are estimated using a Monte Carlo simulation approach in a risk-neutral framework to model future stock price movements based upon historical volatility, risk-free rates of return and correlation matrix.

The following table summarizes PSU activity for the maximum number of shares that may be issued upon vesting of those awards for the years ended December 31, 2022, 2021 and 2020:

	PSUs	Weighted-average grant date fair value ^(a)
Outstanding and unvested at December 31, 2019	157,348	\$ 75.82
Granted	92,913	113.54
Vested	(101,638)	83.16
Forfeited	(2,647)	121.43
Outstanding and unvested at December 31, 2020	145,976	93.89
Granted	92,717	109.53
Vested	(80,194)	100.26
Forfeited	(13,332)	115.92
Outstanding and unvested at December 31, 2021	145,167	98.34
Granted	51,035	123.26
Vested	(38,044)	92.15
Forfeited	(19,773)	101.96
Outstanding and unvested at December 31, 2022	138,385	\$ 108.71

⁽a) The weighted-average grant date fair value represents the fair value of the awards on the grant date converted to ordinary shares of the Company.

At December 31, 2022, there was \$6.3 million of total unrecognized compensation cost from the PSP based on actual performance through such date, which is related to shares underlying unvested awards. This compensation cost will be recognized over the required service period, which is generally the three-year performance/vesting period.

NOTE 16 – RESTRUCTURING ACTIVITIES

During the years ended December 31, 2022, 2021 and 2020, the Company recorded \$3.3 million, \$4.3 million and \$25.6 million, respectively, of expenses associated with restructuring activities. Restructuring activities in each period were primarily associated with the Allegion International segment and related to workforce reductions intended to optimize and simplify operations and cost structure, although approximately \$9 million of the restructuring charges incurred during the year ended December 31, 2020, related to the Allegion Americas segment and Corporate. Restructuring expenses are included within Cost of goods sold and Selling and administrative expenses within the Consolidated Statements of Comprehensive Income.

The changes in the restructuring reserve during the years ended December 31, 2022 and 2021, were as follows:

In millions	Total
December 31, 2020	\$ 5.3
Additions, net of reversals	3.8
Cash payments	(8.6)
Currency translation	(0.1)
December 31, 2021	0.4
Additions, net of reversals	3.3
Cash payments	(3.4)
Currency translation	(0.1)
December 31, 2022	\$ 0.2

The majority of the costs accrued as of December 31, 2022, are expected to be paid within one year.

The Company also incurred other non-qualified restructuring charges of \$1.6 million, \$0.8 million and \$1.2 million during the years ended December 31, 2022, 2021 and 2020, respectively, which represent costs directly attributable to restructuring activities, but that do not fall into the severance, exit or disposal category. Non-qualified restructuring charges are included within Cost of goods sold and Selling and administrative expenses within the Consolidated Statements of Comprehensive Income.

NOTE 17 - OTHER INCOME, NET

The components of Other income, net for the years ended December 31, were as follows:

In millions	 2022	2021	2020
Interest income	\$ (1.3)	\$ (0.4)	\$ (0.9)
Foreign currency exchange loss	2.4	2.7	0.7
Earnings and gains from the sale of equity method investments, net	(0.8)	(6.4)	(0.3)
Net periodic pension and postretirement benefit income, less service cost	(9.4)	(7.1)	(2.2)
Other	(2.5)	(32.8)	(10.3)
Other income, net	\$ (11.6)	\$ (44.0)	\$ (13.0)

For the year ended December 31, 2021, Other income, net included unrealized gains related to the Company's investments in debt and equity securities of \$25.6 million, which are included within Other in the table above. The largest of these unrealized gains was \$20.7 million related to a fair value remeasurement upon an observable price change in an orderly external funding round. Other income, net also included a gain of \$6.4 million from the sale of the Company's interest in an equity method affiliate during the year ended December 31, 2021.

For the year ended December 31, 2020, Other income, net included gains of \$12.8 million related to the reclassification to earnings of accumulated foreign currency translation adjustments upon the liquidation of two legal entities in the Company's Allegion International segment. These gains are included within Other in the table above.

NOTE 18 – INCOME TAXES

Earnings before income taxes for the years ended December 31 were taxed within the following jurisdictions:

In millions	2022		2022 2021		2020
U.S.	\$	95.5	\$	74.5	\$ 151.4
Non-U.S.		419.0		449.5	214.0
Total	\$	514.5	\$	524.0	\$ 365.4

The jurisdictional mix of earnings, which includes the impact of the location of earnings as well as the tax cost on the Company's international operations, can vary as a result of operating fluctuations in the normal course of business, the impact of internal restructurings and as a result of the extent and location of other income and expense items, such as restructuring charges, asset impairments and gains or losses on strategic business decisions.

The components of the Provision for income taxes for the years ended December 31 were as follows:

In millions	2022		2021		 2020
Current tax expense:					
U.S.	\$	98.3	\$	57.4	\$ 55.0
Non-U.S.		29.2		27.1	20.3
Total:		127.5		84.5	75.3
Deferred tax benefit:					
U.S.		(62.8)		(38.3)	(13.4)
Non-U.S.		(8.5)		(5.5)	(11.0)
Total:		(71.3)		(43.8)	(24.4)
Total tax expense:					
U.S.		35.5		19.1	41.6
Non-U.S.		20.7		21.6	9.3
Total	\$	56.2	\$	40.7	\$ 50.9

The Provision for income taxes differs from the amount of income taxes determined by applying the applicable U.S. statutory income tax rate to pretax income, as a result of the following differences:

	Percent of pretax income				
	2022	2021	2020		
Statutory U.S. rate	21.0 %	21.0 %	21.0 %		
Increase (decrease) in rates resulting from:					
Non-U.S. tax rate differential (1)	(13.6)	(14.1)	(17.5)		
State and local income taxes (1)	1.4	1.1	2.4		
Reserves for uncertain tax positions	1.3	0.3	1.1		
Tax on unremitted earnings	0.1	(0.1)	(0.1)		
Impairment of goodwill and intangible assets	_	_	7.3		
Other adjustments	0.7	(0.4)	(0.3)		
Effective tax rate	10.9 %	7.8 %	13.9 %		

(1) Net of changes in valuation allowances

The majority of the Company's earnings are considered permanently reinvested, and therefore, the Company has not recorded any incremental withholding or income tax liabilities on earnings of its non-U.S. subsidiaries.

At December 31, a summary of the deferred tax accounts was as follows:

In millions	2022		2021
Deferred tax assets:			
Inventory and accounts receivable	\$	6.8	\$ 6.5
Fixed assets and intangibles		2.9	3.2
Lease liabilities		24.3	21.6
Postemployment and other benefit liabilities		27.8	24.9
Other reserves and accruals		16.0	12.9
Net operating losses, tax credits and other carryforwards		492.7	446.0
Other		1.8	0.6
Gross deferred tax assets		572.3	515.7
Less: deferred tax valuation allowances		(264.7)	(265.5)
Deferred tax assets net of valuation allowances	\$	307.6	\$ 250.2
Deferred tax liabilities:			
Fixed assets and intangibles	\$	(98.0)	\$ (110.6)
Right of use assets		(23.7)	(21.0)
Postemployment and other benefit liabilities		(3.2)	(13.9)
Unremitted earnings of foreign subsidiaries		(1.8)	(1.9)
Other		(8.4)	(10.3)
Gross deferred tax liabilities		(135.1)	(157.7)
Net deferred tax assets	\$	172.5	\$ 92.5

At December 31, 2022, \$1.8 million of deferred taxes were recorded for certain undistributed earnings of non-U.S. subsidiaries. Historically, no deferred taxes have been provided for any portion of the remaining undistributed earnings of the Company's subsidiaries since these earnings have been, and will continue to be, permanently reinvested in these subsidiaries. For many reasons, including the number of legal entities and jurisdictions involved, the complexity of the Company's legal entity structure, the complexity of tax laws in the relevant jurisdictions and the impact of projections of income for future years to any calculations, the Company believes it is not practicable to estimate, within any reasonable range, the amount of additional taxes which may be payable upon the distribution of earnings.

At December 31, 2022, the Company had the following tax losses and tax credit carryforwards available to offset taxable income in prior and future years:

In millions	 Amount	Expiration Period
U.S. Federal tax loss carryforwards	\$ 16.4	2027-Unlimited
U.S. Federal and State credit carryforwards	23.2	2024-2037
U.S. State tax loss carryforwards	1.2	2023-Unlimited
Non-U.S. tax loss carryforwards	\$ 1.007.9	2025-Unlimited

The U.S. state loss carryforwards were incurred in various jurisdictions. The non-U.S. loss carryforwards were incurred in various jurisdictions, predominantly in China, Ireland, Italy, Luxembourg and the United Kingdom.

The Company evaluates its deferred income tax assets to determine if valuation allowances are required or should be adjusted. GAAP requires that companies assess whether valuation allowances should be established against their deferred tax assets based on consideration of all available evidence, both positive and negative, using a "more likely than not" standard. This assessment considers the nature, frequency and amount of recent losses, the duration of statutory carryforward periods and tax planning strategies. In making such judgments, significant weight is given to evidence that can be objectively verified.

Activity associated with the Company's valuation allowance is as follows:

In millions	2	2022	2021	2020
Beginning balance	\$	265.5	\$ 259.7	\$ 241.0
Increase to valuation allowance		4.2	8.4	21.1
Decrease to valuation allowance		(3.9)	(2.0)	(2.8)
Foreign exchange translation		(1.1)	(0.6)	0.4
Ending balance	\$	264.7	\$ 265.5	\$ 259.7

During the year ended December 31, 2022, the valuation allowance decreased by \$0.8 million, while during the year ended December 31, 2021, the valuation allowance increased by \$5.8 million. The Company's valuation allowance will fluctuate from year to year as a result of changes in country specific tax laws, internal restructurings, jurisdictional profitability and changes in judgments and facts regarding the realizability of deferred tax assets.

The Company has total unrecognized tax benefits of \$45.2 million and \$41.5 million as of December 31, 2022 and 2021, respectively. The amount of unrecognized tax benefits that, if recognized, would affect the effective tax rate is \$45.2 million as of December 31, 2022. A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows:

In millions	2022		2022		2021		2020
Beginning balance	\$	41.5	\$	41.2	\$ 37.3		
Additions based on tax positions related to the current year		10.1		8.8	6.0		
Additions based on tax positions related to prior years		0.9		3.6	4.1		
Reductions based on tax positions related to prior years		(0.2)		(2.2)	(1.5)		
Reductions related to settlements with tax authorities		_		(3.6)	(0.3)		
Reductions related to lapses of statute of limitations		(6.5)		(5.6)	(5.2)		
Translation (gain)/loss		(0.6)		(0.7)	0.8		
Ending balance	\$	45.2	\$	41.5	\$ 41.2		

The Company records interest and penalties associated with the uncertain tax positions within its provision for income taxes. The Company had reserves associated with interest and penalties, net of tax, of \$11.0 million and \$7.5 million at December 31, 2022 and 2021, respectively. For the years ended December 31, 2022 and 2021, the Company recognized \$3.3 million and \$0.5 million in interest and penalties, net of tax, related to these uncertain tax positions.

The total amount of unrecognized tax benefits relating to the Company's tax positions is subject to change based on future events including, but not limited to, the settlements of ongoing audits and/or the expiration of applicable statutes of limitations. Although the outcomes and timing of such events are highly uncertain, it is reasonably possible that the balance of gross unrecognized tax benefits, excluding interest and penalties, could potentially be reduced by up to approximately \$12.7 million during the next 12 months.

The provision for income taxes involves a significant amount of management judgment regarding interpretation of relevant facts and laws in the jurisdictions in which the Company operates. Future changes in applicable laws, projected levels of taxable income and tax planning could change the effective tax rate and tax balances recorded by the Company. In addition, tax authorities periodically review income tax returns filed by the Company and can raise issues regarding its filing positions, timing and amount of income or deductions and the allocation of income among the jurisdictions in which the Company operates. A significant period of time may elapse between the filing of an income tax return and the ultimate resolution of an issue raised by a tax authority with respect to that return. In the normal course of business, the Company is subject to examination by taxing authorities throughout the world, including such major jurisdictions as Australia, Canada, France, Germany, Italy, Mexico, the Netherlands, Poland and the U.S. In general, the examination of the material tax returns of subsidiaries of the Company is complete for the years prior to 2009, with certain matters being resolved through appeals and litigation.

NOTE 19 – EARNINGS PER SHARE (EPS)

Basic EPS is calculated by dividing Net earnings attributable to Allegion plc by the weighted-average number of ordinary shares outstanding for the applicable period. Diluted EPS is calculated after adjusting the denominator of the basic EPS calculation for the effect of all potentially dilutive ordinary shares, which in the Company's case, includes shares issuable under its share-based compensation plans.

The following table summarizes the weighted-average number of ordinary shares outstanding for basic and diluted earnings per share calculations:

In millions	2022	2021	2020
Weighted-average number of basic shares	88.0	89.9	92.3
Shares issuable under share-based compensation plans	0.3	0.6	0.5
Weighted-average number of diluted shares	88.3	90.5	92.8

At December 31, 2022, 0.5 million stock options were excluded from the computation of weighted-average diluted shares outstanding because the effect of including these shares would have been anti-dilutive.

NOTE 20 – NET REVENUES

The following table shows the Company's Net revenues related to both tangible product sales and services for the years ended December 31, 2022, 2021 and 2020, respectively, disaggregated by business segment. Net revenues are shown by tangible product sales and services, as contract terms, conditions and economic factors affecting the nature, amount, timing and uncertainty around revenue recognition and cash flows are substantially similar within each of these two revenue streams:

2022					
	Allegion Americas		Allegion nternational		Total
\$	2,476.7	\$	683.1	\$	3,159.8
	74.9		37.2		112.1
\$	2,551.6	\$	720.3	\$	3,271.9
			2021		
	Allegion Americas	Iı	Allegion nternational		Total
\$	2,070.4	\$	763.1	\$	2,833.5
	1.8		32.1		33.9
\$	2,072.2	\$	795.2	\$	2,867.4
			2020		
	Allegion Americas	Iı	Allegion nternational		Total
\$	2,016.7	\$	672.2	\$	2,688.9
			31.0		31.0
\$	2,016.7	\$	703.2	\$	2,719.9
	\$	Americas \$ 2,476.7	Americas II \$ 2,476.7 \$ 74.9 \$ 2,551.6 \$ Allegion Americas II \$ 2,070.4 \$ 1.8 \$ 2,072.2 \$ Allegion Americas II \$ 2,076.7 \$ \$ 2,016.7 \$	Allegion Americas Allegion International \$ 2,476.7 \$ 683.1 74.9 37.2 \$ 2,551.6 \$ 720.3 2021 Allegion Americas Allegion International \$ 2,070.4 \$ 763.1 1.8 32.1 \$ 2,072.2 \$ 795.2 2020 Allegion Americas Allegion International \$ 2,016.7 \$ 672.2 — 31.0	Allegion Americas

Historically, approximately 99% of the Company's consolidated Net revenues have involved contracts with a single performance obligation, the transfer of control of a product or bundle of products to a customer. However, with the acquisition of the Access Technologies business, which offers extensive planned inspection, maintenance and repair services for its automatic entrance solutions throughout the U.S. and Canada, the percentage of Net revenues from services has increased.

As of December 31, 2022 and 2021, neither the contract assets related to the Company's right to consideration for work completed but not billed nor the contract liabilities associated with contract revenue were material. The Company does not have any costs to obtain or fulfill a contract that are capitalized on its Consolidated Balance Sheets. During the years ended December 31, 2022 and 2021, no adjustments related to performance obligations satisfied in previous periods were recorded.

NOTE 21 – COMMITMENTS AND CONTINGENCIES

The Company is involved in various litigation, claims and administrative proceedings, including those related to environmental and product warranty matters. Amounts recorded for identified contingent liabilities are estimates, which are reviewed periodically and adjusted to reflect additional information when it becomes available. Subject to the uncertainties inherent in estimating future costs for contingent liabilities, except as expressly set forth in this note, management believes that any liability which may result from these legal matters would not have a material adverse effect on the financial condition, results of operations, liquidity or cash flows of the Company.

Environmental Matters

As of December 31, 2022 and 2021, the Company has recorded reserves for environmental matters of \$24.1 million and \$16.4 million, respectively. The total reserve at December 31, 2022 and 2021, included \$13.8 million and \$4.3 million, respectively, related to remediation of sites previously disposed by the Company. Environmental reserves are classified as Accrued expenses and other current liabilities or Other noncurrent liabilities within the Consolidated Balance Sheets based on the timing of their expected future payment. The Company's total current environmental reserve at December 31, 2022 and 2021, was \$3.9 million and \$3.7 million, respectively, and the remainder is classified as noncurrent.

The Company incurred \$2.9 million, \$0.9 million and \$7.1 million of expenses during the years ended December 31, 2022, 2021 and 2020, respectively, for environmental remediation at sites presently or formerly owned or leased by the Company. Environmental remediation costs are recorded in Costs of goods sold within the Consolidated Statements of Comprehensive Income. Given the evolving nature of environmental laws, regulations and technology, the ultimate cost of future compliance is uncertain.

Warranty Liability

The changes in the standard product warranty liability for the years ended December 31, were as follows:

In millions	2022		2021		2020
Balance at beginning of period	\$	17.7	\$	16.5	\$ 15.9
Reductions for payments		(9.1)		(10.6)	(7.3)
Accruals for warranties issued during the current period		8.8		11.9	8.2
Changes to accruals related to preexisting warranties				_	(0.6)
Acquisitions/divestitures		1.4		_	_
Translation		(0.6)		(0.1)	0.3
Balance at end of period	\$	18.2	\$	17.7	\$ 16.5

Standard product warranty liabilities are classified as Accrued expenses and other current liabilities or Other noncurrent liabilities within the Consolidated Balance Sheets based on the timing of the expected future payments.

NOTE 22 – BUSINESS SEGMENT INFORMATION

The Company classifies its business into the following two reportable segments based on industry and market focus: Allegion Americas and Allegion International. The Company largely evaluates performance based on Segment operating income and Segment operating margin. Segment operating income is the measure of profit and loss that the Company's chief operating decision maker uses to evaluate the financial performance of the business and as the basis for resource allocation, performance reviews and compensation. For these reasons, the Company believes Segment operating income represents the most relevant measure of segment profit and loss. The Company's chief operating decision maker may exclude certain charges or gains, such as corporate charges and other special charges, from Operating income to arrive at a Segment operating income that is a more meaningful measure of profit and loss upon which to base operating decisions. The Company defines Segment operating margin as Segment operating income (loss) as a percentage of the segment's Net revenues.

As previously announced, effective January 1, 2021, the Company combined its previous operations in Europe, the Middle East and Africa ("EMEA") and Asia Pacific into a new segment named Allegion International, in addition to renaming its Americas segment "Allegion Americas". Business segment information for EMEA and Asia Pacific for the year ended December 31, 2020, has been combined in the table below to reflect this change in reportable segments.

A summary of operations and balance sheet information by reportable segments as of and for the years ended December 31, were as follows:

Dollar amounts in millions	_	2022	2021		2020
Allegion Americas					
Net revenues		\$ 2,551.6	\$ 2,072.2	\$	2,016.7
Segment operating income		613.3	525.0		580.2
Segment operating margin		24.0 %	25.3 %)	28.8 %
Depreciation and amortization		55.3	34.8		34.5
Capital expenditures		49.2	30.7		26.9
Total segment assets		2,410.2	1,309.6		1,249.0
Allegion International					
Net revenues		720.3	795.2		703.2
Segment operating income (loss)		68.3	82.4		(102.1)
Segment operating margin		9.5 %	10.4 %)	(14.5)%
Depreciation and amortization		36.6	40.4		39.0
Capital expenditures		11.7	11.4		15.6
Total segment assets		1,150.9	1,276.9		1,343.5
Total Net revenues	_	\$ 3,271.9	\$ 2,867.4	\$	2,719.9
Reconciliation to earnings before income taxes					
Segment operating income from reportable segments		\$ 681.6	\$ 607.4	\$	478.1
Unallocated corporate expense		95.2	77.2		74.6
Interest expense		75.9	50.2		51.1
Loss on divestitures		7.6			_
Other (income) expense, net	_	(11.6)	 (44.0)		(13.0)
Total earnings before income taxes		\$ 514.5	\$ 524.0	\$	365.4
Depreciation and amortization from reportable segments		\$ 91.9	\$ 75.2	\$	73.5
Unallocated depreciation and amortization		3.2	4.0		4.5
Total depreciation and amortization	_	\$ 95.1	\$ 79.2	\$	78.0
Capital expenditures from reportable segments	_	\$ 60.9	\$ 42.1	\$	42.5
Corporate capital expenditures		3.1	3.3		4.6
Total capital expenditures		\$ 64.0	\$ 45.4	\$	47.1
Assets from reportable segments	_	\$ 3,561.1	\$ 2,586.5	\$	2,592.5
Unallocated assets ^(a)		430.1	464.5		476.9
Total assets	_	\$ 3,991.2	\$ 3,051.0	\$	3,069.4
	_				

⁽a) Unallocated assets consist primarily of investments in unconsolidated affiliates, property, plant and equipment, net, ROU assets, deferred income taxes and cash and cash equivalents.

Net revenues by destination and nature of products and services for the years ended December 31, were as follows:

1			
In millions	2022	2021	2020
U.S.	\$ 2,402.7	\$ 1,948.9	\$ 1,905.5
Non-U.S.	869.2	918.5	814.4
Total Net revenues	\$ 3,271.9	\$ 2,867.4	\$ 2,719.9
In millions	 2022	2021	 2020
In millions Mechanical products	\$ 2,302.3	\$ 2021 2,045.4	\$ 1,898.6
	\$ 	\$ -	\$
Mechanical products	\$ 2,302.3	\$ 2,045.4	\$ 1,898.6

- (a) Electronic products encompass both residential and non-residential products, and include all electrified product categories, including, but not limited to, electronic and electrified locks, access control systems, time, attendance and workforce productivity solutions and electronic and electrified door controls and systems and exit devices.
- (b) Services and software revenues include inspection, maintenance and repair, design and installation, aftermarket and locksmith services, as well as SaaS offerings such as access control, IoT integration and workforce management solutions.

In fiscal year 2022, 2021 and 2020, no customer exceeded 10% of consolidated Net revenues.

At December 31, long-lived assets by geographic area were as follows:

In millions		2022		2022 202		2021
U.S.	\$	430.5	\$	231.7		
Non-U.S.		376.7		385.6		
Total	\$	807.2	\$	617.3		

NOTE 23 – SUBSEQUENT EVENTS

On January 3, 2023, the Company acquired the assets of plano.group ("plano"), a SaaS workforce management solution based in Germany, through its subsidiaries, for cash consideration of approximately \$37 million, with additional consideration payable in future periods in the event that plano achieves certain specified financial results. The plano business will be incorporated into the Company's Allegion International segment.

On February 9, 2023, the Company's Board of Directors declared a quarterly dividend of \$0.45 cents per ordinary share. The dividend is payable March 31, 2023, to shareholders of record on March 15, 2023.

ALLEGION PLC VALUATION AND QUALIFYING ACCOUNTS FOR THE YEARS ENDED DECEMBER 31, 2022, 2021 AND 2020

(Amounts in millions)

Allowances for Doubtful Accounts:

Balance December 31, 2019	\$ 5.6
Adoption of ASC 326, Financial Instruments - Credit Losses	1.9
Additions charged to costs and expenses	2.4
Deductions*	(3.9)
Currency translation	0.2
Balance December 31, 2020	6.2
Additions charged to costs and expenses	0.1
Deductions*	(0.7)
Currency translation	(0.2)
Balance December 31, 2021	 5.4
Additions charged to costs and expenses	2.1
Deductions*	(0.8)
Divestitures	(0.3)
Currency translation	(0.4)
Balance December 31, 2022	\$ 6.0

^{* &}quot;Deductions" include accounts and advances written off, less recoveries.

