

AptarGroup Annual Report 2024

Form 10-K (NYSE:ATR)

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United States Securities and Exchange Commission
Washington, D.C. 20549

FORM 10-K

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

FOR THE FISCAL YEAR ENDED DECEMBER 31, 2023
OR

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

FOR THE TRANSITION PERIOD FROM_____TO_____

COMMISSION FILE NUMBER 1-11846



AptarGroup, Inc.

Delaware	**36-3853103**

265 EXCHANGE DRIVE, SUITE 301, CRYSTAL LAKE, IL 60014
815-477-0424

Securities Registered Pursuant to Section 12(b) of the Act:

Title of each class	**Trading symbol(s)**	**Name of each exchange on which registered**
Common Stock, $.01 par value	ATR	New York Stock Exchange

Securities Registered Pursuant to Section 12(g) of the Act:
NONE

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

Yes ☒

No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act.

Yes ☐

No ☒

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15 (d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes ☒

No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files).

Yes ☒

No ☐

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

Large accelerated filer ☒	Accelerated filer ☐	Non-accelerated filer ☐	Smaller reporting company ☐	Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

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

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant’s executive officers during the relevant recovery period pursuant to §240.10D-1(b). ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act).

Yes ☐

No ☒

The aggregate market value of the common stock held by non-affiliates as of June 30, 2023 was$7,639,338,540.

The number of outstanding shares of common stock, as of February 5, 2024, was66,016,263 shares.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the definitive Proxy Statement to be delivered to stockholders in connection with the Annual Meeting of Stockholders to be held May 1, 2024 are incorporated by reference into Part III of this report.

AptarGroup, Inc.

FORM 10-K

For the Year Ended December 31, 2023

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PART I

ITEM 1. BUSINESS

WHO ARE WE AND WHAT DO WE DO

Aptar is a global leader in the design and manufacturing of drug and consumer product dosing, dispensing and protection technologies. Aptar serves a number of attractive end markets including pharmaceutical, beauty, food, beverage, personal care, and home care. Using market expertise, proprietary design, engineering and science to create innovative solutions for many of the world's leading brands, Aptar in turn makes a meaningful difference in the lives, looks, health and homes of millions of patients and consumers around the world. Aptar is headquartered in Crystal Lake, Illinois and has approximately 13,800 dedicated employees in 20 different countries. For more information, visit www.aptar.com.

Our business was started in the late 1940's, manufacturing and selling aerosol valves in the United States, and has grown primarily through acquisitions and internal expansion. In this report, we may refer to AptarGroup, Inc. and its subsidiaries as "AptarGroup", "Aptar" or the "Company".

We have manufacturing facilities located throughout the world including North America, Europe, Asia and Latin America. We have approximately 5,000 customers with no single customer or group of affiliated customers accounting for greater than 5% of our 2023 Net Sales.

Consumers' and patients' preferences for convenience and product differentiation through drug delivery and packaging design and function are important to our customers and they have converted many of their packages from non-dispensing formats to dispensing systems that offer enhanced shelf appeal, convenience, cleanliness and accuracy of dosage. We design our products with both people and the environment in mind. Many of our product solutions for the beauty, personal care, home care, food and beverage markets are recyclable, reusable or made with recycled content.

We partner with our customers by providing innovative solutions and end market expertise. While we offer a wide variety of services and products, our primary products are dispensing pumps, closures, aerosol valves, elastomeric primary packaging components, active material science solutions and digital health solutions.

Dispensing pumps are finger-actuated dispensing systems that dispense a spray or lotion from non-pressurized containers. The style of pump used depends largely on the nature of the product being dispensed, from small, fine mist pumps used with pharmaceutical products and perfume to lotion pumps for more viscous formulas.

Closures are primarily dispensing closures but to a lesser degree can include non-dispensing closures. Dispensing closures are plastic caps that allow a product to be dispensed without removing the cap.

Aerosol valves dispense product from pressurized containers. The majority of the aerosol valves that we sell are continuous spray valves, with the balance being metered dose valves and bag-on valves.

We also manufacture and sell elastomeric primary packaging components. These components are used in the injectables market. Products include stoppers for infusion, antibiotic, lyophilization and diagnostic vials. Our elastomeric components also include pre-filled syringe components, such as plungers, needle shields, tip caps and components for cartridges.

We provide active material science solutions using our platform technology to maintain container closure integrity, extend shelf-life, control moisture and oxygen while also protecting drug products from overall environmental exposures and degradations.

Our digital health solutions aim to improve patients' treatment experience and outcomes. We leverage companion and regulated software solutions, connected devices and diagnostic tools that support patients to manage their disease as well as enabling care teams to remotely monitor the health of the patients when needed. Available as standalone or as a fully integrated offering in our existing range of drug delivery solutions, we have digital health solutions covering a wide range of therapeutic areas including, but not limited to, pulmonary, oncology, neurology, diabetes, immunology and rare disease.

During 2023 and 2022, we acquired several companies to strengthen and broaden our portfolio, including the following business combinations:

- March 2023 - We acquired 100% of the outstanding capital stock of iD SCENT for approximately $9.4 million (net of $1.4 million cash acquired). iD SCENT offers green sampling solutions for perfume and cosmetics.
- March 2023 - We acquired 80% of the equity interests in Gulf Closures W.L.L. ("Gulf Closures") for approximately $1.5 million (net of $1.2 million cash acquired). The acquisition of Gulf Closures allows us to transfer some production to the Middle East and free up capacity in Germany while helping us to establish a foothold in emerging markets.
- August 2022 - We acquired 100% of the outstanding capital stock of Metaphase Design Group Inc. ("Metaphase") for approximately $5.1 million (net of $0.1 million of cash acquired). Metaphase provides us with human factor expertise primarily in pharma but this can also be leveraged in beauty and closures.

Refer to Note 19 – Acquisitions in Part II, Item 8 – Financial Statements and Supplementary Data for further details on acquisitions and investments.

OUR STRATEGY

We seek to enhance our position as a leading global provider in drug and consumer dosing, dispensing and protection technologies to deliver increased value to our customers and stockholders through strategic focus and execution in the following areas:

(i) Focus on Organic Growth with an added focus on high growth regions: We are focused on profitable growth by leveraging capabilities, assets, capacity and by sharing capabilities across segments. We seek to maximize our return on investments while focusing on the top and bottom lines.

(ii) Focus on Talent and Leadership: Execution of our strategy requires a talented, motivated, diverse, global team. We have continued to focus on talent acquisition and development strategies designed to ensure our teams have the right skills to execute our strategy.

(iii) Excellence in Core Business Functions: We have established three pillars of functional excellence designed to ensure we perform at best in class levels in the core functions of any manufacturing operations, namely “innovate,” “produce” and “sell,” and that our business teams are supported in the areas of Innovation, Operations and Commercial Excellence.

(iv) Focus on Reducing Fixed Costs and Improving our Return on Invested Capital: We strive to reduce selling, research & development and administrative ("SG&A") costs and overall fixed costs by leveraging our Global Business Service Centers, while improving our return on invested capital throughout the business. The key concepts are simplification, centralization, standardization and automation. Our goal is to create a more efficient structure to leverage as our businesses continue to grow, without adding significant costs. This is designed to help ensure our margins improve as the business grows.

(v) Acquisitions and Partnerships: We will continue to focus on growing the Company through appropriate business acquisition opportunities as well as developing partnerships to expand the scope of our technologies, geographic presence and product offerings.

Facilitating the execution of our strategy are our core values, which dictate how we interact internally and externally with our employees, customers, suppliers and all stakeholders.

DESCRIPTION OF OUR REPORTING SEGMENTS

INFORMATION ABOUT SEGMENTS

During the year ended December 31, 2022, our organizational structure consisted of three market-focused business segments: Pharma, Beauty + Home and Food + Beverage. Effective January 1, 2023, we realigned two of our segments, allowing us to better serve our customers and positioning us for long-term profitable growth. We continue to have three reporting segments; Aptar Pharma and Aptar Beauty are named for the markets they serve with multiple product platforms, while Aptar Closures is named primarily for a single product platform that serves all available markets.

The Aptar Closures business serves multiple markets, including food, beverage, personal care, home care, beauty and healthcare. Closures that were developed in Beauty + Home moved to Aptar Closures together with the operations of the legacy Food + Beverage segment. Aptar's food protection business and our elastomeric flow-control technology business continue to report through the Aptar Closures segment. The realignment brings us closer to how our customers are structured and operate their businesses.

At the same time, we have simplified and focused our Beauty + Home segment to better leverage our complex spray and dispensing solutions for prestige and mass brands in the beauty, personal care and home care markets. For many of our customers, personal care products are considered part of "beauty" and so we renamed this segment, Aptar Beauty.

The segment realignment had no impact on our Consolidated Statements of Income, Balance Sheets, and Cash Flows. Segment financial information for the prior periods has been recast to conform to the current presentation.

These changes are intended to help us increase our rate of innovation, broaden our market reach, streamline operations, increase effectiveness and raise capital efficiencies. Additionally, we intend to continue to focus on sustainability because leadership in sustainability remains a key differentiator across all of our segments.

APTAR PHARMA SEGMENT

Our Aptar Pharma segment is our largest segment in terms of net sales and total assets, representing 44% and 47% of our Net Sales and Total Assets, respectively, for 2023 and accounted for 65% of our Adjusted EBITDA excluding non-allocated corporate costs in 2023. We are a leading supplier of nasal drug delivery spray pumps and metered dose inhaler valves ("MDIs") to the pharmaceutical and health care markets worldwide and we are an important supplier of elastomer for injectable primary packaging components worldwide. We also provide services designed to accelerate and de-risk the development and regulatory approvals of drugs using drug delivery devices. Characteristics of this market include (i) governmental regulation of our pharmaceutical customers, (ii) contaminant-controlled manufacturing environments and (iii) a significant amount of time and research from initially working with pharmaceutical companies at the molecular development stage of a medication through the eventual distribution to the market. We have clean-room manufacturing facilities in Argentina, China, France, Germany, India, Switzerland and the United States. We believe that providing value-added, convenient drug delivery and dispensing systems will continue to offer opportunities for our business. In addition, we believe there are opportunities for growth in the over-the-counter and generic pharmaceutical categories.

Prescription Drug. Sales to the prescription drug market accounted for approximately 46% of the segment's total net sales in 2023. Pumps sold to the prescription drug market deliver medications nasally, orally or topically. Currently the majority of our pumps sold are for nasal allergy treatments. Sales of pumps to deliver prescription allergy medicine that is now available over-the-counter remains part of our prescription drug division. Our nasal pumps and unit dose and bidose devices are also used to deliver liquid and powder pain management, emergency medicines and central nervous system therapies.

MDIs are used for dispensing precise amounts of aerosolized medication. This technology allows medication to be broken up into very fine particles, which enables the drug to be delivered typically via the pulmonary route. Currently the majority of our MDIs sold are used for respiratory ailments such as asthma and chronic obstructive pulmonary disease (COPD).

We continue to develop proprietary drug delivery systems and accessories in this division. While we expect that these types of new products will come to market in the future, it is difficult to estimate when, as the rigors of pharmaceutical regulations affect the timing of product introductions by our pharmaceutical customers that use our proprietary drug delivery systems.

Consumer Health Care. Sales to the consumer health care market accounted for approximately 25% of the segment's total net sales in 2023. Many product applications for this market are similar to the prescription market proprietary drug delivery systems; however, these product applications are sold over-the-counter without a prescription. Typical consumer health care spray product applications include nasal decongestants, nasal salines and cough and cold products. Typical consumer health care valve product applications include nasal saline using our bag-on valve technology. We have developed a multi dose ophthalmic dispensing device suitable for unpreserved formulations. Other products sold to this market include airless pump systems for dermal drug delivery product applications. We continue to see trends toward more child resistant and senior-friendly packaging solutions and have developed products to meet these market needs.

Injectables. Sales to the injectables market accounted for approximately 18% of the segment's total net sales in 2023. Injectables are elastomeric primary packaging components that assist with the administration of injected medicines. Injectable products offered include stoppers for vials and pre-filled syringe components, such as plungers, rigid needle shields, tip caps and components for cartridges. Our recent capital investment commitments in this business have enabled us to bring to market a broader offering of higher value products including prefilled and coated stoppers and plungers which better protect the contents of the primary packaging container and the integrity of biologic formulations. Pharmaceutical applications for this market include vaccines, anti-thrombotic, small molecules and biologics.

Active Material Science Solutions. Sales of active material science solutions products accounted for approximately 10% of the segment's total net sales in 2023. Our three-phase Active-Polymer™ technology solution is used to protect oral solid dose drugs, medical devices, diabetes diagnostics and probiotics. It can be engineered to absorb moisture, emit aromas, reduce pathogens, or scavenge odor, oxygen or volatile organic compounds.

Digital Health Solutions. Aptar began reporting on digital health solutions in the fourth quarter of 2021 with the acquisition of Voluntis S.A. Sales to the digital health market accounted for 1% of the segment's total net sales in 2023 and are expected to increase in the future as we expand the division's platform for services provided. The digital health solutions we provide improve patients' treatment, experience and outcomes. We leverage connected devices, diagnostics and digital therapeutic tools that support patients in managing their disease as well as enable care teams to remotely monitor the health of the patients when needed. Available as standalone or as a fully integrated offering in our existing range of drug delivery solutions, we have digital health solutions covering a wide range of therapeutic areas including, but not limited to, pulmonary, oncology, diabetes, immunology and neurology.

APTAR BEAUTY SEGMENT

Our Aptar Beauty segment is our second largest segment in terms of net sales and total assets, representing 36% and 32% of our Net Sales and Total Assets, respectively, for 2023 and accounted for 21% of our Adjusted EBITDA excluding non-allocated corporate costs in 2023. The Aptar Beauty segment sells a broad variety of pumps, airless systems and valves to the fragrance, color cosmetics, facial skincare, personal care and home care markets. We believe we are a leading supplier for the majority of the products we sell primarily to the beauty markets.

Fragrance, facial skincare, color cosmetics. Sales to these markets accounted for approximately 63% of the segment's total net sales in 2023. The fragrance, facial skincare, and color cosmetics markets require a broad range of spray and lotion pumps and sampling dispensing systems to meet functional as well as aesthetic requirements. A considerable amount of research and coordination with our customers is required to qualify a pump for use with their products. Within the market, we expect the use of pumps to continue to increase, particularly in the fragrance, facial skincare and sampling sectors. Packaging for certain products such as natural and organic cosmetics, dermo-cosmetic formulas and anti-aging lotions continue to provide us with growth opportunities. We are a leading provider of packaging solutions for prestige and mass market fragrance products. Our cosmetic lotion pumps, airless dispensing systems, and decorative capabilities are also expected to provide growth opportunities.

Personal Care. Sales to the personal care market accounted for approximately 33% of the segment's total net sales in 2023 and primarily included sales of lotion pumps, spray pumps and continuous spray aerosol valves. Personal care lotion pump product applications include hand sanitizers, hand soaps, bath and shower cleansers and skin moisturizers. Typical spray pump product applications include hair care, body care and sun care products. Personal care continuous spray aerosol valve product applications include hair care products, deodorants, shaving creams and sun care products. Our research and development teams continue to design unique accessories that increase the value of our continuous spray aerosol valve offerings.

Home Care. Sales to the home care market accounted for approximately 4% of the segment's total net sales in 2023 and primarily included sales of continuous or metered dose spray aerosol valves, and to a lesser degree spray and lotion pumps. Product applications for continuous spray valves include disinfectants, spray paints, insecticides and automotive products. Metered dose valves are used for air fresheners. Spray and lotion pump product applications primarily include household cleaners, insect repellent and industrial cleaners.

APTAR CLOSURES SEGMENT

Our Aptar Closures segment accounted for 20% of our Net Sales, 17% of our Total Assets and 14% of our Adjusted EBITDA excluding non-allocated corporate costs for 2023. We primarily sell dispensing closures.

In recent years, sales of dispensing closures have grown as consumers worldwide have demonstrated a preference for a package utilizing the convenience of a dispensing closure. At the same time, consumer marketers are trying to differentiate their products by incorporating performance enhancing features such as flow-control and no-drip dispensing, e-commerce capable solution, inverted packaging and directional flow to make packages simpler to use, cleaner and more appealing to consumers. Aptar Closures is also evolving its product offering to make it more sustainable for example through light weighting, use of post-consumer recycled (PCR) resin, thermoplastic elastomers (TPE) flow control or by adding features such as tethered closures and non-detachable tamper evident packaging for beverages. We also have an increasing number of product solutions that address the increased use of flexible packaging formats.

Food. Sales to the food market accounted for approximately 52% of the segment's total net sales in 2023 and primarily include sales of dispensing closures including those utilizing elastomeric flow-control components, and absorbent and non-absorbent food service trays. Product applications for dispensing closures include sauces, condiments, infant nutrition and other food products. We also leverage our material science technology to sell and further develop packaging solutions to the food service market to enhance the shelf life of those products.

Beauty, Personal Care and Home Care. Sales to the beauty, personal care and home care markets accounted for approximately 27% of the segment's total net sales in 2023 and primarily include sales of dispensing closures for standard and custom applications. Hair care, body and facial skin care, dish care, and other products in these spaces use dispensing closures to provide convenience, function, and style. Sustainability, e-commerce, and value providing solutions are what we see as the key drivers for growth in these markets.

Beverage. Sales to the beverage market accounted for approximately 21% of the segment's total net sales in 2023 and primarily include sales of dispensing closures including those utilizing elastomeric flow-control components. Sales of dispensing closures to the beverage market have increased over the last several years, reflecting the rebound of on-the-go consumption from consumers. We see continued interest from marketers using dispensing closures for their products. Examples of beverage products currently utilizing dispensing closures include bottled water, sport and energy drinks, juices and concentrated water flavorings.

GENERAL BUSINESS INFORMATION

RESEARCH AND DEVELOPMENT

Our commitment to innovation, one of our competitive strengths, has resulted in an emphasis on research and development directed toward developing affordable, new, sustainable and innovative packaging, drug delivery solutions and connected devices and adapting existing products for new markets or customer requirements. In certain cases, our customers share in the research and development expenses of customer initiated projects. Occasionally, we acquire or license from third parties technologies or products that are in various stages of development.

PATENTS AND TRADEMARKS

We customarily seek patent and trademark protection for our products and brands. We own and currently have numerous product applications pending for patents and trademarks in many regions of the world. In addition, certain of our products are produced under patent licenses granted by third parties. We believe that we possess certain technical capabilities and know-how that make our products difficult for a competitor to duplicate. While valuable to our overall product portfolio, sales of any one individually patented product are not considered material to any specific segment or to our consolidated results.

TECHNOLOGY

We have technical expertise regarding injection molding, robotics, clean-room facilities and high-speed assembly. We also have expertise regarding the formulation and finishing of elastomer and silicone components. In addition, we offer a variety of sterilization options for elastomeric components and active material science solutions based on proprietary material science expertise. Pumps and aerosol valves require the assembly of several different plastic, metal and rubber components using high-speed equipment. When molding dispensing closures, or plastic components to be used in pump or aerosol valve products, we use advanced plastic injection molding technology, including large cavitation plastic injection molds, bi-injection molding and in-mold assembly. We are able to mold within tolerances as small as one one-thousandth of an inch and we assemble products in a high-speed, cost-effective manner. We also provide analytical and connected device expertise within our pharma service technology businesses.

MANUFACTURING AND SOURCING

The majority of our worldwide production is located outside of the United States. Our philosophy is to produce as much as possible in the region where it will be sold. In order to augment capacity and to maximize internal capacity utilization (particularly for plastic injection molding), we use subcontractors to supply certain plastic and metal components. Certain suppliers of these components have unique technical abilities that make us dependent on them, particularly for aerosol valve and pump production. The principal raw materials used in our production are plastic resins, silicone, rubber and certain metal products. We believe an adequate supply of such raw materials is available from existing and alternative sources. We attempt to offset cost increases through improving productivity and developing new, higher margin solutions and increasing selling prices, as allowed by market conditions or contractual commitments. We source certain materials, especially some resins and rubber components for our pharmaceutical segment, from a single source. Significant delays in receiving these components or discontinuance of an approved raw material would require us to seek alternative sources, which could result in higher costs as well as impact our ability to supply products in the short-term. We believe we have adequate safety stock to mitigate any significant supply concerns.

CUSTOMERS

We have approximately 5,000 customers with no single customer or group of affiliated customers accounting for greater than 5% of 2023 Net Sales.

INTERNATIONAL BUSINESS

We are geographically diverse with manufacturing and sales operations in Asia, Europe, Latin America (including Mexico) and North America. Europe is our largest region in terms of sales, where sales (including exports) for the years ended December 31, 2023 and 2022 were approximately 57% and 53% of our consolidated sales, respectively. Asia and Latin America when aggregated represented approximately 14% and 14% of our consolidated sales for the years ended December 31, 2023 and 2022, respectively. Export sales from the United States were $196.6 million and $211.1 million in 2023 and 2022, respectively. Although Europe represents the largest region for us in terms of sales, our beauty and pharmaceutical customers often export their finished products using our technology around the world for consumption. We are a net exporter of goods from Europe and a net importer of goods to the North American, Asian and Latin American regions.

FOREIGN CURRENCY

Because of our international presence, movements in exchange rates have a significant impact on the translation of the financial statements of our foreign subsidiaries. Our primary foreign exchange exposure is to the euro, but we have foreign exchange exposure to the Chinese yuan, Brazilian real, Argentine peso, Mexican peso, Swiss franc and other Asian, European and Latin American currencies. A weakening U.S. dollar relative to foreign currencies has an additive translation effect on our financial statements. Conversely, a strengthening U.S. dollar has a dilutive effect. We manage our exposures to foreign exchange principally with forward exchange contracts to economically hedge recorded transactions and firm purchase and sales commitments denominated in foreign currencies.

EMPLOYEE AND LABOR RELATIONS

Human Capital. Our key human capital management objectives are to attract, retain and develop the highest quality talent. To support these objectives, our human resource programs are designed to develop talent to prepare them for critical roles and leadership positions for the future; reward and support employees through competitive pay, benefit and incentive programs; enhance our culture through efforts aimed at making the workplace more engaging and inclusive; acquire talent and facilitate internal talent mobility to create a high-performing, diverse workforce; and evolve and invest in technology, tools and resources to enable employees at work.

As of December 31, 2023, Aptar had approximately 13,800 full-time employees. Of the full-time employees, approximately 8,400 were located in Europe, 2,800 were located in Asia and Latin America and the remaining 2,600 were located in North America. The majority of our European and Latin American employees are covered by collective bargaining arrangements made at either the local or national level in their respective countries. The total labor force covered by a collective bargaining agreement represents approximately 55% of the total employee population. Termination of employees at certain of our international operations could be costly due to local regulations regarding severance benefits. There were no material work stoppages in 2023 and management considers our employee relations to be satisfactory. Higher employee turnover levels or our failure to attract and retain talent in a timely manner could impact our future results.

Employee Engagement. At Aptar, we conduct annual leadership for growth surveys. We have focused on organizational development based on our leadership principles, core values and strategic priorities. Our goal is to ensure that Aptar is well positioned for long-term growth and that we continue to be a high-performing, values-based, customer-focused company, with active commitments to innovation and sustainability. Our periodic employee get-togethers at local sites and offices continue to be well received, provide an opportunity for recognition, celebration and a way to continue to enrich our culture.

Employee Development & Leadership Succession. Developing our employees to reach their full potential is an integral part of our Core Values. We have a strong foundation of learning and development systems and leadership programs at our Corporate University. Our leadership programs are targeted at all levels of the organization, from early career to senior leadership globally. Our program offerings also include many specialized programs such as change management, manufacturing and operational leadership, technical skills and others. Aptar also has developed and deployed an integrated talent management system that includes annual talent reviews, three tiered succession planning, and individual development planning. Promotions from within provide career growth opportunities for our employees.

Diversity, Equity & Inclusion. At AptarGroup, we aim to cultivate a diverse culture founded on fairness and a sense of belonging rooted in our core values of mutual trust and respect. We support and promote the development of women as we aspire for more balanced gender representation. As of December 31, 2023, women comprised 50% of the Board of Directors approximately 36% of our global employee population and approximately 24% of senior leadership. Our Employee Resource Groups which have been evolving over the past years, provide an open and inclusive forum to facilitate exchange and growth for all employees. Our Employee Resource Groups (for the LGBTQ+ community, the women's network employee group and the employee resource group for Black/African American and/or African descent employees), collaborate to host DEI Weeks for the employee population, as well as host the celebration of various heritage months throughout the year.

Aptar is included in the SPDR SSGA Gender Diversity Index ETF (SHE) which invests in companies that rank among the highest in gender diversity within senior leadership. Aptar is also a participant in the Catalyst CEO Champions for Change and the Gender and Diversity KPI Alliance. Aptar was named on the World's Top Female-Friendly Companies by Forbes for 2022 and 2023. Aptar was also recognized by Women's Forum of NY for having 50% female board directors. Additionally, SHero has recognized Aptar Greater China as one of the Best Companies for Female Executives 2022. Aptar launched its first Diversity Supplier Program in 2023. Aspiring to build a diverse and inclusive culture that fosters fairness and belonging continues to be part of Aptar's strategic priorities.

Employee Well-being & Safety. Employee safety and well-being is a primary focus of Aptar. Our Wellness Wall, internally accessed via our intranet, offers further everyday health and well-being practices from around the world, many times contributed by our employees. We also offer live webinars in small group settings focusing on specific health and well-being topics to provide opportunities for small group interaction. In the post-pandemic era, we continue to follow public and private sector policies to keep employees safe.

COMPETITION

All of the markets in which we operate are highly competitive and we continue to experience price competition in all product lines and markets. Competitors include privately and publicly held entities that range from regional to international companies. We expect the market for our products to remain competitive, as our competitors continue to grow both organically and through consolidation and/or changing of ownership in the current economic climate. We believe our competitive advantages include our consistent high levels of innovation, quality and service, geographic diversity, financial strength and stability and breadth of products and services. Our manufacturing strength lies in the ability to mold complex plastic components and formulate and finish elastomer and silicone components in a cost-effective manner and to assemble products at high speeds. Our business is somewhat capital intensive and it is becoming more important to our customers that we have global manufacturing capabilities though we continue to face meaningful competition from local and regional competitors.

While we have experienced some competition in Europe, Latin America and the United States from low cost Asian suppliers, particularly in the beauty and personal care market, more customers often prefer local suppliers citing shorter lead times, higher reactivity and service, and stronger safety of supply. We have also reduced our carbon footprint due to the increased use of lower-carbon fuels within some of our shipping lanes, which we see as a competitive advantage.

ENVIRONMENT & SUSTAINABILITY

Our manufacturing operations primarily involve plastic injection molding, automated assembly processes, elastomer and silicone formulation and finishing and, to a limited degree, metal anodization and vacuum metallization of plastic components. Historically, the environmental impact of these processes has been minimal, and we believe we meet current environmental standards in all material respects. To date, our manufacturing operations have not been significantly affected by environmental laws and regulations relating to the environment.

In 2020, we formalized our science-based targets, setting a Scope 1 and Scope 2 emissions reduction goal consistent with requirements to keep global warming well below 2° Celsius by year 2030, and a Scope 3 reduction goal consistent with requirements to keep global warming at 2° Celsius by year 2030. We surpassed our original Scope 1 and Scope 2 reduction target within the first year of validation by the Science Based Targets Initiative (SBTi). Therefore, in 2022 we began working with SBTi to revise the Scope 1 and Scope 2 target to a more aggressive ambition, and to align it to the requirements to keep global warming at 1.5° Celsius by 2030. This updated target was validated by SBTi in early 2023. With this update, Aptar's Scope 3 ambition remains the same, as does our commitment to increase annual sourcing of renewable electricity to 100% by 2030. This science-based approach incorporates our own operations and operations within the value chain. In addition, we annually undergo data assurance as part of our sustainability reporting. This assurance process allows for data on consumption of electricity, fuel oil, and natural gas and renewable energy purchases to be verified for accuracy and completeness by an external organization. Globally this process is certified to the ISO 14064 standard for energy and greenhouse gas emission reporting.

Compared to our 2019 baseline, Aptar has made progress cutting emissions, and continues efforts to mitigate climate risks and further the low-carbon economy, as reported by the Company through global environmental non-profit CDP's 2023 climate change and water questionnaires. We believe Aptar is leading on corporate environmental ambition, action and transparency worldwide as proven by our "A-" letter grade on the CDP climate change assessment and our "B" letter grade on the CDP water assessment.

There continues to be increased interest and awareness from consumers and our customers in products with environmentally sustainable features, especially through the sourcing of sustainable materials. We are focused on reducing our environmental impacts through product life cycle assessments, sustainable material trials, operational eco-efficiency initiatives and renewable energy sourcing. We have teams dedicated to designing for sustainability by providing products that improve recyclability and use less material. Aptar has launched products and components in North America, Europe and Asia made with post-consumer recycled (PCR) resins and continues to explore additional opportunities for alternative resins and recyclable products.

Connecting with other companies through organizations like Ellen MacArthur Foundation's New Plastics Economy and the World Business Council for Sustainable Development (WBCSD) provides an invaluable opportunity to share best practices and work on larger projects with aligned objectives toward a more circular economy.

In March 2023, Aptar was named one of Barron's 100 Most Sustainable Companies for 2022, marking the fifth consecutive year Aptar was included on the Barron's list. Also in March 2023, Aptar was named on CDP's Supplier Engagement Leaderboard, for the third consecutive year, in recognition of our efforts to measure and reduce climate risk within our supply chain. In May 2023, Aptar was named one of America's Climate Leaders by USA Today, and first in our industry sector, on its inaugural list of 400 U.S. companies who achieved notable emissions reductions. In October 2023, Aptar was named among the 100 Best Corporate Citizens for 2023 by 3BL Media. In December 2023, Aptar was named one of America's Most Responsible Companies 2024 by Newsweek, ranked #29 out of 600 U.S. companies, and ranked first in the Materials & Chemicals industry. Additionally, Aptar has held a Platinum Sustainability Rating with EcoVadis since 2021.

Future regulations on environmental matters regarding recycling or material inputs could impact our business.

GOVERNMENT REGULATION

Certain of our products are directly or indirectly affected by government regulation. In 2022, the United Nations Environment Assembly adopted a resolution to end plastic waste pollution and forge an internationally binding agreement by 2024. In addition, the European Union (EU) has adopted a circular economy package. The package maps out a series of actions planned over several years. Some actions have resulted in regulations aimed to reduce marine litter, increase plastic recycling rates, prohibit single-use plastic packaging and introduce new taxes in relation to the end-of-life management of packaging. For example, the EU released in 2022 a draft regulation on packaging and packaging waste with a focus on recyclability, recycled content, compostability and reusability. The final version is expected in 2024. In Europe and in parts of the United States (including California), regulations require food and beverage companies to tether plastic caps to ensure the caps stay with the package, thus improving the likelihood the caps will enter the recycling stream. The EU and the United States are planning new regulations to ban perfluoroalkyl and polyfluoroalkyl substances (PFAS) materials used in the packaging industry. The potential exists for these types of regulations to expand worldwide. We have established an innovation team that focuses on designing for and converting into more sustainable options like post-consumer recycled (PCR) resin and Food and Drug Administration approved resin alternatives. We are designing for sustainability by providing products that improve recyclability, use sustainable material and use less material, and we offer multiple tethered options. Our new product offerings include: Purity Lite, a mono-material, lightweight, fully-recyclable closure; SimpliCycle, an award winning recyclable valve; Rocket, a sports cap awarded Best in Cap at the 17th Global Water Drinks Congress in 2020, tethered and with no losable component; Future, a mono-material, fully-recyclable pump; APF Futurity, our highly recyclable nasal spray pump and Mono Micro, our mono-material and fully recyclable airless dispenser. We are also partnering with global and regional thought leaders to drive a more circular economy.

On October 15, 2016, 197 countries adopted an amendment to phase down hydrofluorocarbon ("HFC") propellants in order to reduce greenhouse gas emission under the Montreal Protocol in Kigali, Rwanda. Under the amendment, countries committed to cut the production and consumption of HFC propellants by more than 80% over the next 30 years. This type of propellant is used for pressurized metered-dose inhalers ("pMDI"). The phase down plan has an exemption for pharmaceutical product applications of pMDIs; however, customers are looking for alternative propellants to reduce greenhouse gas emissions. We are working with the suppliers of these alternative propellants and our customers to develop new solutions.

Pharma regulatory agencies in the United States and EU have developed and introduced Combination Products specific guidelines for more complex drug delivery products, including dispensing systems. These guidelines have increased the complexity of the registration process for these products and recognize the existence of a device part in the drug delivery product, which now is required to be appropriately designed, developed and documented.

Future government regulations could include healthcare cost containment policies. For example, reviews by various governments to determine the number of drugs, or prices thereof, that will be paid by their insurance systems could affect future sales of our pharmaceutical customers' products and thus adversely impact our sales to these customers. Such regulation could adversely affect prices of and demand for our pharmaceutical products. We believe that the focus on the cost effectiveness of the use of medications as compared to surgery and hospitalization provides us with an opportunity to expand sales to the pharmaceutical market.

AVAILABLE INFORMATION

Our periodic and current reports, and any amendments to those reports, are available, free of charge, through a link on the Investors page of our website (www.aptar.com), as soon as reasonably practicable after the material is electronically filed with, or furnished to, the Securities and Exchange Commission ("SEC"). These filings are also available to the public over the Internet at the SEC's website (www.sec.gov).

Also posted on our website are the charters for our Audit, Management Development and Compensation, and Governance Committees, our Governance Principles, our Code of Conduct, our Director Independence Standards and our Conflict Minerals Statement. Within the time period required by the SEC and the New York Stock Exchange ("NYSE"), we will post on our website any amendment or waiver to the Code of Business Conduct & Ethics applicable to any executive officer or director. The information provided on our website is not part of this report and is therefore not incorporated herein by reference.

INFORMATION ABOUT OUR EXECUTIVE OFFICERS

Our executive officers as of February 9, 2024 are as follows:

Name	Age	Position with the Company
Stephan Tanda	**58**	**President and Chief Executive Officer**

Mr. Tanda has been President and Chief Executive Officer since February 2017. Prior to this, Mr. Tanda was an Executive Managing Board Director at Royal DSM NV, a leading global supplier of ingredients and material solutions for the food, dietary supplement, personal care, medical device, automotive, paint, electronic and bio-material markets, from March 2007 to January 2017.

Robert Kuhn	**61**	**Executive Vice President and Chief Financial Officer**

Mr. Kuhn has been Executive Vice President and Chief Financial Officer since September 2008. Mr. Kuhn served as Secretary from June 2011 to January 2021.

Marc Prieur	**58**	**President, Aptar Beauty**

Mr. Prieur has been President of Aptar Beauty since December 2019. Prior to this, Mr. Prieur was President of Aptar Food + Beverage from September 2018 to November 2019, VP of Aptar Operational Excellence from June 2017 to August 2018, President EMEA Sales & Operations – Consumer Health Care from June 2013 to June 2017 and President of our Pharma business in Asia from June 2008 to June 2013.

Hedi Tlili	**49**	**President, Aptar Closures**

Mr. Tlili has been President of Aptar Closures since December 2019. Prior to this, Mr. Tlili was President of Aptar EMEA Beauty + Home from June 2018 to November 2019 and President of Aptar EMEA Food + Beverage from May 2016 to May 2018. Prior to joining Aptar, Mr. Tlili held leadership positions at our packaging solutions peers Albéa and Sonoco. He was a Cluster Deputy Manager in Albéa Group from September 2014 to March 2016, Country General Manager in Sonoco from April 2013 to June 2014 and European Sales and Marketing Director from September 2011 to March 2013 in Sonoco.

Gael Touya	**54**	**President, Aptar Pharma**

Mr. Touya has been President of Aptar Pharma since September 2018. Prior to this, Mr. Touya was President of Aptar Food + Beverage from 2016 to August 2018, President of Aptar Food + Beverage Europe from 2012 to 2015 and Business Development Vice President Skin Care and Color Cosmetics from 2010 to 2011.

Xiangwei Gong	**54**	**President, Aptar Asia**

Ms. Gong has been President of Aptar Asia since October 2018. Prior to this, Ms. Gong held various leadership positions at Royal DSM for over 22 years. She was President of DSM Hydrocolloids from 2014 to 2018, President Asia of DSM Food Specialties from 2011 to 2014, Vice President of Channel Marketing from 2008 to 2011 and Vice President of Personal Care in DSM North America from 2005 to 2008.

Shiela Vinczeller	**60**	**Chief Human Resources Officer**

Ms. Vinczeller has been Chief Human Resources Officer since November 2018. Prior to this, Ms. Vinczellerspent 12 years in Human Resources leadership roles at International Paper, one of the world's leading producers of fiber-based packaging, pulp and paper.

Kimberly Y. Chainey	**48**	**Executive Vice President, Chief Legal Officer and Corporate Secretary**

Ms. Chainey has been Executive Vice President and global Chief Legal Officer since July 2020. Ms. Chainey has been Corporate Secretary since January 2021. Prior to this, Ms. Chainey was Vice President and General Counsel at Panasonic Avionics Corporation, a global manufacturer of in-flight entertainment and communications solutions, from January 2019 to July 2020 and Associate General Counsel at Avis Budget Group, a global provider of mobility solutions, from November 2014 to December 2018.

There were no arrangements or understandings between any of the executive officers and any other person(s) pursuant to which such officers were elected.

ITEM 1A. RISK FACTORS

Set forth below and elsewhere in this report and in other documents we file with the SEC are risks and uncertainties that could cause our actual results or other events to materially differ from the results or events contemplated by the forward-looking statements contained in this report and in other documents we file with the SEC. Additional risks and uncertainties not presently known to us, or that we currently deem immaterial, may also impair our business operations. You should carefully consider the following factors in addition to other information contained in this report before purchasing any shares of our common stock.

Risks Related to Our Operations and Industry

If there is deterioration in economic conditions, our business and operating results could be materially adversely impacted. Due to our strong balance sheet, diverse product offerings, various end-markets served, and our broad geographic presence, we believe we are well positioned to withstand temporary slowness in any one particular region or market. However, economic uncertainties affect businesses such as ours in a number of ways, making it difficult to accurately forecast and plan our future business activities. A tightening of credit in financial markets and other unfavorable changes in economic conditions, such as inflation, rising interest rates or a recession, or other factors, may lead consumers and businesses to postpone spending, which may cause our customers to cancel, decrease or delay their existing and future orders with us. In addition, financial difficulties experienced by our suppliers, customers or distributors could result in product delays, increased accounts receivable defaults, inventory or supply challenges and pricing pressures. An interruption in supply may also impact our ability to meet customer demands. Consumer demand for our customers' products and shifting consumer preferences are unpredictable and could have a negative impact on our customers and our customers' demand for our products.

Geopolitical conditions, including trade disputes and acts of war or terrorism, could have a material adverse effect on our operations and financial results. Our operations could be disrupted by geopolitical conditions, trade disputes, international boycotts and sanctions, political and social instability, acts of war, terrorist activity or other similar events. Such events could make it difficult, impossible or more expensive to manufacture or deliver products to our customers, receive production materials from our suppliers, or perform critical functions, all of which could adversely affect our business globally or in certain regions. In addition, our customers may export their finished products using our dispensing mechanisms that were sold in other regions and an adverse geopolitical event may impact the sales of our customers' products and thus indirectly negatively impact the demand for our dispensing solutions. Although our business is diversified across 10 end markets and many geographies and we believe our diverse business model, coupled with our diverse and global customer base, allow some protection from dependency on any one geographic region, country or even trade route, our diversification efforts may not be successful in insulating our operations from disruptive geopolitical conditions and we do face some risk related to trade policies specific to any country we operate in or to which our customers export their products.

For example, Russia's invasion of Ukraine has created significant regional disruption in addition to global security concerns that together with retaliatory sanctions imposed by the U.S. and other NATO members could have a lasting impact on both regional and global economies. As of December 31, 2023, less than 1% of our consolidated net sales were from Russia and Ukraine; in addition, less than 2% is imported into Russia and Ukraine and therefore the war has not had, and we continue to expect that it would not have a material direct impact to our consolidated results. However, we have experienced indirect impacts on our business, including higher energy and other input costs as well as certain supply chain disruptions, which could materially adversely affect our results of operations and financial condition. In addition, some Aptar products and services are subject to various sanctions regimes, including in the U.S. and the EU, relating to Russia. Although we currently have relevant licenses regarding our products and services, changes in the sanctions regimes without obtaining necessary licenses could adversely affect our operations in Russia and, as a result, our relationship with certain customers.

Additionally, ongoing conflicts in the Middle East, heightened tensions in the Red Sea and disruption of the Suez Canal shipping channels may cause delays in the global supply chain and have the potential to significantly increase shipping costs. At this time, impacts to our business are minimal.

Furthermore, a deterioration in the relationship between the U.S. and China which could result in further revisions to laws or regulations or their interpretation and enforcement, increased taxation, trade sanctions, the imposition of import or export duties and tariffs, restrictions on imports or exports, currency revaluations or retaliatory actions, could materially adversely affect our operations and financial condition.

Increased global cybersecurity threats and more sophisticated, targeted computer crime could pose a risk to our operations. Increased global information security threats and more sophisticated, targeted computer crime pose a risk to the confidentiality, availability and integrity of our data, operations and infrastructure, as well as the data of our customers. The rapid evolution and increased adoption of artificial intelligence technologies may intensify our cybersecurity risks. We continue to assess potential threats, including computer viruses, cyberattacks, ransomware attacks, phishing attacks and other malicious activity, and make investments seeking to reduce the risk of these threats by employing a number of security measures, including employee training, monitoring of our networks and systems, ensuring strong data protection standards including authentication mechanisms are in place and safeguarding our critical information assets.

We also periodically test our systems for vulnerabilities and regularly rely on third parties to conduct such tests. To date, we have seen no material impact on our business or operations from these threats; however, we cannot guarantee that our security efforts will prevent unauthorized access or loss of functionality to our or our third-party providers' systems. Even with these mitigations, our information systems remain potentially vulnerable to sophisticated cybersecurity threats, particularly as more business activities have shifted online. Depending on their nature and scope, such threats could potentially lead to the compromise of confidential information, improper use of our systems and networks, manipulation and destruction of data, production downtimes and operational disruptions, mitigation costs and legal liability, which in turn could adversely affect our reputation, competitiveness and results of operations.

Employee retention or labor cost inflation could disrupt our business. Labor cost and availability are subject factors that are beyond our control. As a result, there is no assurance that we will be able to recruit, train, assimilate, motivate and retain employees in the future. The loss of a substantial number of our employees or a prolonged labor dispute could disrupt our business and result in a material adverse effect on our business and operating results.

We face strong global competition and our market share could decline. All of the markets in which we operate are highly competitive and we continue to experience competition in all product lines and segments. Competitors, including privately and publicly held entities that range from regional to international companies, are becoming increasingly credible in the core markets in which we do business. We expect the market for our products to remain competitive, as consolidation and/or changing of ownership among our competitors and key customers are increasing in the current economic climate.

Customers and consumers are increasingly requesting solutions that can be refilled and reused as the market moves toward more sustainable products. Our competitors' design innovation or ability to provide more sustainable products could have an adverse impact on our business. If we are unable to compete successfully, our market share may decline, which could materially adversely affect our results of operations and financial condition.

In difficult market conditions, our fixed costs structure combined with potentially lower revenues may negatively impact our results. Our business is characterized by relatively high fixed costs and, notwithstanding our utilization of third-party manufacturing capacity, most of our production requirements are met by our own manufacturing facilities. In difficult environments, we are generally faced with a decline in the utilization rates of our manufacturing facilities due to decreases in product demand. During such periods, our plants may not operate at full capacity and the costs associated with this excess capacity are charged directly to cost of sales. Difficult market conditions in the future may adversely affect our utilization rates and consequently our future gross margins, and this, in turn, could have a material negative impact on our business, financial condition and results of operations.

Global health crises, such as the COVID-19 pandemic, have adversely affected our business, and future developments or other global pandemics could cause adverse effects, which may be material. Global health crises could have a material impact on our operations our employees and our customer, which could adversely impact our business, financial condition and results of operations. For example, during 2020 the COVID-19 pandemic adversely affected our sales of products to our prescription pharma customers, due to lower incidences of common illnesses and doctors appointments, and to our travel and retail beauty business and on-the-go beverage customers. Customer demand across all segments may decrease quickly as a result of future developments related to the health crises, including the extent, duration and severity of outbreaks, the availability, adoption and efficacy of approved vaccines and treatments, the length of time it takes for normal economic and operating conditions to resume, additional governmental actions that may be taken and/or extended in response to outbreaks, and numerous other uncertainties. Such events may result in business and manufacturing disruption, inventory shortages due to disruptions to our supply chain and distribution channels, delivery delays, increased risk associated with customer payments, increased labor cost and reduced labor availability, and reduced sales and operations, any of which could materially affect our stock price, business prospects, financial condition, results of operations and liquidity.

Consolidation of our customer base could impact our business. We believe mergers and acquisitions within our customer base create opportunities for increasing sales due to the breadth of our product line, our international presence and our long-term relationships with certain customers. However, consolidation of our customers could lead to pricing pressures, concentration of credit risk and fewer opportunities to introduce new products to the market.

The success or failure of our customers' products, particularly in the pharmaceutical market, may materially affect our operating results and financial condition. In the pharmaceutical market, the proprietary nature of our customers' products and the success or failure of their products in the market using our dispensing systems may have a material impact on our operating results and financial condition. We may potentially work for years on modifying our dispensing device to work in conjunction with a customer's drug formulation. If the customer's pharmaceutical product is not approved by regulatory bodies or it is not successful on the market, the associated costs may not be recovered.

Our revenue and results of operations may suffer upon the bankruptcy, insolvency or other credit failure of our customers As mentioned above, shifting consumer preferences put our customers under pressure in their markets. In addition, general economic conditions, competition and other factors may adversely affect the solvency or creditworthiness of our customers. If our customers suffer significant financial difficulty, they may be unable to pay their debts to us timely or at all, which could have a material adverse effect on our results of operations. It is possible that customers may contest their contractual obligations to us under bankruptcy laws or otherwise. Customer bankruptcies could further adversely affect our net sales and increase our operating expenses by requiring larger provisions for bad debt expense. In addition, even when our contracts with these customers are not contested, if customers are unable to meet their obligations on a timely basis, it could adversely affect our ability to collect receivables. Further, we may have to negotiate significant discounts and/or extended financing terms with customers in these situations. If we are unable to collect upon our accounts receivable as they come due in an efficient and timely manner, our business, financial condition or results of operations may be materially adversely affected.

Higher raw material costs and other inputs and an inability to offset these higher costs with price increases may materially adversely affect our operating results and financial condition. The cost of raw materials and other inputs (particularly plastic resin, rubber, metal, anodization costs and transportation and energy costs) are volatile and susceptible to rapid and substantial changes due to factors beyond our control, such as changing economic conditions, currency fluctuations, weather conditions, health crises, political and social instability, acts of war, terrorist activity or other similar events in energy-producing nations, and supply and demand pressures. Raw material costs may continue to increase in the coming years due to market fluctuation and the use of post-consumer recycled (PCR) resin for our sustainable product offerings and future market conditions may prevent us from passing these increased costs on to our customers through timely price increases. In addition, we may not be able to improve productivity or realize savings from our cost reduction programs sufficiently enough to offset the impact of increased raw material costs. As a result, higher raw material costs could result in declining margins and operating results.

If our unionized employees were to engage in a strike or other work stoppage, our business, operating results and financial position could be materially adversely affected. The majority of our European and Latin American employees are covered by collective bargaining arrangements made either at the local or national level in their respective countries. Although we believe that our relations with our employees are satisfactory, no assurance can be given that this will continue. If disputes with our unions arise, or if our unionized workers engage in a strike or other work stoppage, we could experience a significant disruption of operations, which could have a material adverse effect on our business, operating results and financial position.

Single sourced materials and manufacturing sites could adversely impact our ability to deliver product. We source certain materials, especially some resins and rubber components for our pharmaceutical segment, from a single source. Any disruption in the supply of these materials could adversely impact our ability to deliver products to our customers. Similarly, we have certain components and products that are manufactured at a single location or from a single machine or mold. Any disruption to the manufacturing process could also adversely impact our ability to deliver products to our customers.

We may not achieve the expected benefits from our restructuring initiatives, which could adversely affect our business and operations We continue to streamline and reduce our fixed costs in order to increase operating efficiencies. If we do not successfully manage and execute these initiatives, or if they are inadequate or ineffective, we may fail to achieve the expected benefits, and our business and operations could be adversely affected. Furthermore, any restructuring initiative could result in unintended consequences or unforeseen costs, including distraction of our management and employees, inability to attract or retain key personnel and reduced employee productivity, which could adversely affect our business, financial condition and results of operations.

If our integration of acquisitions or significant capital investments fail to generate expected returns, our financial performance may suffer. We continue to pursue growth through acquisitions and equity investments, including the recent iD Scent, Gulf Closures, and Metaphase acquisitions. We continue to invest internally in several larger facility expansions, if our integration efforts, including unlocking synergies, are unsuccessful we may not realize the full potential of the acquisitions and as a result our financial performance may suffer.

Risks Related to Financial, Legal and Regulatory Matters

We have foreign currency translation and transaction risks that may materially adversely affect our operating results. A majority of our operations are located outside of the United States. Because of this, movements in exchange rates may have an impact on the translation of the financial statements of our foreign entities. Our primary foreign exchange exposure is to the euro, but we have foreign exchange exposure to the Chinese yuan, Brazilian real, Argentine peso, Mexican peso, Swiss franc and other Asian, European and Latin American currencies. A weakening U.S. dollar relative to foreign currencies has an additive translation effect on our financial statements. Conversely, a strengthening U.S. dollar has a dilutive effect. In some cases, we sell products denominated in a currency different from the currency in which the related costs are incurred. We manage our exposures to foreign exchange principally with forward exchange contracts to economically hedge certain transactions and firm purchase and sales commitments denominated in foreign currencies. However, there is no guarantee that our hedging strategy will be effective, and the volatility of currency exchange rates may materially affect our operating results.

We have approximately $963.4 million in recorded goodwill at December 31, 2023, and changes in future business conditions could cause this asset to become impaired, requiring write-downs that would reduce our operating income. We evaluate the recoverability of goodwill amounts annually, or more frequently when evidence of potential impairment exists. The impairment test is based on several factors requiring judgment. A decrease in expected reporting unit cash flows, changes in market conditions, or rising discount rates may indicate potential impairment of recorded goodwill and, as a result, our operating results could be materially adversely affected. See “Critical Accounting Estimates” in Part II, Item 7 – Management's Discussion and Analysis of Financial Condition and Results of Operations for additional information.

We are subject to a variety of laws and regulations and changes in, or failure to comply with, these laws or regulations could have an adverse impact on the Company’s reputation, business and results of operations. Doing business globally requires us to comply with anti-corruption, trade, sanctions, competition and similar laws, and to implement policies and procedures designed to ensure that our company, employees and other intermediaries comply with the applicable restrictions. We are also required to comply with a variety of other laws and regulations in the ordinary course of business, including those related to data privacy. Privacy regulations, such as the EU’s General Data Protection Regulation (“GDPR”) and the California Privacy Rights Act of 2020 (“CPRA”), are complex, rigorous and sometimes conflicting. Compliance with existing and forthcoming privacy laws and regulations can be costly and time consuming, and may require changes to our information systems and practices and to those of any third parties that process information on our behalf. Despite our commitment to legal compliance and corporate ethics, we cannot ensure that our policies and procedures will always prevent intentional, reckless, negligent or unauthorized acts committed by employees or agents. If we fail to comply with applicable laws and regulations, we may be subject to investigations, criminal and civil penalties and other remedial measures, which could materially adversely affect our reputation, business and results of operations.

In addition, Aptar's customers' products, as well as certain of Aptar's products and services, are subject to regulation in the U.S. by the U.S. Food and Drug Administration (FDA) and by comparable government agencies in other countries. The regulatory clearance and approval process may result in, among other things, delayed realization of product revenues, substantial additional costs or limitations on indicated uses of products, any one of which could have a material adverse effect on our financial condition and results of operations.

We are exposed to risks from lawsuits and claims, including product liability claims, as well as investigations, audits and other proceedings, which may result in substantial costs and expenses or interruption of our normal business operations. We are subject to a number of lawsuits and claims that arise in the ordinary course of our business, which include infringement, product liability, commercial, employment, tort, and other litigation. We are also subject to indemnification claims under various contracts. Further, the failure of our products to operate as intended may result in a product liability claim against us. We believe we maintain adequate levels of product liability insurance coverage and robust quality control systems at our facilitates. However, a product liability claim in excess of our insurance coverage or not covered by existing insurance may materially adversely affect our business, results of operations or cash flows.

In addition, we are subject to investigations, audits and other proceedings initiated by federal, state, international, national, provincial and local authorities, including regulatory agencies such as the FDA as a result of the products manufactured by our Aptar Pharma segment.

Current and future litigation, claims, investigations, audits and other proceedings or indemnification claims that we face may result in substantial costs and expenses and significantly divert the attention of our management regardless of the outcome. In addition, these matters could lead to increased operating costs or interruptions of our normal business operations. Litigation, proceedings and indemnification claims involve uncertainties and the eventual outcome of any such matter could adversely affect our business, results of operations or cash flows.

Challenges to, or the loss of, our intellectual property rights could have an adverse impact on our ability to compete effectively. Our ability to compete effectively depends, in part, on our ability to protect and maintain the proprietary nature of our owned and licensed intellectual property. We own a large number of patents on our products, aspects of our products, methods of use and/or methods of manufacturing, and we own, or have licenses to use, all of the material trademark and trade name rights used in connection with the packaging, marketing and distribution of our major products. We also rely on trade secrets, know-how and other unpatented proprietary technology. We attempt to protect and restrict access to our intellectual property and proprietary information by relying on the patent, trademark, copyright and trade secret laws of the U.S. and other countries, as well as non-disclosure agreements. However, it may be possible for a third party to obtain our information without our authorization, independently develop similar technologies, or breach a non-disclosure agreement entered into with us. Furthermore, many of the countries in which we operate do not have intellectual property laws that protect proprietary rights as fully as do laws in the U.S. The use of our intellectual property by someone else without our authorization could reduce or eliminate certain of our competitive advantages, cause us to lose sales or otherwise harm our business. The costs associated with protecting our intellectual property rights could also adversely impact our business.

We are also from time to time subject to claims from third parties suggesting that we may be infringing on their intellectual property rights. If we were held liable for infringement, we could be required to pay damages, obtain licenses or cease making or selling certain products. Intellectual property litigation, which could result in substantial cost to us and divert the attention of management, may be necessary to protect our trade secrets or proprietary technology or for us to defend against claimed infringement of the rights of others and to determine the scope and validity of others' proprietary rights. We may not prevail in any such litigation, and if we are unsuccessful, we may not be able to obtain any necessary licenses on reasonable terms or at all. Failure to protect our patents, trademarks and other intellectual property rights, or failure to successfully defend against intellectual property litigation, may have a material adverse effect on our business, consolidated financial condition or results of operations.

Government regulation on environmental matters, including recycling or environmental sustainability policies could impact our business. Future government regulations mandating the use or limitations of certain materials could impact our suppliers, manufacturing processes or the technologies we use and force faster development and adoption of alternative materials or assets used in the production of our products. For example, the EU and the United States are planning new regulations to ban PFAS materials used in the packaging industry. The potential exists for these types of regulations to expand worldwide. Additionally, any failure to comply with environmental laws could result in claims, investigations, penalties or damages, which could materially adversely affect our reputation, business and results of operations.

Future government regulations of healthcare cost containment policies may impact our pharmaceutical sales. Review by governments or private insurers of cost containment policies of the number of drugs and prices thereof that will be paid by their insurance systems could affect future sales to the pharmaceutical industry and thereby adversely affect prices of and demand for our pharmaceutical products.

Interest rate volatility could increase our borrowing costs. As our fixed rate debt obligations become due, any refinancing or additional borrowings could potentially be under higher interest rates. As interest rates increase, our debt service obligation on refinanced indebtedness will increase, impacting our results of operations and cash flows.

We could be subject to changes in tax rates, the adoption of new tax legislation or rules or exposure to additional tax liabilities Due to economic and political conditions, tax rates in the various jurisdictions in which we operate may be subject to change. Our effective tax rate could be affected by changes in the mix of earnings in countries with differing statutory tax rates, changes in the valuation of deferred tax assets and liabilities, the introduction of new taxes, or changes in tax laws or their interpretations.

We continue to monitor countries' progress toward enactment of the Organization of Economic Cooperation and Development's model rules on a global minimum tax. During 2023, various countries enacted domestic legislation to adopt the minimum tax rules which will be effective for years beginning on or after January 1, 2024. These specific actions did not affect our Consolidated Financial Statements in 2023. We are currently evaluating the impact of this rule on our consolidated results for 2024.

We are also subject to examination of our returns and other tax matters by the U.S. Internal Revenue Service and other tax authorities and governmental bodies. We regularly assess the likelihood of an adverse outcome resulting from these examinations to determine the adequacy of our provision for taxes. There can be no assurance as to the outcome of these examinations. We are also periodically subject to tax assessments resulting from custom duties, including those described in Note 13 - Commitments and Contingencies of the Notes to Consolidated Financial Statements. If our effective tax rates were to increase in jurisdictions where we have significant operations, or if the ultimate determination of taxes owed or other tax liability is for an amount in excess of amounts previously accrued, our financial condition and operating results could be materially and adversely affected.

General Risk Factors

Global climate change and legal, regulatory, or market measures to address climate change, may negatively affect our business, operations and financial results. There is growing concern that the global economy, including the manufacturing industry, will be affected by the impacts of climate change as the frequency and severity of natural disasters increase. We monitor risks posed by climate change such as physical climate risks, current and emerging regulations, and market risks, as well as the potential impact to our business, operations and financial results, especially where the cost to respond is significant.

If not addressed, repercussions of physical climate-related issues, like water scarcity and drought, could cause disruptions within our value chain, making it more difficult and/or expensive to operate, or impeding our ability to operate. Further, if we are not successful in implementing our plans to reduce both direct and indirect emissions, we could be subject to carbon taxes.

Current and emerging regulation of products may include mandates to limit carbon dioxide and other greenhouse gas emissions throughout the product life cycle; increase the recycled content of raw materials in our products; limit or eliminate the use of certain materials within our products; and improve recyclability or reusability of packaging at the end-of-life. We may encounter increased costs as we reformulate and redesign our product offerings in response to the changing regulatory landscape.

Market risks, like the increased cost or limited availability of certain raw material inputs for our products, including post-consumer recycled (PCR) resins, may impede the production, distribution and sale of certain of our customers' products.

Customers and consumers may change their purchasing behaviors based on the actual or perceived environmental impact of our products. Consumers may begin to opt for products that have a lower carbon footprint or a more circular life cycle. We may encounter increased costs as we reformulate and redesign our product offerings in response to changing customer behaviors, and our efforts may be unsuccessful.

Ownership by Certain Significant Stockholders. Based on filings with the SEC as of the date of this report, Aptar has two institutional stockholders who each own between 5% and 10% of our outstanding common stock. None of these stockholders have direct representation on our Board of Directors. If one of these stockholders decides to sell significant volumes of our stock, this could put downward pressure on the price of the stock.

ITEM 1B. UNRESOLVED STAFF COMMENTS

We have no unresolved comments from the SEC.

ITEM 1C. CYBERSECURITY

Increased global cybersecurity threats and sophisticated, targeted computer crime could pose a risk to our operations. Aptar has strategically integrated cybersecurity risk management into a broader enterprise-wide risk management framework, and consists of administrative, operational, organizational, physical, and technical processes that we believe are appropriate to the scope and nature of our business. We believe this integrated approach allows cybersecurity considerations to be an integral part of our decision-making processes. Our risk management team works closely with our Information Security Department to continuously evaluate and address cybersecurity risks in alignment with our business and operational needs.

Our cybersecurity strategy focuses on continued strengthening of our security posture, improvement of security operational efficiencies, and preparedness for evolving business and technology needs including the detection, analysis, and response to known, anticipated or unexpected cybersecurity threats, management of material risks related to cybersecurity threats and resilience against cybersecurity incidents. We regularly assess potential threats and make investments seeking to reduce the risk of these threats against our critical information and assets by implementing a broad set of security measures, including comprehensive monitoring of our networks and systems, rapid detection and response, and threat management capabilities. For example, we scan our systems for vulnerabilities and annually engage external experts, including cybersecurity assessors, consultants, and auditors in evaluating and testing our cybersecurity systems. The results of such assessments and reviews are reported to our Information Security Department and Audit Committee of the Board of Directors (the "Audit Committee"), and then we consider adjustments to our cybersecurity processes and practices as appropriate based on the information provided by the third-party assessments and reviews.

Security and data privacy awareness and training is provided to new employees and annually for current Aptar employees, which is designed to educate employees on recognizing information security and cybersecurity concerns, how they can help protect the organization and how to inform the cybersecurity team of potential incidents. In addition, Aptar implements stringent processes to oversee and manage risks associated with our third-party providers. As set forth in our Sustainable Purchasing Charter, third-party providers are expected to, among other things, protect personal data and implement security and protection measures in relation thereto. We conduct security assessments of third-party providers before engagement and monitor their compliance with our cybersecurity standards on an ongoing basis. The monitoring includes periodic and ongoing assessments by our Information Security Department. This approach is designed to mitigate risks related to data breaches or other security incidents originating from third parties. In addition, we maintain cybersecurity insurance as part of our overall insurance portfolio.

Management briefs the Audit Committee on a quarterly basis regarding our information security programs. As part of its oversight responsibilities, the Audit Committee regularly discusses and reviews with management, among other items, Aptar's compliance and cybersecurity programs. We also periodically test our systems for vulnerabilities and regularly engage third parties to conduct evaluations of our security controls whether through penetration testing, independent audit or consulting on best practices to address new challenges. An independent review of our cybersecurity program has been assessed against the National Institute of Standards and Technology (NIST) cybersecurity framework. In addition, we maintain cybersecurity insurance as part of our overall insurance portfolio.

Our Information Security Department, reports to our Vice President and Chief Information Officer and is headed by our Director of Information Security. This team is comprised of full-time information security professionals, is responsible for the implementation of our cybersecurity strategy, including assessing and managing material risks from cybersecurity threats. Our Vice President and Chief Information Officer is an experienced information technology professional with 34 years of experience in the industry, including oversight of our cybersecurity department and has a degree in Management Information Systems. The Information Security Department ultimately reports to, and regularly informs, our Chief Information Officer and Chief Financial Officer with regard to cybersecurity risks and incidents. Our Chief Financial Officer is responsible for oversight of our response to cybersecurity incidents, as appropriate. In addition, our executive management discusses cybersecurity issues quarterly.

Aptar has a detailed incident response plan that provides the process and workflow of communication for escalation of incidents to executive leadership to determine if there is a breach that would warrant further action. We also have a cyber incident materiality committee, which is a cross functional team that includes various departments across the Company including Finance, Public Relations, Accounting/Controller, Legal and the Director of Information Security. Our Information Security Department, in conjunction with the cyber incident materiality committee, review each incident under our materiality framework to assess whether further escalation and reporting is required and if the incidents could constitute a material breach. Periodically, our incident response team participates in a tabletop exercise or cybersecurity preparedness led by a third-party incident response provider.

The Audit Committee is responsible for the oversight of risks from cybersecurity threats. The Audit Committee is composed of independent directors with diverse experiences, including relating to risk management, technology, and finance. Management briefs the Audit Committee on a quarterly basis, and on an as needed basis, regarding our information security program and related risks to Aptar. As part of its oversight responsibilities, the Audit Committee regularly discusses and reviews with management, among other items, Aptar's risk management system, including cybersecurity programs. The Audit Committee receives regular updates on any significant developments relating to cybersecurity. Furthermore, significant cybersecurity matters and related strategic risk management decisions are escalated to the Board of Directors.

Although we have not experienced any material cybersecurity events to date, cybersecurity threats could materially affect our business strategy, results of operations, or financial condition, as further discussed in the risk factor entitled "Increased global cybersecurity threats and more sophisticated, targeted computer crime could pose a risk to our operations" in Part I, Item 1A of this report.

ITEM 2. PROPERTIES

We lease or own our principal offices and manufacturing facilities. None of the owned principal properties is subject to a lien or other encumbrance material to our operations. We believe that existing operating leases will be renegotiated as they expire, will be acquired through purchase options or that suitable alternative properties will be leased on acceptable terms. We consider the condition and extent of utilization of our manufacturing facilities and other properties to be generally good, and the capacity of our plants to be adequate for the needs of our business. We manufacture products in 50 locations, with 13 of those facilities serving two segments and four serving all three of our segments as of December 31, 2023. The locations of our manufacturing facilities, by geographic region/country, are set forth below:

Geographic Region/Country	Number of Manufacturing Facilities	Aptar Pharma Manufacturing Facilities	Aptar Beauty Manufacturing Facilities	Aptar Closures Manufacturing Facilities
France	12	6	7	1
Germany	6	4	4	1
Rest of Europe	7	2	2	4
North America	9	5	3	6
Latin America	7	1	7	3
China	5	3	2	4
Other Asia	4	1	2	3
Total	50	22	27	22

Our head corporate office is located in Crystal Lake, Illinois. We also have sales, service facilities, and corporate offices in locations in addition to those listed above.

ITEM 3. LEGAL PROCEEDINGS

In the normal course of business, we are subject to a number of lawsuits and claims both actual and potential in nature. While management believes the resolution of these claims and lawsuits will not have a material adverse effect on our financial position or results of operations or cash flows, claims and legal proceedings are subject to inherent uncertainties, and unfavorable outcomes could occur that could include amounts in excess of any accruals which management has established. Were such unfavorable final outcomes to occur, it is possible that they could have a material adverse effect on our financial position, results of operations and cash flows. Please refer to Note 13 – Commitments and Contingencies in Part II, Item 8 – Financial Statements and Supplementary Data for further discussion of contingencies affecting our business.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

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

MARKET FOR REGISTRANT'S COMMON EQUITY

Our common stock is traded on the New York Stock Exchange under the symbol "ATR". As of February 5, 2024, there were 152 holders of record of our common stock. A substantially greater number of holders of our common stock are "street name" or beneficial holders, whose shares of record are held by banks, brokers, and other financial institutions.

DIVIDENDS

On January 18, 2024, our Board of Directors declared a quarterly cash dividend of $0.41 per share of common stock, which will be paid on February 22, 2024 to stockholders of record as of February 1, 2024. During 2023, we paid $103.7 million in dividends to stockholders. While we expect to continue to pay a regular quarterly dividend of $0.41 per share in 2024, the timing, declaration, amount and payment of any future cash dividends are at the discretion of the Board of Directors and will depend on our available cash, working capital, financial condition, results of operations, capital requirements, covenants in our credit facility, applicable law and other factors that the Board of Directors considers relevant.

RECENT SALES OF UNREGISTERED SECURITIES

Certain French employees are eligible to participate in the FCP Aptar Savings Plan (the "Plan"). An independent agent purchases shares of common stock available under the Plan for cash on the open market and we do not issue shares. We do not receive any proceeds from the purchase of common stock under the Plan. The agent under the Plan is BNP Paribas Fund Services. No underwriters are used under the Plan. All shares are sold in reliance upon the exemption from registration under the Securities Act of 1933 provided by Regulation S promulgated under that Act. During the quarter ended December 31, 2023, the Plan did not purchase any shares of our common stock on behalf of the participants. The Plan sold 6,533 shares of our common stock on behalf of the participants at an average price of $124.57 per share, for an aggregate amount of $814 thousand. At December 31, 2023, the Plan owned 113,946 shares of our common stock.

ISSUER PURCHASES OF EQUITY SECURITIES

On April 18, 2019, we announced a share repurchase authorization of up to $350 million of common stock. This authorization replaces previous authorizations and has no expiration date. We may repurchase shares through the open market, privately negotiated transactions or other programs, subject to market conditions.

During the fourth quarter of 2023, we repurchased approximately 81 thousand shares for approximately $10.3 million.

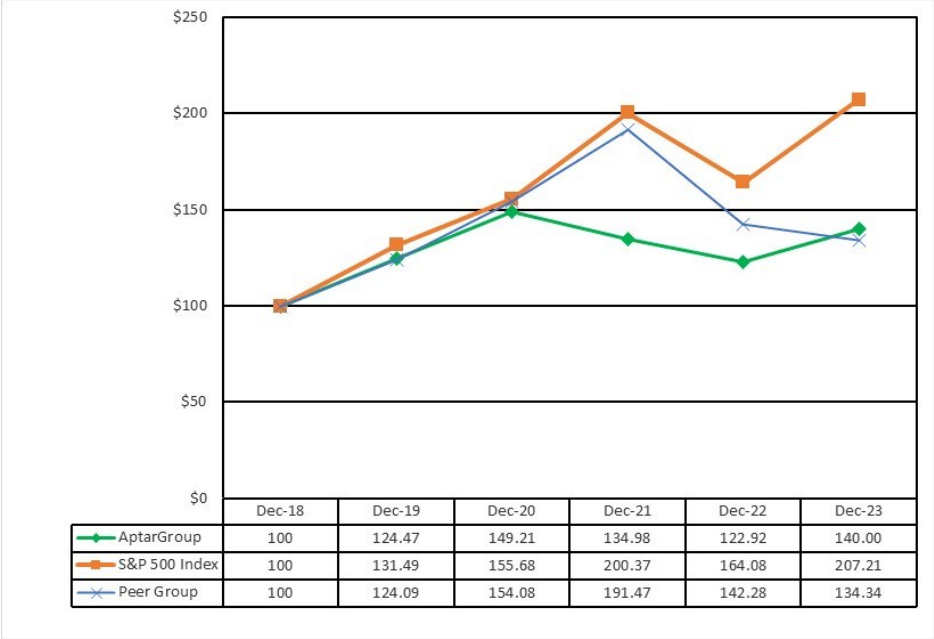
The following table summarizes our purchases of our securities for the quarter endedDecember 31, 2023:

Period	Total Number Of Shares Purchased	Average Price Paid Per Share	Total Number Of Shares Purchased As Part Of Publicly Announced Plans Or Programs	Dollar Value Of Shares That May Yet Be Purchased Under The Plans Or Programs (in millions)
10/1 - 10/31/23	—	$ —	—	$ 70.9
11/1 - 11/30/23	62,869	126.23	62,869	63.0
12/1 - 12/31/23	18,200	127.18	18,200	60.7
Total	81,069	$ 126.44	81,069	$ 60.7

SHARE PERFORMANCE

The following graph shows a five year comparison of the cumulative total stockholder return on our common stock as compared to the cumulative total return of the Standard & Poor's 500 Composite Stock Price Index and to an index of peer group companies we selected. The companies included in the peer group are: Albemarle Corporation, Ashland Inc., Berry Global Group, Inc., Catalent, Inc., CCL Industries Inc., Enovis Corporation, ICU Medical, Inc., Ingredion Inc., International Flavors & Fragrances, Inc., McCormick & Company, Inc., Perrigo Company plc, Revvity, Inc., Sealed Air Corporation, Sensient Technologies Corporation, Silgan Holdings, Inc., Sonoco Products Company, Stericycle, Inc., STERIS plc, Teleflex Inc. and West Pharmaceutical Services, Inc. The peer group is consistent with the peer companies used by the Management Development and Compensation Committee of our Board of Directors ("MD&C Committee") in connection with certain aspects of our executive compensation programs. The MD&C Committee selected companies that (i) compete with Aptar for market share, operate in similar industries (e.g., packaging, specialty chemicals, specialty materials) and are based in the U.S.; (ii) provide similar intermediate products (e.g., structured materials, packaging, closures, spray products) to similar end-use markets (e.g., consumer, beauty, home, pharmaceutical, medical, healthcare, food, beverage); (iii) fall within a reasonable range of Aptar's size and scale based on several factors (e.g., revenue, assets, invested capital, number of employees, market capitalization); (iv) earn a considerable amount of their revenue outside of the U.S.; (v) appear to be valued like Aptar by the stock market based on their market capitalization to revenue versus Aptar's; and (vi) compete with Aptar for senior executive talent (companies Aptar potentially would recruit senior talent from, and possibly lose senior talent to).

Comparison of 5 Year Cumulative Stockholder Returns



	Dec-18	Dec-19	Dec-20	Dec-21	Dec-22	Dec-23
AptarGroup	100	124.47	149.21	134.98	122.92	140.00
S&P 500 Index	100	131.49	155.68	200.37	164.08	207.21
Peer Group	100	124.09	154.08	191.47	142.28	134.34

The graph and other information furnished in the section titled "Share Performance" under this Part II, Item 5 of this Form 10-K shall not be deemed to be "soliciting" material or to be "filed" with the SEC or subject to Regulation 14A or 14C, or to the liabilities of Section 18 of the Securities Exchange Act of 1934, as amended.

ITEM 6. [RESERVED]

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

(Dollars in thousands, except per share amounts or as otherwise indicated)

The objective of the following Management's Discussion and Analysis of Financial Condition and Results of Operations ("MD&A") is to help the reader understand the financial condition and results of operations of AptarGroup, Inc. from management's perspective. MD&A is presented in eight sections: Overview, Results of Operations, Liquidity and Capital Resources, Recently Issued Accounting Standards, Critical Accounting Estimates, Operations Outlook and Forward-Looking Statements. MD&A should be read in conjunction with our Consolidated Financial Statements and accompanying Notes to Consolidated Financial Statements contained elsewhere in this Annual Report on Form 10-K.

In MD&A, "we," "our," "us," "AptarGroup," "AptarGroup, Inc.", "Aptar" and the "Company" refer to AptarGroup, Inc. and its consolidated subsidiaries.

OVERVIEW

GENERAL

Aptar is a global leader in the design and manufacturing of a broad range of drug delivery, consumer product dispensing and active material science solutions and services for the pharmaceutical, beauty, personal care, home care, food and beverage markets. Using insights, proprietary design, engineering and science to create dispensing, dosing and protective technologies for many of the world's leading brands, Aptar in turn makes a meaningful difference in the lives, looks, health and homes of millions of patients and consumers around the world.

In addition to the information presented herein that conforms to accounting principles generally accepted in the United States of America ("U.S. GAAP"), we also present certain financial information that does not conform to U.S. GAAP, which are referred to as non-U.S. GAAP financial measures. Management may assess our financial results both on a U.S. GAAP basis and on a non-U.S. GAAP basis. We believe it is useful to present these non-U.S.GAAP financial measures because they allow for a more meaningful period over period comparison of operating results by removing the impact of items that, in management's view, do not reflect Aptar's core operating performance. These non-U.S. GAAP financial measures should not be considered in isolation or as a substitute for U.S. GAAP financial results, but should be read in conjunction with the audited Consolidated Statements of Income and other information presented herein. Investors are cautioned against placing undue reliance on these non-U.S. GAAP measures. Further, investors are urged to review and consider carefully the adjustments made by management to the most directly comparable U.S. GAAP financial measure to arrive at these non-U.S. GAAP financial measures. See the reconciliation under "Non-U.S. GAAP Measures" below.

For the year ended December 31, 2023, reported sales increased 5% to $3.49 billion from $3.32 billion a year ago. Core sales, excluding the positive impact from changes in currency exchange rates and acquisition effects, increased 3% from 2022. A reconciliation of core sales growth to reported net sales growth, the most directly comparable U.S. GAAP measure, can be found under "Net Sales" below.

2023 HIGHLIGHTS

- First full year following segment re-alignment: Aptar Pharma, Aptar Beauty and Aptar Closures
- Reported sales grew 5% and core sales increased 3%
- Reported earnings per share increased 18% to $4.25
- Reported net income increased 19% to $284 million
- Adjusted EBITDA increased 15% to $708 million
- 30th consecutive year of paying an increased annual dividend

RESULTS OF OPERATIONS

The following table sets forth the Consolidated Statements of Income and the related percentages of net sales for the periods indicated. Refer to Part II, Item 7 – Management's Discussion and Analysis of Financial Condition and Results of Operations of our Annual Report on Form 10-K for the fiscal year ended December 31, 2022 for additional information regarding Results of Operations for the year ended December 31, 2022 as compared to the year ended December 31, 2021.

Year Ended December 31,	**2023**		**2022**	
	Amount in Thousands $	**% of Net Sales**	**Amount in Thousands $**	**% of Net Sales**
Net sales	**$ 3,487,450**	**100.0 %**	$ 3,322,249	100.0 %
Cost of sales (exclusive of depreciation and amortization shown below)	**2,224,051**	**63.8**	2,158,411	65.0
Selling, research & development and administrative	**565,783**	**16.2**	544,262	16.4
Depreciation and amortization	**248,593**	**7.1**	233,706	7.0
Restructuring initiatives	**45,004**	**1.3**	6,597	0.2
Operating income	**404,019**	**11.6**	379,273	11.4
Interest expense	**(40,418)**	**(1.2)**	(40,827)	(1.2)
Other (expense) income	**11,224**	**0.3**	(3,742)	(0.1)
Income before income taxes	**374,825**	**10.7**	334,704	10.1
Net Income	**$ 284,176**	**8.1 %**	$ 239,555	7.2 %
Effective tax rate	**24.2 %**		28.4 %	
Adjusted EBITDA margin (1)	**20.3 %**		18.6 %	

(1) Adjusted EBITDA margin is calculated as Adjusted EBITDA divided by Reported Net Sales. See the reconciliation under "Non-U.S. GAAP Measures".

NET SALES

For the year ended December 31, 2023, reported net sales increased 5% to $3.49 billion from $3.32 billion a year ago. The average U.S. dollar exchange rate weakened compared to the euro and other major currencies in which we operate, resulting in a positive currency translation impact of 2%. There was no significant impact from our acquisitions of Metaphase, iD SCENT, and Gulf Closures on our consolidated net sales during 2023. Core sales, which exclude acquisitions and changes in foreign currency rates, increased by 3% in 2023 compared to 2022. Volume growth, especially for products in our prescription, consumer healthcare and beauty applications, had a positive impact on our core sales in spite of a 1% headwind on resin cost pass-through reductions.

Year Ended December 31, 2023	**Aptar Pharma**	**Aptar Beauty**	**Aptar Closures**	**Total**
Reported Net Sales Growth	**12 %**	**4 %**	**(5) %**	**5 %**
Currency Effects (1)	(2) %	(2) %	(1) %	(2) %
Acquisitions	— %	— %	(1) %	— %
Core Sales Growth	10 %	2 %	(7) %	3 %

(1) Currency effects are calculated by translating last year's amounts at this year's foreign exchange rates.

For further discussion on net sales by reporting segment, please refer to the segment analysis of net sales and operating income on the following pages.

The following table sets forth, for the periods indicated, net sales by geographic location:

Years Ended December 31,	**2023**	**% of Total**	**2022**	**% of Total**
Domestic	**$ 1,001,087**	**29 %**	$ 1,100,159	33 %
Europe	**2,001,779**	**57 %**	1,773,395	53 %
Other Foreign	**484,584**	**14 %**	448,695	14 %

COST OF SALES (EXCLUSIVE OF DEPRECIATION AND AMORTIZATION SHOWN BELOW)

Our cost of sales ("COS") as a percent of net sales decreased to 63.8% in 2023 compared to 65.0% in 2022, in spite of approximately $16 million additional costs related to the validation of the new injectables expansion capacity as well as inefficiencies in the first part of the year due to the Enterprise Resource Planning ("ERP") system implementation. Our COS percentage was positively impacted by an improved mix of our higher-margin Pharma product sales compared to the same period in 2022. We also benefited from the moderation of inflationary cost increases. Since we maintained our normal pass-through of resin costs during 2023 and there is no margin on these pass-through costs, the decrease in resin prices caused a decrease in our COS as a percentage of sales.

SELLING, RESEARCH & DEVELOPMENT AND ADMINISTRATIVE

Our selling, research & development and administrative expenses ("SG&A") increased approximately 4% or $21.5 million to $565.8 million in 2023 compared to $544.3 million in 2022. Excluding changes in foreign currency rates, SG&A increased by approximately $14.7 million compared to the prior year. Of this increase, $1.5 million relates to incremental SG&A costs in 2023 due to our acquisitions of Metaphase, iD SCENT, and Gulf Closures. Improvements from our overhead cost management initiatives during 2023 were more than offset by higher compensation costs, including accruals related to our current short-term and long-term incentive compensation programs, along with higher travel costs. SG&A as a percentage of net sales, however, decreased to 16.2% in 2023 compared to 16.4% in the prior year.

DEPRECIATION AND AMORTIZATION

Depreciation and amortization expense increased approximately 6% or $14.9 million to $248.6 million in 2023 compared to $233.7 million in 2022. Excluding changes in foreign currency rates, depreciation and amortization expense increased by approximately $11.4 million compared to the prior year. Approximately $0.9 million of this increase is due to our acquisitions of Metaphase, iD SCENT, and Gulf Closures. The remaining increase relates to higher capital spending during the current and prior years to support our growth strategy, including several new manufacturing facilities commencing operations during 2023. Depreciation and amortization as a percentage of net sales increased to 7.1% in 2023 compared to 7.0% in the prior year.

RESTRUCTURING INITIATIVES

During the third quarter of 2022, we began an initiative to better leverage our fixed cost base through growth and cost reduction measures. For the years ended December 31, 2023 and 2022, we recognized $45.4 million and $6.2 million, respectively, of restructuring costs related to this initiative. The cumulative expense incurred as of December 31, 2023 was $51.6 million.

Restructuring costs for the years ended December 31, 2023 and 2022 are as follows:

Year Ended December 31,	**2023**	**2022**
Restructuring Initiatives by Plan:		
Optimization initiative	**$ 45,445**	$ 6,224
Prior year initiatives	**(441)**	373
Total Restructuring Initiatives	**$ 45,004**	$ 6,597
Restructuring Initiatives by Segment		
Aptar Pharma	**$ 4,852**	$ —
Aptar Beauty	**20,683**	5,539
Aptar Closures	**17,927**	1,058
Corporate & Other	**1,542**	—
Total Restructuring Initiatives	**$ 45,004**	$ 6,597

OPERATING INCOME

Operating income increased approximately $24.7 million or 7% to $404.0 million in 2023 compared to $379.3 million in 2022. Excluding changes in foreign currency rates, operating income increased by approximately $14.7 million in 2023 compared to 2022. Strong Aptar Pharma segment sales growth along with our lower COS percentage and SG&A leverage discussed above more than compensated for our higher restructuring costs. Operating income as a percentage of net sales increased to 11.6% in 2023 compared to 11.4% for the prior year.

INTEREST EXPENSE

Interest expense decreased by $0.4 million in 2023 to $40.4 million compared to $40.8 million in 2022. During 2022, we repaid part of our private placement debt, which included a $0.4 million make-whole payment for the early redemption during the second quarter of 2022 which did not repeat during 2023. See Note 7 – Debt of the Consolidated Financial Statements for further details. On March 7, 2022, we issued $400 million aggregate principal amount of 3.60% Senior Notes due March 2032 in an underwritten public offering. We have been able to successfully offset the higher borrowing costs on these notes with lower overall debt balances carried during 2023.

NET OTHER (INCOME) EXPENSE

Net other expense (income) increased $15.0 million to $11.2 million of income in 2023 compared to $3.7 million of expense in 2022. During the fourth quarter of 2023, we reached a $6.6 million settlement for disputed amounts with our insurance company to recover for losses caused by a fire at our facility in Annecy, France (the 'Annecy Settlement'). $3.5 million of the $15 million increase is due to the change in fair value of our PureCycle investment. As discussed in Note 20 – Investment in Equity Securities of the Consolidated Financial Statements, this investment is recorded at fair value based on observable market prices for identical assets with the change in fair value being recorded as a net investment gain or loss in our Consolidated Statements of Income. During 2023, we also recognized $1.8 million of improved performance in our equity investments along with $3.2 million in lower pension costs compared to 2022, which more than offset $2.4 million of foreign exchange losses due to the devaluation of the Argentine peso during the fourth quarter of 2023.

PROVISION FOR INCOME TAXES

The reported effective tax rate on income before income taxes for 2023 and 2022 was 24.2% and 28.4%, respectively. The tax rate for 2023 was lower compared to 2022 due primarily to a better mix of earnings and increased tax benefits from share-based compensation.

At December 31, 2023, with the exceptions identified below, we continued to assert indefinite reinvestment of foreign earnings from Aptar's foreign operations. We do not have a balance of foreign earnings that will be subject to U.S. tax upon repatriation under the currently enacted U.S. tax laws. We continually analyze our global working capital requirements as well as local country operation needs in developing our repatriation plans.

During 2023, we recorded a liability of $2.8 million in connection with the distribution of all pre-2023 earnings of a China subsidiary that were previously asserted to be indefinitely reinvested. We also previously removed our indefinite reinvestment assertion with respect to undistributed earnings accumulated in Germany. We also previously removed the indefinite reinvestment assertion for the pre-2020 earnings in Italy, Switzerland and Colombia. We continue to assert indefinite reinvestment with respect to foreign earnings from other countries. We estimate that if the non-U.S. subsidiaries were to make a distribution of their cash or distributable reserves to the U.S., we would incur local country withholding tax and income taxes in the range of $15 million to $20 million. We would recognize such tax expense in our Consolidated Statements of Income and Consolidated Balance Sheets should we change the current indefinite reinvestment assertion on foreign earnings.

NET INCOME ATTRIBUTABLE TO APTARGROUP, INC.

We reported net income of $284.5 million in 2023 compared to $239.3 million reported in 2022.

In thousands, except percentages

APTAR PHARMA SEGMENT

Year Ended December 31,		**2023**		**2022**	**% Change 2023 vs. 2022**
Net Sales	**$**	**1,520,993**	$	1,361,256	11.7 %
Adjusted EBITDA (1)		**502,633**		441,622	13.8
Adjusted EBITDA margin (1)		**33.0 %**		32.4 %	

(1) Adjusted EBITDA is calculated as earnings before net interest, taxes, depreciation, amortization, unallocated corporate expenses, restructuring initiatives, acquisition-related costs, net unrealized investment gains and losses related to observable market price changes on equity securities and other special items. Adjusted EBITDA margins are calculated as Adjusted EBITDA divided by Reported Net Sales. See the reconciliation under "Non-U.S. GAAP Measures."

Reported net sales increased approximately 12% in 2023 to $1.52 billion compared to $1.36 billion in 2022. Changes in currency rates positively affected net sales by 2%, while the acquisition of Metaphase did not have a significant impact during 2023. Therefore, core sales increased 10% in 2023 compared to the prior year. Strong core sales growth for our proprietary drug delivery systems to the prescription drug and consumer health care markets more than compensated for lower sales to the injectables and active material science solutions markets. Core sales of our proprietary drug delivery systems to the prescription drug market increased 26% on continued strong demand for our allergic rhinitis, asthma and emergency medicines and central nervous system devices. The 17% core sales growth in the consumer health care market was driven by higher demand for our nasal decongestant, saline rinses, eye care and cough and cold solutions. Core sales of our products to the injectables market declined 7% primarily due to the shutdown of operations for the implementation of our new ERP system in the first quarter of 2023. In addition, we were up against strong prior year comparisons as we experienced strong sales of our elastomeric components for COVID-19 and other vaccines during 2022. Similarly, core sales of our active material science solutions decreased 22% mainly on strong prior year period demand for our active film products used with at-home COVID-19 antigen test kits and tooling sales that did not repeat during 2023. Digital Health currently does not represent a significant percentage of the total Pharma sales.

Year Ended December 31, 2023	**Prescription Drug**	**Consumer Health Care**	**Injectables**	**Active Material Science Solutions**	**Digital Health**	**Total**
Reported Net Sales Growth	**27 %**	**20 %**	**(4) %**	**(21) %**	**— %**	**12 %**
Currency Effects (1)	(1) %	(3) %	(2) %	(1) %	(4) %	(2) %
Acquisitions	— %	— %	(1) %	— %	— %	— %
Core Sales Growth	26 %	17 %	(7) %	(22) %	(4) %	10 %

(1) Currency effects are calculated by translating last year's amounts at this year's foreign exchange rates.

Adjusted EBITDA for 2023 increased approximately 14% to $502.6 million compared to $441.6 million in 2022. The positive impact of our strong core sales growth in the prescription drug and consumer healthcare divisions was partially offset by the additional expenses related to our injectables ERP system implementation in the first quarter of 2023 and the impact of lower COVID-19 related sales in our injectables and active material science solutions divisions, as discussed above. Overall, our Adjusted EBITDA margin improved modestly to 33.0% in 2023 compared to 32.4% in 2022.

In thousands, except percentages

APTAR BEAUTY SEGMENT

Year Ended December 31,	**2023**	**2022**	**% Change 2023 vs. 2022**
Net Sales	**$ 1,267,697**	$ 1,222,535	3.7 %
Adjusted EBITDA (1)	**163,716**	151,887	7.8
Adjusted EBITDA margin (1)	**12.9 %**	12.4 %	

(1) Adjusted EBITDA is calculated as earnings before net interest, taxes, depreciation, amortization, unallocated corporate expenses, restructuring initiatives, acquisition-related costs, net unrealized investment gains and losses related to observable market price changes on equity securities and other special items. Adjusted EBITDA margins are calculated as Adjusted EBITDA divided by Reported Net Sales. See the reconciliation under "Non-U.S. GAAP Measures."

Reported net sales increased approximately 4% in 2023 to $1.27 billion compared to $1.22 billion in 2022. Changes in currency rates positively impacted net sales by 2%, while our acquisition of iD SCENT did not have a material impact on the sales for 2023. Therefore, core sales increased 2% in 2023 compared to the prior year. Regionally, strong sales growth in Europe and Latin America more than offset lower North American demand. Core sales of our products to the beauty market increased 10% during 2023 on higher sales in both prestige and mass fragrance, along with continued growth for our cosmetic solutions. Personal care core sales decreased 7% as higher demand for our sun care applications was offset by softness in baby and hair care product sales mainly due to customer destocking in North America. Core sales to the home care markets decreased 22% over 2022 mainly due to lower demand from our air care and surface cleaner customers.

Year Ended December 31, 2023	Personal Care	Beauty	Home Care	Total
Reported Net Sales Growth	**(5) %**	**12 %**	**(21)%**	**4 %**
Currency Effects (1)	(2) %	(2) %	(1)%	(2)%
Acquisitions	— %	— %	— %	— %
Core Sales Growth	(7) %	10 %	(22)%	2 %

(1) Currency effects are calculated by translating last year's amounts at this year's foreign exchange rates.

Adjusted EBITDA for 2023 increased approximately 8% to $163.7 million from $151.9 million in 2022. This is partially due to the $6.6 million Annecy Settlement as discussed above. We further benefited from higher tooling profits and improved European profitability due to strong volume growth which more than compensated for lower profitability in North America. Adjusted EBITDA margin improved to 12.9% in 2023 compared to 12.4% in 2022.

In thousands, except percentages

APTAR CLOSURES SEGMENT

Year Ended December 31,	2023	2022	% Change 2023 vs. 2022
Net Sales	**$ 698,760**	$ 738,458	(5.4)%
Adjusted EBITDA (1)	**103,693**	86,109	20.4
Adjusted EBITDA margin (1)	**14.8 %**	11.7 %	

(1) Adjusted EBITDA is calculated as earnings before net interest, taxes, depreciation, amortization, unallocated corporate expenses, restructuring initiatives, acquisition-related costs, net unrealized investment gains and losses related to observable market price changes on equity securities and other special items. Adjusted EBITDA margins are calculated as Adjusted EBITDA divided by Reported Net Sales. See the reconciliation under "Non-U.S. GAAP Measures".

Reported net sales decreased approximately 5% in 2023 to $698.8 million compared to $738.5 million in 2022. Changes in currency rates positively impacted net sales by 1%, while the acquisition of Gulf Closures also had a positive impact of 1%. Therefore, core sales decreased 7% in 2023 compared to the prior year. Approximately half of the core sales decrease is due to passing through lower input costs, mainly due to lower resin prices during 2023. Tooling sales and product volumes were also lower as customers continued to work through their inventory levels, primarily in North America. Core sales to the food and personal care markets decreased 9% and 16%, respectively, while core sales to the beverage market increased 5% during 2023 compared to the prior year. For the food market, we were up against strong prior year period comparisons, mainly for sauces and condiment applications and our infant nutrition products. The personal care market was also negatively impacted by lower sales of our body and hair care applications, while the beverage market reported growth mainly from higher demand for our bottled water and concentrate products.

Year Ended December 31, 2023	Food	Beverage	Personal Care	Other (2)	Total
Reported Net Sales Growth	**(9)%**	**14 %**	**(15) %**	**2 %**	**(5)%**
Currency Effects (1)	— %	(2) %	(1) %	— %	(1)%
Acquisitions	— %	(7) %	— %	— %	(1)%
Core Sales Growth	(9)%	5 %	(16) %	2 %	(7)%

(1) Currency effects are calculated by translating last year's amounts at this year's foreign exchange rates.
(2) Other includes beauty, home care and healthcare markets.

Adjusted EBITDA for 2023 increased approximately 20% to $103.7 million compared to $86.1 million in 2022. Our profitability was positively impacted by a focus on operational improvements and containing costs within our new segment structure. As discussed above, approximately half of our sales decrease was due to passing through lower input costs. As these pass-throughs typically do not carry any margin, the lower sales favorably impact our margins. Together, these changes led to our Adjusted EBITDA margin improving from 11.7% in 2022 to 14.8% during 2023.

CORPORATE & OTHER

In addition to our three reporting segments, Aptar assigns certain costs to “Corporate & Other,” which is presented separately in Note 18 — Segment Information of the Notes to the Consolidated Financial Statements. For Corporate & Other, Adjusted EBITDA (which excludes net interest, taxes, depreciation, amortization, restructuring initiatives, acquisition-related costs, net unrealized investment gains and losses related to observable market price changes on equity securities and other special items) primarily includes certain professional fees, compensation and information system costs which are not allocated directly to our reporting segments.

Corporate & Other expenses in 2023 decreased to $62.3 million compared to $62.9 million in 2022. This expense decrease is mainly due to realized gains on the sale of PCT shares related to our PureCycle investment. Our results include approximately $4.2 million and $1.2 million realized gains on sales of PCT shares for 2023 and 2022, respectively. As noted above, any unrealized investment gains or losses are removed from our Adjusted EBITDA calculation as we believe that unrealized investment gains and losses from changes in market prices are not considered relevant to understanding our reported consolidated earnings or evaluating our periodic economic performance. The remaining cost increases are mainly due to higher professional fees for corporate projects and higher incentive compensation costs, including accruals related to our current short-term and equity compensation programs.

NON-U.S. GAAP MEASURES

In addition to the information presented herein that conforms to U.S. GAAP, we also present financial information that does not conform to U.S. GAAP, which are referred to as non-U.S. GAAP financial measures. Management may assess our financial results both on a U.S. GAAP basis and on a non-U.S. GAAP basis. We believe it is useful to present these non-U.S. GAAP financial measures because they allow for a better period-over-period comparison of operating results by removing the impact of items that, in management’s view, do not reflect our core operating performance. These non-U.S. GAAP financial measures should not be considered in isolation or as a substitute for U.S. GAAP financial results, but should be read in conjunction with the audited Consolidated Statements of Income and other information presented herein. Investors are cautioned against placing undue reliance on these non-U.S. GAAP measures. Further, investors are urged to review and consider carefully the adjustments made by management to the most directly comparable U.S. GAAP financial measures to arrive at these non-U.S. GAAP financial measures.

In our Management's Discussion and Analysis, we exclude the impact of foreign currency translation when presenting net sales and other information, which we define as “constant currency.” Changes in net sales excluding the impact of foreign currency translation is a non-U.S. GAAP financial measure. As a worldwide business, it is important that we take into account the effects of foreign currency translation when we view our results and plan our strategies. Consequently, when our management looks at our financial results to measure the core performance of our business, we may exclude the impact of foreign currency translation by translating our prior period results at current period foreign currency exchange rates. As a result, our management believes that these presentations are useful internally and may be useful to investors. We also exclude the impact of material acquisitions when comparing results to prior periods. Changes in operating results excluding the impact of acquisitions are non-U.S. GAAP financial measures. We believe it is important to exclude the impact of acquisitions on period over period results in order to evaluate performance on a more comparable basis.

We present earnings before net interest and taxes (“EBIT”) and earnings before net interest, taxes, depreciation and amortization (“EBITDA”). We also present our adjusted earnings before net interest and taxes (“Adjusted EBIT”) and adjusted earnings before net interest, taxes, depreciation and amortization (“Adjusted EBITDA”), both of which exclude restructuring initiatives, acquisition-related costs, purchase accounting adjustments related to acquisitions and investments and net unrealized investment gains and losses related to observable market price changes on equity securities. Our Operations Outlook is also provided on a non-U.S. GAAP basis because certain reconciling items are dependent on future events that either cannot be controlled, such as exchange rates and changes in the fair value of equity investments, or reliably predicted because they are not part of our routine activities, such as restructuring initiatives and acquisition-related costs.

We provide a reconciliation of Net Debt to Net Capital as a non-U.S. GAAP measure. "Net Debt" is calculated as interest bearing debt less cash and equivalents and short-term investments while "Net Capital" is calculated as stockholders' equity plus Net Debt. Net Debt to Net Capital measures a company’s financial leverage, which gives users an idea of a company's financial structure, or how it is financing its operations, along with insight into its financial strength. We believe that it is meaningful to take into consideration the balance of our cash, cash equivalents and short-term investments when evaluating our leverage. If needed, such assets could be used to reduce our gross debt position.

Finally, we provide a reconciliation of free cash flow as a non-U.S. GAAP measure. Free cash flow is calculated as cash provided by operating activities less capital expenditures plus proceeds from government grants related to capital expenditures. We use free cash flow to measure cash flow generated by operations that is available for dividends, share repurchases, acquisitions and debt repayment. We believe that it is meaningful to investors in evaluating our financial performance and measuring our ability to generate cash internally to fund our initiatives.

	Year Ended December 31, 2023					
	Consolidated	**Aptar Pharma**	**Aptar Beauty**	**Aptar Closures**	**Corporate & Other**	**Net Interest**
Net Sales	**$ 3,487,450**	$ 1,520,993	$ 1,267,697	$ 698,760	$ —	$ —
Reported net income	**$ 284,176**					
Reported income taxes	**90,649**					
Reported income before income taxes	**374,825**	**388,415**	**59,210**	**33,615**	**(70,370)**	**(36,045)**
Adjustments:						
Restructuring initiatives	45,004	4,852	20,683	17,927	1,542	
Net investment gain (1)	(1,413)				(1,413)	
Realized gain on investments included in net investment gain above	4,188				4,188	
Transaction costs related to acquisitions	480	—	424	56	—	
Adjusted earnings before income taxes	423,084	393,267	80,317	51,598	(66,053)	(36,045)
Interest expense	40,418					40,418
Interest income	(4,373)					(4,373)
Adjusted earnings before net interest and taxes (Adjusted EBIT)	459,129	393,267	80,317	51,598	(66,053)	—
Depreciation and amortization	248,593	109,366	83,399	52,095	3,733	—
Adjusted earnings before net interest, taxes, depreciation and amortization (Adjusted EBITDA)	$ 707,722	$ 502,633	$ 163,716	$ 103,693	$ (62,320)	$ —
Reported net income margin (Reported net income / Reported Net Sales)	**8.1 %**					
Adjusted EBITDA margins (Adjusted EBITDA / Reported Net Sales)	20.3 %	33.0 %	12.9 %	14.8 %		

(1) Net investment gain represents the change in fair value of our investment in PCT (see Note 20 - Investment in Equity Securities for further details).

	Year Ended December 31, 2022					
	Consolidated	Aptar Pharma	Aptar Beauty	Aptar Closures	Corporate & Other	Net Interest
Net Sales	**$ 3,322,249**	$ 1,361,256	$ 1,222,535	$ 738,458	$ —	$ —
Reported net income	**$ 239,555**					
Reported income taxes	**95,149**					
Reported income before income taxes	**334,704**	**346,995**	**65,850**	**32,185**	**(72,199)**	**(38,127)**
Adjustments:						
Restructuring initiatives	6,597	—	5,539	1,058	—	
Net investment loss (1)	2,110				2,110	
Realized gain on investments included in net investment loss above	1,213				1,213	
Transaction costs related to acquisitions	231	231	—	—	—	
Adjusted earnings before income taxes	344,855	347,226	71,389	33,243	(68,876)	(38,127)
Interest expense	40,827					40,827
Interest income	(2,700)					(2,700)
Adjusted earnings before net interest and taxes (Adjusted EBIT)	382,982	347,226	71,389	33,243	(68,876)	—
Depreciation and amortization	233,706	94,396	80,498	52,866	5,946	—
Adjusted earnings before net interest, taxes, depreciation and amortization (Adjusted EBITDA)	$ 616,688	$ 441,622	$ 151,887	$ 86,109	$ (62,930)	$ —
Reported net income margin (Reported net income / Reported Net Sales)	**7.2 %**					
Adjusted EBITDA margins (Adjusted EBITDA / Reported Net Sales)	18.6 %	32.4 %	12.4 %	11.7 %		

(1) Net investment loss represents the change in fair value of our investment in PCT (see Note 20 - Investment in Equity Securities for further details).

Net Debt to Net Capital Reconciliation	**December 31, 2023**	**December 31, 2022**
Revolving credit facility and overdrafts	$ 81,794	$ 3,810
Current maturities of long-term obligations, net of unamortized debt issuance costs	376,426	118,981
Long-Term Obligations, net of unamortized debt issuance costs	681,188	1,052,597
Total Debt	**$ 1,139,408**	**$ 1,175,388**
Less:		
Cash and equivalents	$ 223,643	$ 141,732
Net Debt	**$ 915,765**	**$ 1,033,656**
Total Stockholders' Equity	$ 2,321,298	$ 2,068,204
Net Debt	915,765	1,033,656
Net Capital	**$ 3,237,063**	**$ 3,101,860**
Net Debt to Net Capital	**28.3 %**	**33.3 %**

Free Cash Flow Reconciliation	December 31, 2023	December 31, 2022
Net Cash Provided by Operations	**$ 575,239**	**$ 478,617**
Capital Expenditures	**(312,342)**	**(310,427)**
Proceeds from Government Grants	**—**	**27,795**
Free Cash Flow	$ 262,897	$ 195,985

LIQUIDITY AND CAPITAL RESOURCES

Given our current level of leverage relative to others in our industry and our ability to consistently generate significant cash flow from operations, we believe we are in a strong financial position to meet our business requirements in the foreseeable future. We have historically used cash flow from operations and our revolving and other credit facilities, as needed, as our primary sources of liquidity. Our primary uses of cash are to invest in equipment and working capital for the continued growth of our business, including facilities that are necessary to support our growth, pay quarterly dividends to stockholders, make acquisitions and repurchase shares of our common stock. In the event that customer demand decreases significantly for a prolonged period of time and adversely impacts our cash flows from operations, we would have the ability to restrict and significantly reduce our capital expenditure levels and share repurchases, as well as evaluate our acquisition strategy. A prolonged and significant reduction in capital expenditure levels could increase future repairs and maintenance costs as well as have a negative impact on operating margins if we were unable to invest in new innovative products.

Cash and equivalents increased to $223.6 million at December 31, 2023 from $141.7 million at December 31, 2022 while total short and long-term interest bearing debt of $1.14 billion at December 31, 2023 decreased from $1.18 billion at December 31, 2022. The ratio of our Net Debt (interest bearing debt less cash and cash equivalents) to Net Capital (stockholders' equity plus Net Debt) decreased to 28.3% at December 31, 2023 compared to 33.3% at December 31, 2022. See the reconciliation under "Non-U.S. GAAP Measures".

In 2023, our operations provided approximately $575.2 million in net cash flow compared to $478.6 million in 2022. Cash flow from operations is primarily derived from earnings before depreciation and amortization. The increase in 2023 cash flow from operations compared to 2022 is primarily attributable to improved earnings and better working capital management. Based on our current business plan and revenue prospects, we believe that our 2024 operating cash flow will be more than sufficient to fund our working capital needs and outstanding purchase commitments as discussed in Note 20 - Investment in Equity Securities and Note 13 - Commitments and Contingencies as well as lease arrangements as discussed in Note 8 - Lease Commitments.

We used $324.5 million in cash for investing activities during 2023 compared to $295.6 million during 2022. During 2023, approximately $10.9 million was utilized to fund the iD SCENT and Gulf Closures acquisitions, and $5.2 million was utilized to fund the remaining payment on the Hengyu acquisition. Our investments in capital projects net of government grant proceeds increased $29.7 million primarily due to $27.8 million related to government grant proceeds received in 2022 for our active material science solutions and injectables divisions. In 2024, we expect our capital investments to be in the range of $280 million to $300 million.

Financing activities utilized $171.6 million of cash during 2023, compared to $162.1 million during 2022. During 2023, we paid $103.7 million of dividends, purchased $47.6 million of our common stock that was placed into treasury stock and received proceeds of $54.0 million on stock option exercises. We paid our outstanding contingent consideration obligation related to the Fusion acquisition of $25.3 million of which $22.8 million was treated as a financing outflow. Additionally, we received proceeds of $77.0 million from our revolving credit facility and repaid $125.8 million of our long-term debt obligations. During 2022, we received proceeds of $412.0 million primarily from the issuance of $400 million of our 3.60% Senior Notes due March 2032, we repaid $143.1 million related to our revolving credit facility, redeemed all $75.0 million of our 3.25% senior unsecured notes and repaid $125.0 million on our 3.49% senior unsecured notes. In 2024, we expect to have financing cash outlays of approximately $458.2 million to fund short- and long-term debt obligations as discussed in Note 7 - Debt, which are expected to be covered by cash on hand or additional borrowings on our revolving credit facility.

Refer to Part II, Item 7 – Management's Discussion and Analysis of Financial Condition and Results of Operations - Liquidity and Capital Resources of our Annual Report on Form 10-K for the fiscal year ended December 31, 2022 for additional information regarding cash flows for the year ended December 31, 2022 as compared to the year ended December 31, 2021.

On June 30, 2021, we entered into an amended and restated multi-currency revolving credit facility (the "revolving credit facility") with a syndicate of banks to replace the then-existing facility maturing July 2022 (the "prior credit facility") and to amend and restate the unsecured term loan facility extended to our wholly-owned UK subsidiary under the prior credit facility (as amended, the "amended term facility"). The revolving credit facility matures in June 2026, subject to a maximum of two one-year extensions in certain circumstances, and provides for unsecured financing of up to $600 million available in the U.S. and to our wholly-owned UK subsidiary. The amended term facility matured in July 2022 and was repaid in full. The revolving credit facility can be drawn in various currencies including USD, EUR, GBP, and CHF to the equivalent of $600 million, which may be increased by up to $300 million subject to the satisfaction of certain conditions. As of December 31, 2023, $36.5 million and €40.0 million ($44.2 million) was utilized under the revolving credit facility in the U.S. and no balance was utilized by our wholly-owned UK subsidiary. As of December 31, 2022, no balance was utilized under the revolving credit facility in the U.S. and no balance was utilized by our wholly-owned UK subsidiary.

There are no compensating balance requirements associated with our revolving credit facility. Each borrowing under the revolving credit facility will bear interest at rates based on SOFR (in the case of USD), EURIBOR (in the case of EUR), SONIA (in the case of GBP), SARON (in the case of CHF), prime rates or other similar rates, in each case plus an applicable margin. In May 2023, the revolving credit facility was amended to make SOFR the default borrowing rate for USD. The revolving credit facility also provides mechanics relating to a transition away from designated benchmark rates for other available currencies and the replacement of any such applicable benchmark by a replacement alternative benchmark rate or mechanism for loans made in the applicable currency. A facility fee on the total amount of the revolving credit facility is also payable quarterly, regardless of usage. The applicable margins for borrowings under the revolving credit facility and the facility fee percentage may change from time to time depending on changes in our consolidated leverage ratio. Credit facility balances are included in notes payable, revolving credit facility and overdrafts on the Consolidated Balance Sheets.

Our revolving credit facility and certain long-term obligations require us to satisfy certain financial and other covenants including:

	Requirement	**Level at December 31, 2023**
Consolidated Leverage Ratio (1)	Maximum of 3.50 to 1.00	1.46 to 1.00
Consolidated Interest Coverage Ratio (1)	Minimum of 3.00 to 1.00	16.06 to 1.00

(1) Definitions of ratios are included as part of the revolving credit facility agreement and the private placement agreements.

Based upon the above consolidated leverage ratio covenant, we would have the ability to borrow approximately an additional $1.3 billion before the 3.50 to 1.00 maximum ratio requirement would be exceeded.

On July 6, 2022, we entered into an agreement to swap approximately $200 million of our fixed USD debt to fixed EUR debt which should generate interest savings of approximately $0.5 million per quarter based upon exchange rates as of the transaction date.

In October 2020, we entered into an unsecured money market borrowing arrangement to provide short term financing of up to $30 million that is available in the U.S. No borrowing on this facility is permitted over a quarter end date. As such, no balance was utilized under this arrangement as of December 31, 2023.

Our foreign operations have historically met cash requirements with the use of internally generated cash or uncommitted short-term borrowings. We also have committed financing arrangements in both the U.S. and the UK as detailed above. We manage our global cash requirements considering (i) available funds among the many subsidiaries through which we conduct business, (ii) the geographic location of our liquidity needs, and (iii) the cost to access international cash balances.

RECENTLY ISSUED ACCOUNTING STANDARDS

For a discussion of recently issued accounting standards, including their impacts, if any, of the adoption of these standards, see Note 1 – Summary of Significant Accounting Policies.

CRITICAL ACCOUNTING ESTIMATES

The preparation of the financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities. We continually evaluate our estimates, including those related to bad debts, inventories, intangible assets, income taxes, pensions and contingencies. We base our estimates on historical experience and on a variety of other assumptions believed to be reasonable in order to make judgments about the carrying values of assets and liabilities. Actual results may differ from these estimates under different assumptions or conditions. We believe the following critical accounting policies affect our more significant judgments and estimates used in preparation of our Consolidated Financial Statements. Management has discussed the development and selection of these critical accounting estimates with the Audit Committee and the Audit Committee has reviewed our disclosure relating to it in this MD&A.

IMPAIRMENT OF GOODWILL

In accordance with current accounting standards, goodwill has an indefinite life and is not amortized. We evaluate our goodwill for impairment at the reporting unit level on an annual basis, or whenever indicators of impairment exist. We have determined that our Aptar Beauty and Aptar Closures business segments each represent a reporting unit. In addition to the Aptar Pharma business reporting unit, the injectables and active material science solutions divisions of the Aptar Pharma segment qualify as separate reporting units for goodwill impairment testing apart from the remaining Aptar Pharma business. As a result of the realignment of two of our segments effective January 1, 2023, we reclassified $39.5 million of goodwill from Aptar Beauty into Aptar Closures. As of December 31, 2023, we have $963.4 million of goodwill, which is allocated as follows:

In Thousands **Reporting Unit**		**Balance at December 31, 2023**
Pharma	$	175,606
Injectables		171,211
Active Material Science Solutions		161,630
Beauty		287,096
Closures		167,875
Total	**$**	**963,418**

We believe that the accounting estimates related to determining the fair value of our reporting units is a critical accounting estimate because: (1) it is highly susceptible to change from period to period as it requires management to make assumptions about the future cash flows for each reporting unit over several years, and (2) the impact that recognizing an impairment would have on the assets reported on our balance sheet as well as our results of operations could be material. Management's determination of the fair value of our reporting units, based on future cash flows for the reporting units, requires significant judgment and the use of estimates and assumptions related to projected revenue growth rates, projected EBITDA margins, the terminal growth factor, as well as the discount rate. Actual cash flows in the future may differ significantly from those forecasted today. The estimates and assumptions for future cash flows and their impact on the impairment testing of goodwill are a critical accounting estimate.

For our goodwill impairment assessment, we first consider qualitative factors to determine whether the existence of events or circumstances leads to a determination that it is more likely than not (greater than 50 percent chance) that the fair value of a reporting unit is less than its carrying amount (the "step zero" approach). Such qualitative factors may include the following: macroeconomic conditions; industry and market considerations; cost factors; overall financial performance, and other relevant entity-specific events. In the absence of sufficient qualitative factors, if it is determined that the fair value of a reporting unit is below its carrying amount, where necessary, goodwill will be impaired at that time.

We have historically evaluated our goodwill for impairment annually as of October 1 or more frequently if events or circumstances change that would, more likely than not, reduce the fair value of a reporting unit below it's carrying value, in accordance with Accounting Standards Codification ("ASC") Topic 350, "Intangibles - Goodwill and Other." Due to the realignment of the Beauty and Closures segments, management determined it appropriate to calculate the fair value of both reporting units and compare with their associated carrying amounts as of January 1, 2023. Further, as we performed our annual goodwill impairment assessment, due to events or circumstances that were unfavorable for injectables and active material science solutions, management determined it appropriate to calculate the fair value of both reporting units and compare with their associated carrying amounts as of October 1, 2023.

We estimated the fair values of the affected businesses based upon the present value of their estimated future cash flows. Our determination of fair value involved judgment and the use of significant estimates and assumptions, including assumptions regarding the projected revenue growth rates, projected EBITDA margins, the terminal growth factor, as well as the discount rate to calculate estimated future cash flows. We believe that our assumptions used in discounting future cash flows are appropriate. At October 1, 2023, our goodwill for the Injectables and Active Material Science Solutions reporting units were $166.1 million and $158.7 million, respectively. A 15% decrease in the estimated fair value of the Injectables and Active Material Science Solutions would not have resulted in a different conclusion. Based on our qualitative and quantitative analysis performed over the reporting units, we determined it was more likely than not that the fair value of these reporting units was greater than their carrying amounts and therefore no impairment of goodwill was recognized during the year ended December 31, 2023.

INCOME TAXES

We recognize tax benefits from uncertain tax positions if it is more likely than not that the tax position will be sustained on examination by the taxing authorities, based on the technical merits of the position. The tax benefits recognized in the financial statements from such positions are measured based on the largest benefit that has a greater-than-50% likelihood of being realized upon ultimate settlement. The calculation of tax liabilities involves significant judgment in estimating the impact of uncertainties in the application of U.S. GAAP and complex tax laws. Resolution of these uncertainties in a manner inconsistent with management's expectations could have a material impact on our financial condition and operating results.

At December 31, 2023 and 2022, we had $133.4 million and $114.8 million, respectively, of deferred tax assets net of valuation allowance on our balance sheet, a significant portion of which is related to net operating losses and other tax attribute carryforwards. The ultimate realization of these deferred tax assets is dependent upon the amount, source, and timing of future taxable income. In cases where we believe it is more likely than not that we may not realize the future potential tax benefits, we establish a valuation allowance against the deferred tax assets. We have $131.4 million of tax losses in Luxembourg for which no deferred tax asset or valuation allowance has been recorded since there is no expectation of realization.

ACQUISITIONS

We account for business combinations using the acquisition method, which requires management to estimate the fair value of identifiable assets acquired and liabilities assumed, and to properly allocate purchase price consideration to the individual assets acquired and liabilities assumed. Goodwill is measured as the excess amount of consideration transferred, compared to fair value of the assets acquired and the liabilities assumed. The allocation of the purchase price utilizes significant estimates and assumptions in determining the fair values of identifiable assets acquired and liabilities assumed, especially with respect to intangible assets. These estimates are based on all available information and in some cases assumptions with respect to the timing and amount of future revenues and expenses associated with an asset and are reviewed by consulting with outside valuation experts. The purchase price allocation for business acquisitions contains uncertainties because it requires management's judgment.

Management applied judgment in determining the fair value of the acquired assets with respect to the acquisitions of Metaphase, iD SCENT and Gulf Closures, including the fair values of acquired intangibles including acquired technology, trademarks and customer relationships. In particular, judgment was applied with respect to determining the fair value of acquired technology, trademarks and customer relationships intangible assets, which involved the use of benchmarking to prior deals to assess the reasonableness of allocation of excess purchase price to goodwill and intangibles.

VALUATION OF PENSION BENEFITS

The benefit obligations and net periodic pension cost associated with our domestic and foreign noncontributory pension plans are determined using actuarial assumptions. Such assumptions include discount rates to reflect the time value of money, rate of employee compensation increases, demographic assumptions to determine the probability and timing of benefit payments, and the long-term rate of return on plan assets. The actuarial assumptions are based upon management’s best estimates, after consulting with outside investment advisors and actuaries. Because assumptions and estimates are used, actual results could differ from expected results.

The discount rate is utilized principally in calculating our pension obligations, which are represented by the Accumulated Benefit Obligation ("ABO") and the Projected Benefit Obligation (“PBO”), and in calculating net periodic benefit cost. In establishing the discount rate for our foreign plans, we review a number of relevant interest rates including AA corporate bond yields. In establishing the discount rate for our domestic plans, we match the hypothetical duration of our plans, using a weighted average duration that is based upon projected cash payments, to a simulated bond portfolio (FTSE Pension Index Curve). At December 31, 2023, the discount rates for our domestic and foreign plans were 4.95% and 3.20%, respectively.

We believe that the accounting estimates related to determining the valuation of pension benefits are critical accounting estimates because: (1) changes in them can materially affect net income and (2) we are required to establish the discount rate and the expected return on fund assets, which are highly uncertain and require judgment. The estimates for the valuation of pension benefits are critical accounting estimates for all of our segments.

To the extent the discount rates increase (or decrease), our PBO and net periodic benefit cost will decrease (or increase) accordingly. The estimated effect of a 1% decrease in each discount rate would be a $49.0 million increase in the PBO ($36.3 million for the domestic plans and $12.7 million for the foreign plans) and a $3.1 million increase in net periodic benefit cost ($2.1 million for the domestic plans and $1.0 million for the foreign plans). To the extent the PBO increases, the after-tax effect of such increase could reduce Other Comprehensive Income and Stockholders’ Equity. The estimated effect of a 1% increase in each discount rate would be a $39.1 million decrease in the PBO ($28.4 million for the domestic plans and $10.7 million for the foreign plans) and a $5.3 million decrease in net periodic benefit cost ($4.6 million for the domestic plans and $0.7 million for the foreign plans).

The assumed expected long-term rate of return on assets is the average rate of earnings expected on the funds invested to provide for the benefits included in the PBO. Of domestic plan assets, approximately 48% was invested in equities, 26% was invested in fixed income securities, 11% was invested in hedge funds, 8% was invested in infrastructure securities, 5% was invested in real estate securities and 1% was invested in money market funds, at December 31, 2023. Of foreign plan assets, approximately 94% was invested in investment funds, 3% was invested in equity securities, 1% was invested in corporate debt securities, 1% was invested in fixed income securities and 1% was invested in money market funds at December 31, 2023.

The expected long-term rate of return assumptions are determined based on our investment policy combined with expected risk premiums of equities and fixed income securities over the underlying risk-free rate. This rate is utilized principally in calculating the expected return on the plan assets component of the net periodic benefit cost. To the extent the actual rate of return on assets realized over the course of a year is greater or less than the assumed rate, that year's net periodic benefit cost is not affected. Rather, this gain (or loss) reduces (or increases) future net periodic benefit cost over a period of approximately 15 to 20 years. To the extent the expected long-term rate of return on assets increases (or decreases), our net periodic benefit cost will decrease (or increase) accordingly. The estimated effect of a 1% decrease (or increase) in each expected long-term rate of return on assets would be a $2.4 million increase (or decrease) in net periodic benefit cost.

The average rate of compensation increase is utilized principally in calculating the PBO and the net periodic benefit cost. The estimated effect of a 0.5% decrease in each of the expected compensation rates would be a $6.0 million decrease in the PBO ($1.3 million decrease for the domestic plans and $4.7 million decrease for the foreign plans) and a $0.9 million decrease to the net periodic benefit cost. The estimated effect of a 0.5% increase in each of the expected compensation rates would be a $6.4 million increase in the PBO ($1.3 million increase for the domestic plans and $5.1 million increase for the foreign plans) and a $1.0 million increase to the net periodic benefit cost.

Our primary pension related assumptions as of December 31, 2023 and 2022 were as follows:

Actuarial Assumptions as of December 31,	**2023**	**2022**
Discount rate:		
Domestic plans	**4.95 %**	5.15 %
Foreign plans	**3.20 %**	3.69 %
Expected long-term rate of return on plan assets:		
Domestic plans	**7.00 %**	7.00 %
Foreign plans	**3.23 %**	3.53 %
Rate of compensation increase:		
Domestic plans	**3.24 %**	3.20 %
Foreign plans	**3.20 %**	3.21 %

In order to determine the 2024 net periodic benefit cost, we expect to use the discount rates, expected long-term rates of return on plan assets and rates of compensation assumptions as of December 31, 2023. The estimated impact of the changes to the assumptions as noted in the table above on our 2024 net periodic benefit cost is expected to be an increase of approximately $1.5 million.

OPERATIONS OUTLOOK

Looking to the first quarter, we intend to build on our positive momentum from the previous year and anticipate starting the year off strong. We expect demand for pharma's proprietary drug delivery systems and elastomeric components for biologics to continue to grow. We also expect our beauty and closures segments to benefit from a progressive recovery of the North American market and we anticipate continued demand for our fragrance dispensing technologies. We remain focused on reducing SG&A as a percentage of sales and reducing our fixed costs.

Aptar expects earnings per share for the first quarter of 2024, excluding any restructuring expenses, changes in the fair value of equity investments and acquisition-related costs, to be in the range of $1.10 to $1.18 and this guidance is based on an effective tax rate range of 24.5% to 26.5%.

FORWARD-LOOKING STATEMENTS

Certain statements in MD&A and other sections of this Form 10-K are forward-looking and involve a number of risks and uncertainties, including certain statements set forth in the Significant Developments, Restructuring Initiatives, Liquidity and Capital Resources, Contingencies and Operations Outlook sections of this Form 10-K. Words such as "expects," "anticipates," "believes," "estimates," "future", "potential", "continues", "are optimistic" and other similar expressions or future or conditional verbs such as "will," "should," "would" and "could" are intended to identify such forward-looking statements. Forward-looking statements are made pursuant to the safe harbor provisions of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934 and are based on our beliefs as well as assumptions made by and information currently available to us. Accordingly, our actual results or other events may differ materially from those expressed or implied in such forward-looking statements due to known or unknown risks and uncertainties that exist in our operations and business environment, including but not limited to:

- geopolitical conflicts worldwide including the invasion of Ukraine by the Russian military and the recent events in the Middle East and the resulting indirect impact on demand from our customers selling their products into these countries, as well as rising input costs and certain supply chain disruptions;

- lower demand and asset utilization due to an economic recession either globally or in key markets we operate within;
- economic conditions worldwide, including inflationary conditions and potential deflationary conditions in other regions we rely on for growth;
- the execution of our fixed cost reduction initiatives, including our optimization initiative;
- the availability of raw materials and components (particularly from sole sourced suppliers) as well as the financial viability of these suppliers;
- fluctuations in the cost of materials, components, transportation cost as a result of supply chain disruptions and labor shortages, and other input costs (particularly resin, metal, anodization costs and energy costs);
- significant fluctuations in foreign currency exchange rates or our effective tax rate;
- the impact of tax reform legislation, changes in tax rates and other tax-related events or transactions that could impact our effective tax rate;
- financial conditions of customers and suppliers;
- consolidations within our customer or supplier bases;
- changes in customer and/or consumer spending levels;
- loss of one or more key accounts;
- our ability to successfully implement facility expansions and new facility projects;
- our ability to offset inflationary impacts with cost containment, productivity initiatives and price increases;
- changes in capital availability or cost, including rising interest rates;
- volatility of global credit markets;
- our ability to identify potential new acquisitions and to successfully acquire and integrate such operations, including the successful integration of the businesses we have acquired, including contingent consideration valuation;
- our ability to build out acquired businesses and integrate the product/service offerings of the acquired entities into our existing product/service portfolio;
- direct or indirect consequences of acts of war, terrorism or social unrest;
- cybersecurity threats that could impact our networks and reporting systems;
- the impact of natural disasters and other weather-related occurrences;
- fiscal and monetary policies and other regulations;
- changes, difficulties or failures in complying with government regulation, including FDA or similar foreign governmental authorities;
- changing regulations or market conditions regarding environmental sustainability;
- work stoppages due to labor disputes;
- competition, including technological advances;
- our ability to protect and defend our intellectual property rights, as well as litigation involving intellectual property rights;
- the outcome of any legal proceeding that has been or may be instituted against us and others;
- our ability to meet future cash flow estimates to support our goodwill impairment testing;
- the demand for existing and new products;
- the success of our customers' products, particularly in the pharmaceutical industry;
- our ability to manage worldwide customer launches of complex technical products, particularly in developing markets;
- difficulties in product development and uncertainties related to the timing or outcome of product development;
- significant product liability claims; and
- other risks associated with our operations.

Although we believe that our forward-looking statements are based on reasonable assumptions, there can be no assurance that actual results, performance or achievements will not differ materially from any future results, performance or achievements expressed or implied by such forward-looking statements. Readers are cautioned not to place undue reliance on forward-looking statements. We undertake no obligation to update publicly any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law. Please refer to Part 1, Item 1A - Risk Factors included in this Form 10-K for additional risk factors affecting the Company.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

MARKET RISKS

A significant number of our operations are located outside of the United States. Because of this, movements in exchange rates may have a significant impact on the translation of the financial condition and results of operations of our subsidiaries. Our primary foreign exchange exposure is to the euro, but we have foreign exchange exposure to the Chinese yuan, Brazilian real, Argentine peso, Mexican peso, Swiss franc and other Asian, European and Latin American currencies. A weakening U.S. dollar relative to foreign currencies has an additive translation effect on our financial statements. Conversely, a strengthening U.S. dollar has a dilutive effect. Additionally, in some cases, we sell products denominated in a currency different from the currency in which the related costs are incurred. Any changes in exchange rates on such inter-country sales may impact our results of operations.

The table below provides information as of December 31, 2023 about our forward currency exchange contracts. The majority of the contracts expire before the end of the first quarter of 2024.

Year Ended December 31, 2023 **Buy/Sell**		**Contract Amount (in thousands)**	**Average Contractual Exchange Rate**	**Min / Max Notional Volumes**
EUR / USD	$	13,024	1.0798	13,024 - 20,581
EUR / BRL		12,302	5.3469	11,751 - 12,302
USD / EUR		5,187	0.9253	1,417 - 5,187
EUR / THB		4,915	37.8869	4,734 - 4,915
CHF / EUR		4,491	1.0487	2,294 - 4,491
USD / CNY		3,600	7.1337	2,100 - 3,980
CZK / EUR		2,771	0.0408	2,771 - 6,959
MXN / USD		2,000	0.0569	2,000 - 3,500
THB / EUR		1,012	0.0264	0 - 1,012
GBP / EUR		704	1.1516	407 - 1,071
EUR / MXN		664	19.0128	664 - 1,318
CHF / USD		179	1.1226	166 - 179
Total	$	50,849		

As of December 31, 2023, we have recorded the fair value of foreign currency forward exchange contracts of $0.4 million in prepaid and other and $0.2 million in accounts payable, accrued and other liabilities in the Consolidated Balance Sheets. On July 6, 2022, we entered into a seven year USD/EUR fixed-to-fixed cross currency interest rate swap to effectively hedge the interest rate exposure relating to $203 million of the $400 million 3.60% Senior Notes due March 2032 which were issued by AptarGroup, Inc. on March 7, 2022. This USD/EUR swap agreement exchanged $203 million of fixed-rate 3.60% USD debt to €200 million of fixed-rate 2.5224% EUR debt. The fair value of this net investment hedge is $22.2 million and is reported in accounts payable, accrued and other liabilities in the Consolidated Balance Sheets.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

AptarGroup, Inc.
CONSOLIDATED STATEMENTS OF INCOME

In thousands, except per share amounts

Year Ended December 31,	**2023**	**2022**	**2021**
Net Sales	**$ 3,487,450**	$ 3,322,249	$ 3,227,221
Operating Expenses:			
Cost of sales (exclusive of depreciation and amortization shown below)	**2,224,051**	2,158,411	2,070,538
Selling, research & development and administrative	**565,783**	544,262	551,242
Depreciation and amortization	**248,593**	233,706	234,853
Restructuring initiatives	**45,004**	6,597	23,240
Total Operating Expenses	**3,083,431**	2,942,976	2,879,873
Operating Income	**404,019**	379,273	347,348
Other (Expense) Income:			
Interest expense	**(40,418)**	(40,827)	(30,284)
Interest income	**4,373**	2,700	3,668
Net investment gain (loss)	**1,413**	(2,110)	4,709
Equity in results of affiliates	**2,226**	467	(692)
Miscellaneous income (expense), net	**3,212**	(4,799)	(3,094)
Total Other Expense	**(29,194)**	(44,569)	(25,693)
Income before Income Taxes	**374,825**	334,704	321,655
Provision for Income Taxes	**90,649**	95,149	78,017
Net Income	**$ 284,176**	$ 239,555	$ 243,638
Net Loss (Income) Attributable to Noncontrolling Interests	**311**	(267)	459
Net Income Attributable to AptarGroup, Inc.	**$ 284,487**	$ 239,288	$ 244,097
Net Income Attributable to AptarGroup, Inc. per Common Share:			
Basic	**$ 4.34**	$ 3.66	$ 3.72
Diluted	**$ 4.25**	$ 3.59	$ 3.61
Dividends per Common Share	**$ 1.58**	$ 1.52	$ 1.50

See accompanying notes to consolidated financial statements.

AptarGroup, Inc.

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

In thousands

Year Ended December 31,	**2023**	**2022**	**2021**
Net Income	**$ 284,176**	$ 239,555	$ 243,638
Other Comprehensive Income (Loss):			
Foreign currency translation adjustments	**48,946**	(80,431)	(71,742)
Changes in derivative (losses) gains, net of tax	**(10,086)**	(6,620)	1,307
Defined benefit pension plan, net of tax			
Actuarial (loss) gain, net of tax	**(6,711)**	54,149	26,409
Amortization of prior service cost included in net income, net of tax	**130**	130	127
Amortization of net loss included in net income, net of tax	**641**	6,256	9,300
Total defined benefit pension plan, net of tax	**(5,940)**	60,535	35,836
Total other comprehensive income (loss)	**32,920**	(26,516)	(34,599)
Comprehensive Income	**317,096**	213,039	209,039
Comprehensive (Income) Loss Attributable to Noncontrolling Interests	**(205)**	924	726
Comprehensive Income Attributable to AptarGroup, Inc.	**$ 316,891**	$ 213,963	$ 209,765

See accompanying notes to consolidated financial statements.

AptarGroup, Inc.

CONSOLIDATED BALANCE SHEETS

In thousands

December 31,		**2023**		**2022**
Assets				
Cash and equivalents	**$**	**223,643**	$	141,732
Accounts and notes receivable, less current expected credit loss ("CECL") of $6,217 in 2023 and $9,519 in 2022		**677,822**		676,987
Inventories		**513,053**		486,806
Prepaid and other		**134,761**		124,766
Total Current Assets		**1,549,279**		1,430,291
Land		**30,090**		30,197
Buildings and improvements		**748,897**		693,542
Machinery and equipment		**3,183,097**		2,925,517
Property, Plant and Equipment, Gross		**3,962,084**		3,649,256
Less: Accumulated depreciation		**(2,484,021)**		(2,305,592)
Property, Plant and Equipment, Net		**1,478,063**		1,343,664
Investments in equity securities		**49,203**		52,308
Goodwill		**963,418**		945,632
Intangible assets, net		**283,211**		315,744
Operating lease right-of-use assets		**59,074**		58,675
Miscellaneous		**69,642**		57,144
Total Other Assets		**1,424,548**		1,429,503
Total Assets	**$**	**4,451,890**	$	4,203,458

See accompanying notes to consolidated financial statements.

AptarGroup, Inc.

CONSOLIDATED BALANCE SHEETS

In thousands, except share and per share amounts

December 31,	**2023**	**2022**
Liabilities and Stockholders' Equity		
Revolving credit facility and overdrafts	**$ 81,794**	$ 3,810
Current maturities of long-term obligations, net of unamortized debt issuance costs	**376,426**	118,981
Accounts payable, accrued and other liabilities	**793,089**	794,385
Total Current Liabilities	**1,251,309**	917,176
Long-Term Obligations, net of unamortized debt issuance costs	**681,188**	1,052,597
Deferred income taxes	**19,016**	20,563
Retirement and deferred compensation plans	**62,795**	48,977
Operating lease liabilities	**45,267**	42,948
Deferred and other non-current liabilities	**71,017**	52,993
Commitments and contingencies - (See Note 13)	**—**	—
Total Deferred Liabilities and Other	**198,095**	165,481
AptarGroup, Inc. stockholders' equity		
Common stock, $.01 par value, 199 million shares authorized, 71.7 and 70.9 million shares issued as of December 31, 2023 and 2022, respectively	**717**	709
Capital in excess of par value	**1,044,429**	968,618
Retained earnings	**2,109,816**	1,929,240
Accumulated other comprehensive loss	**(308,734)**	(341,366)
Less: Treasury stock at cost, 5.8 and 5.6 million shares as of December 31, 2023 and 2022, respectively	**(539,404)**	(503,266)
Total AptarGroup, Inc. Stockholders' Equity	**2,306,824**	2,053,935
Noncontrolling interests in subsidiaries	**14,474**	14,269
Total Stockholders' Equity	**2,321,298**	2,068,204
Total Liabilities and Stockholders' Equity	**$ 4,451,890**	$ 4,203,458

See accompanying notes to consolidated financial statements.

AptarGroup, Inc.

CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY

Years Ended December 31, 2023, 2022 and 2021

In thousands

	AptarGroup, Inc. Stockholders' Equity						
	Retained Earnings	**Accumulated Other Comprehensive (Loss)Income**	**Common Stock Par Value**	**Treasury Stock**	**Capital in Excess of Par Value**	**Non-Controlling Interest**	**Total Equity**
Balance - December 31, 2020	$ 1,643,825	$ (281,709)	$ 695	$ (361,583)	$ 849,161	$ 396	$ 1,850,785
Net income	244,097	—	—	—	—	(459)	243,638
Acquisitions of non-controlling interest	—	—	—	—	—	38,543	38,543
Purchases of subsidiary shares from non-controlling interest	—	—	—	—	—	(23,020)	(23,020)
Foreign currency translation adjustments	—	(71,475)	—	—	—	(267)	(71,742)
Changes in unrecognized pension gains (losses) and related amortization, net of tax	—	35,836	—	—	—	—	35,836
Changes in derivative gains (losses), net of tax	—	1,307	—	—	—	—	1,307
Stock awards and option exercises	—	—	9	18,528	67,373	—	85,910
Cash dividends declared on common stock	(98,509)	—	—	—	—	—	(98,509)
Treasury stock purchased	—	—	—	(78,148)	—	—	(78,148)
Balance - December 31, 2021	$ 1,789,413	$ (316,041)	$ 704	$ (421,203)	$ 916,534	$ 15,193	$ 1,984,600
Net income	239,288	—	—	—	—	267	239,555
Foreign currency translation adjustments	—	(79,240)	—	—	—	(1,191)	(80,431)
Changes in unrecognized pension gains (losses) and related amortization, net of tax	—	60,535	—	—	—	—	60,535
Changes in derivative gains (losses), net of tax	—	(6,620)	—	—	—	—	(6,620)
Stock awards and option exercises	—	—	5	10,063	52,084	—	62,152
Cash dividends declared on common stock	(99,461)	—	—	—	—	—	(99,461)
Treasury stock purchased	—	—	—	(92,126)	—	—	(92,126)
Balance - December 31, 2022	$ 1,929,240	$ (341,366)	$ 709	$ (503,266)	$ 968,618	$ 14,269	$ 2,068,204
Net income	284,487	—	—	—	—	(311)	284,176
Foreign currency translation adjustments	(228)	48,658	—	—	—	516	48,946
Changes in unrecognized pension gains (losses) and related amortization, net of tax	—	(5,940)	—	—	—	—	(5,940)
Changes in derivative gains (losses), net of tax	—	(10,086)	—	—	—	—	(10,086)
Stock awards and option exercises	—	—	8	11,414	75,811	—	87,233
Cash dividends declared on common stock	(103,683)	—	—	—	—	—	(103,683)
Treasury stock purchased	—	—	—	(47,552)	—	—	(47,552)
Balance - December 31, 2023	**$ 2,109,816**	**$ (308,734)**	**$ 717**	**$ (539,404)**	**$ 1,044,429**	**$ 14,474**	**$ 2,321,298**

See accompanying notes to consolidated financial statements.

AptarGroup, Inc.

CONSOLIDATED STATEMENTS OF CASH FLOWS

In thousands, brackets denote cash outflows

Year Ended December 31,	**2023**	**2022**	**2021**
Cash Flows from Operating Activities:			
Net income	**$ 284,176**	$ 239,555	$ 243,638
Adjustments to reconcile net income to net cash provided by operations:			
Depreciation	**203,873**	190,132	193,781
Amortization	**44,720**	43,574	41,072
Stock-based compensation	**41,293**	40,937	38,870
Provision for CECL	**8,077**	3,213	1,601
(Gain) loss on disposition of fixed assets	**(3,584)**	397	217
Net (gain) loss on remeasurement of equity securities	**(1,413)**	2,110	(4,709)
Deferred income taxes	**(19,883)**	(12,106)	(14,356)
Defined benefit plan expense	**14,198**	24,560	29,188
Equity in results of affiliates	**(2,226)**	(467)	692
Impairment loss	**257**	307	376
Change in fair value of contingent consideration	**—**	(8,598)	2,768
Changes in balance sheet items, excluding effects from foreign currency adjustments and acquisitions:			
Accounts and other receivables	**15,431**	(27,937)	(123,251)
Inventories	**(10,641)**	(60,354)	(79,961)
Prepaid and other current assets	**(3,900)**	(6,787)	(5,538)
Accounts payable, accrued and other liabilities	**14,596**	55,098	52,305
Income taxes payable	**(8,301)**	17,081	(4,631)
Retirement and deferred compensation plan liabilities	**2,984**	(13,093)	(8,726)
Other changes, net	**(4,418)**	(9,005)	107
Net Cash Provided by Operations	**575,239**	478,617	363,443
Cash Flows from Investing Activities:			
Capital expenditures	**(312,342)**	(310,427)	(307,935)
Proceeds from government grants	**—**	27,795	2,003
Proceeds from sale of property, plant and equipment	**5,348**	93	5,231
Maturity of short-term investments	**—**	740	—
Purchase of short-term investments	**—**	—	(497)
Acquisition of business, net of cash acquired and release of escrow	**(16,570)**	(4,100)	(148,420)
Acquisition of intangible assets, net	**(6,061)**	(5,189)	—
Investment in equity securities	**—**	—	(6,870)
Proceeds from sale of investment in equity securities	**5,604**	1,599	2,434
Notes receivable, net	**(442)**	(6,153)	(3,185)
Net Cash Used by Investing Activities	**(324,463)**	(295,642)	(457,239)
Cash Flows from Financing Activities:			
Proceeds from notes payable and overdrafts	**25,531**	39,944	14,931
Repayments of notes payable and overdrafts	**(28,643)**	(38,837)	(13,701)
Proceeds and (repayments) of short term revolving credit facility, net	**76,966**	(143,055)	92,863
Proceeds from long-term obligations	**403**	412,021	11,703
Repayments of long-term obligations	**(125,809)**	(265,085)	(68,845)
Payment of contingent consideration obligation	**(22,750)**	—	—
Dividends paid	**(103,683)**	(99,461)	(98,509)
Credit facility costs	**—**	(4,009)	(1,718)
Proceeds from stock option exercises	**53,983**	28,512	59,906
Purchase of treasury stock	**(47,552)**	(92,126)	(78,148)
Net Cash Used by Financing Activities	**(171,554)**	(162,096)	(81,518)
Effect of Exchange Rate Changes on Cash	**2,189**	(1,072)	(6,731)
Net Increase (Decrease) in Cash and Equivalents and Restricted Cash	**81,411**	19,807	(182,045)
Cash and Equivalents and Restricted Cash at Beginning of Period	**142,732**	122,925	304,970
Cash and Equivalents and Restricted Cash at End of Period	**$ 224,143**	$ 142,732	$ 122,925
Supplemental Cash Flow Disclosure:			
Interest paid	**$ 39,599**	$ 35,509	$ 29,070
Income taxes paid	**111,994**	87,529	94,968

Restricted cash included in the line item prepaid and other on the Consolidated Balance Sheets as shown below represents amounts held in escrow related to the Metaphase acquisition in 2022.

Year Ended December 31,	**2023**	**2022**	**2021**
Cash and equivalents	**$ 223,643**	$ 141,732	$ 122,925
Restricted cash included in prepaid and other	**500**	1,000	—
Total Cash and Equivalents and Restricted Cash shown in the Statement of Cash Flows	**$ 224,143**	$ 142,732	$ 122,925

See accompanying notes to consolidated financial statements.

AptarGroup, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Dollars in Thousands, Except Share and per Share Amounts, or as Otherwise Indicated)

NOTE 1 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

BASIS OF PRESENTATION

The accompanying consolidated financial statements include the accounts of AptarGroup, Inc. and our subsidiaries. The terms “AptarGroup”, “Aptar”, “Company”, “we”, “us” or “our” as used herein refer to AptarGroup, Inc. and our subsidiaries. All significant intercompany accounts and transactions have been eliminated. Certain previously reported amounts have been reclassified to conform to the current period presentation.

AptarGroup’s organizational structure consists of three market-focused business segments which are Aptar Pharma, Aptar Beauty and Aptar Closures. This is a strategic structure which allows us to better serve our customers and position us for long-term profitable growth.

Beginning July 1, 2018, we have applied highly inflationary accounting for our Argentinian subsidiary pursuant to U.S. GAAP. We have changed the functional currency from the Argentine peso to the U.S. dollar. We remeasure our peso denominated assets and liabilities using the official rate. The Blue Chip Swap rate has diverged significantly from Argentina’s “official rate” due to the economic environment. During the third quarter of 2021, we utilized the Blue Chip Swap and recognized a gain of $1.4 million. Additionally, during the fourth quarter of 2023 we recognized a loss due to devaluation of approximately $2.5 million. Our Argentinian operations contributed less than 2.0% of consolidated net assets and revenues at and for the year ended December 31, 2023.

ACCOUNTING ESTIMATES

The financial statements are prepared in conformity with accounting principles generally accepted in the United States of America (“U.S. GAAP”). This process requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the reporting period. Actual results could differ from those estimates.

CASH AND CASH EQUIVALENTS

We consider all investments that are readily convertible to known amounts of cash with an original maturity of three months or less when purchased to be cash equivalents.

ACCOUNTS RECEIVABLE AND CURRENT EXPECTED CREDIT LOSSES

At December 31, 2023, we reported $677.8 million of accounts receivable, net of CECL of $16.2 million. The allowance is estimated using reasonable and supportable information that is available at the reporting date about past events, current conditions and forecasts of future economic conditions. Changes in CECL were not material for the year ended December 31, 2023.

INVENTORIES

Inventories are stated at lower of cost or net realizable value. Cost of our inventories is determined by costing methods that approximate a first-in, first-out ("FIFO") basis. Costs included in inventories are raw materials, direct labor and manufacturing overhead.

ASSETS HELD FOR SALE

Assets to be disposed of by sale are reported at the lower of their carrying amount or fair value less costs to sell, and are not depreciated while they are held for sale. During the second quarter of 2023, we recorded $0.7 million as assets held for sale within prepaid and other on our Consolidated Balance Sheets related to three buildings located in France. During the third quarter of 2023, two of the three buildings were sold and we recognized a $0.8 million gain on sale.

ACQUISITIONS

We account for business combinations using the acquisition method, which requires management to estimate the fair value of identifiable assets acquired and liabilities assumed, and to properly allocate purchase price consideration to the individual assets acquired and liabilities assumed. Goodwill is measured as the excess amount of consideration transferred, compared to fair value of the assets acquired and the liabilities assumed. The allocation of the purchase price utilizes significant estimates and assumptions in determining the fair values of identifiable assets acquired and liabilities assumed, especially with respect to intangible assets. These estimates are based on all available information and in some cases assumptions with respect to the timing and amount of future revenues and expenses associated with an asset and are reviewed by consulting with outside valuation experts. The purchase price allocation for business acquisitions contains uncertainties because it requires management's judgment.

INVESTMENTS IN EQUITY SECURITIES

We account for our 20% to 50% owned investments using the equity method. Equity investments that do not result in consolidation and are not accounted for under the equity method are measured at fair value. Any related changes in fair value are recognized in net income unless the investments qualify for a practicality exception. There were no dividends received from affiliated companies in 2023, 2022 and 2021.

PROPERTY AND DEPRECIATION

Properties are stated at cost. Depreciation is determined on a straight-line basis over the estimated useful lives for financial reporting purposes and accelerated methods for income tax reporting. Generally, the estimated useful lives are 10 to 40 years for buildings and improvements and3 to 15 years for machinery and equipment.

FINITE-LIVED INTANGIBLE ASSETS

Finite-lived intangibles, consisting of patents, acquired technology, customer relationships, trademarks and trade names and license agreements acquired in purchase transactions, are capitalized and amortized over their useful lives which range from 1 to 50 years.

IMPAIRMENT OF LONG-LIVED ASSETS

Long-lived assets, such as property, plant and equipment and finite-lived intangibles, are evaluated for impairment whenever events or changes in circumstances indicate that the carrying value of an asset may not be recoverable. An impairment loss is recognized when estimated undiscounted future cash flows expected to result from the use of the asset plus net proceeds expected from disposition of the asset (if any) are less than the carrying value of the asset.

GOODWILL

The Company has evaluated the excess of purchase price over the fair value of the net assets acquired (“goodwill”) for impairment annually as of October 1 or more frequently if impairment indicators arose in accordance with Accounting Standards Codification (“ASC”) Topic 350, “Intangibles - Goodwill and Other.” We believe that the accounting estimates related to determining the fair value of our reporting units is a critical accounting estimate because: (1) it is highly susceptible to change from period to period because it requires management to make assumptions about the future cash flows for each reporting unit over several years, and (2) the impact that recognizing an impairment would have on the assets reported on our balance sheet as well as our results of operations could be material. Management’s determination of the fair value of our reporting units, based on future cash flows for the reporting units, requires significant judgment and the use of estimates and assumptions related to projected revenue growth rates, projected EBITDA margins, the terminal growth factor, as well as the discount rate. Actual cash flows in the future may differ significantly from those forecasted today. The estimates and assumptions for future cash flows and its impact on the impairment testing of goodwill is a critical accounting estimate.

Management believes goodwill in purchase transactions has continuing value. Goodwill is not amortized and must be tested annually, or more frequently as circumstances dictate, for impairment. The annual goodwill impairment test may first consider qualitative factors to determine whether it is more likely than not (i.e., greater than 50 percent chance) that the fair value of a reporting unit is less than its book value. This is sometimes referred to as the “step zero” approach and is an optional step in the annual goodwill impairment analysis. Management has performed this qualitative assessment as of October 1, 2023 and October 1, 2022 for each of our reporting units. Due to the realignment of the Beauty and Closures segments, management determined it appropriate to calculate the fair value of both reporting units and compare with their associated carrying amounts as of January 1, 2023. Further, as we performed our annual goodwill impairment assessment, due to events or circumstances that were unfavorable for the Injectables and Active Material Science Solutions reporting units, management determined it appropriate to calculate the fair value of both reporting units and compare with their associated carrying amounts as of October 1, 2023.

Based on our qualitative and quantitative analysis performed over the reporting units, we determined that it was more likely than not that the fair value of these reporting units was greater than their carrying amounts and therefore no impairment of goodwill is required.

DERIVATIVE INSTRUMENTS AND HEDGING ACTIVITIES

Derivative financial instruments are recorded in the Consolidated Balance Sheets at fair value as either assets or liabilities. Changes in the fair value of derivatives are recorded in each period in earnings or other comprehensive income, depending on whether a derivative is designated and effective as part of a hedge transaction.

PURCHASE OF TREASURY STOCK

During 2023, 2022 and 2021, we repurchased399 thousand, 860 thousand and 615 thousand shares, respectively, all of which were returned to treasury stock. If retired, common stock is reduced by the number of shares retired at $0.01 par value per share. We allocate the excess purchase price over par value between additional paid-in capital and retained earnings.

RESEARCH & DEVELOPMENT EXPENSES

Research and development costs, net of any customer funded research and development or government research and development credits, are expensed as incurred. These costs amounted to $92.8 million, $93.5 million and $99.8 million in 2023, 2022 and 2021, respectively.

INCOME TAXES

We compute taxes on income in accordance with the tax rules and regulations of the many taxing authorities where the income is earned. The income tax rates imposed by these taxing authorities may vary substantially. Taxable income may differ from pre-tax income for U.S. GAAP financial accounting purposes. To the extent that these differences create timing differences between the tax basis of an asset or liability and its reported amount in the U.S. GAAP financial statements, an appropriate provision for deferred income taxes is made. We have carry forward tax losses in Luxembourg of $131.4 million for which no benefit has been recorded in the Consolidated Financial Statements since there is no expectation of realization.

We maintain our assertion that the cash and distributable reserves at our non-U.S. affiliates are indefinitely reinvested with the following exceptions: all earnings in Germany, and the pre-2020 earnings in Italy, Switzerland and Colombia. Under current U.S. tax laws, all of our non-U.S. earnings are subject to U.S. taxation on a current or deferred basis. We will provide for the necessary withholding and local income taxes when management decides that an affiliate should make a distribution. These decisions are made taking into consideration the financial requirements of the non-U.S. affiliates and our global cash management goals.

We provide a liability for the amount of unrecognized tax benefits from uncertain tax positions. This liability is provided whenever we determine that a tax benefit will not meet a more-likely-than-not threshold for recognition. See Note 6 – Income Taxes for more information.

We are subject to the examination of our returns and other tax matters by the U.S. Internal Revenue Service and other tax authorities and government bodies. We believe that we have adequately provided a tax reserve for any adjustments that may result from tax examinations or uncertain tax positions. However, the outcome of tax audits cannot be predicted with certainty. If any issues addressed in our tax audits are resolved in a manner inconsistent with our expectations, we could be required to adjust our provision for income taxes in the period such resolution occurs. The resolution of each of these audits is not expected to be material to our Consolidated Financial Statements.

TRANSLATION OF FOREIGN CURRENCIES

The functional currencies of the majority of our foreign operations are their local currencies. Assets and liabilities of our foreign operations are translated into U.S. dollars at the rates of exchange on the balance sheet date. Sales and expenses are translated at the average rates of exchange prevailing during the year. The related translation adjustments are accumulated in a separate section of Stockholders' Equity. Realized and unrealized foreign currency transaction gains and losses are reflected in income, as a component of miscellaneous income and expense, and represented losses of $7.3 million, $7.2 million and $1.4 million in 2023, 2022 and 2021, respectively.

STOCK-BASED COMPENSATION

Accounting standards require the application of the non-substantive vesting approach which means that an award is fully vested when the employee's retention of the award is no longer contingent on providing future service. Under this approach, compensation costs are recognized over the requisite service period of the award instead of ratably over the vesting period stated in the grant. As such, costs are recognized immediately if the employee is retirement eligible on the date of grant or over the period from the date of grant until retirement eligibility if retirement eligibility is reached before the end of the vesting period stated in the grant. Forfeitures are recognized as they occur. See Note 16 – Stock-Based Compensation for more information.

REVENUE RECOGNITION

At inception of customer contracts, we assess the goods and services promised in order to identify a performance obligation for each promise to transfer a good or service (or bundle of goods or services) that is distinct. To identify the performance obligations, we consider all the goods or services promised in the contract, whether explicitly stated or implied based on customary business practices. For a contract that has more than one performance obligation, we allocate the total contract consideration to each distinct performance obligation on a relative standalone selling price basis. Revenue is recognized when (or as) the performance obligations are satisfied (i.e., when the customer obtains control of the good or service). The majority of our revenues are derived from product, tooling and service contract sales; however, we also receive revenues from license, exclusivity and royalty arrangements, which collectively are not material to the results. See specific discussions about methods of accounting for control transfers of product, tooling and service contract sales in Note 2 – Revenue.

LEASES

We determine if an arrangement is a lease at inception. Operating lease assets are included in operating lease right-of-use ("ROU") assets and operating lease liabilities are included in accounts payable accrued and other liabilities in our Consolidated Balance Sheets. Finance leases are included in property, plant and equipment, current maturities of long-term obligations and long-term obligations in our Consolidated Balance Sheets.

ROU assets represent our right to use an underlying asset for the lease term and lease liabilities represent our obligation to make lease payments arising from the lease. Operating lease ROU assets and liabilities are recognized at commencement date based on the present value of lease payments over the lease term. We use the implicit rate when readily determinable. As most of our leases do not provide an implicit rate, we use our incremental borrowing rate based on the information available at the commencement date of the lease in determining the present value of lease payments. The operating lease ROU asset includes any lease payments made as well as initial direct costs incurred and excludes lease incentives. Our lease terms may include options to extend or terminate the lease when it is reasonably certain that we will exercise that option. Lease expense for operating lease payments is recognized on a straight-line basis over the lease term.

We have lease agreements with lease and non-lease components, which are generally accounted for separately. For certain equipment leases, we account for the lease and non-lease components as a single lease component. We have elected not to recognize ROU assets and lease liabilities that arise from short-term leases (a lease whose term is 12 months or less and does not include a purchase option that we are reasonably certain to exercise).

Certain vehicle lease contracts include guaranteed residual value that is considered in the determination of lease classification. The probability of having to satisfy a residual value guarantee is not considered for the purpose of lease classification, but is considered when measuring a lease liability.

GOVERNMENT GRANTS

We record non-reimbursable government grants when there is reasonable assurance that we will comply with the relevant conditions of the grant agreement and the grant funds will be received. When a grant is received toward the purchase or construction of an asset, the funds received are recorded as a contra-asset and deducted from the cost of the related asset. Additionally, we record expenses net of reimbursements for government grants from a reimbursement of cost.

During 2022, we received a $10.5 million government grant to be used toward the expansion of an existing injectables facility. This award will support the delivery of components for COVID-19 and other vaccines. The French government will fund approximately $14.0 million for the expansion of the facility, for which there is no clawback option. As of December 31, 2022, we recorded the $10.5 million received as a contra-asset within property, plant and equipment in the Consolidated Balance Sheets and reported in the proceeds from government grants within the investing section of the Consolidated Statements of Cash Flows.

During 2022 and 2021, we received $17.3 million and $2.0 million, respectively, in government grants to be used toward the construction of a new facility in Alabama. This award will support expanded domestic production capacity for our active material science solutions proprietary Activ-Film technology, which is used to protect and enhance COVID-19 test kit integrity and accuracy. Under the terms of the grant agreement, the U.S. government will fund approximately $19 million to build an operating facility, for which there is no clawback provision, in exchange for the new facility to be on standby for the government for a period of 16 months after construction. As of December 31, 2022 and 2021, we recorded the $17.3 million and $2.0 million, respectively, received as a contra-asset within property, plant and equipment in the Consolidated Balance Sheets and reported in the proceeds from government grants within the investing section of the Consolidated Statements of Cash Flows.

SUPPLY CHAIN FINANCE PROGRAM

We facilitate a supply chain finance program ("SCF") across Europe and the U.S. that is administered by a third-party platform. Eligible suppliers can elect to receive early payment of invoices, less an interest deduction, and negotiate their receivable sales arrangements through the third-party platform on behalf of the respective SCF bank. We are not a party to those agreements, and the terms of our payment obligations are not impacted by a supplier's participation in the SCF. Accordingly, we have concluded that this program continues to be a trade payable program and is not indicative of a borrowing arrangement. Under these agreements, the average payment terms range from 60 to 120 days and are based on industry standards and best practices within each of our regions.

All outstanding amounts related to suppliers participating in the SCF are recorded within accounts payable, accrued and other liabilities in our Consolidated Balance Sheets, and associated payments are included in operating activities within our Consolidated Statements of Cash Flows. As of December 31, 2023 and 2022, the amounts due to suppliers participating in the SCF and included in accounts payable, accrued and other liabilities were approximately $36.3 million and $30.8 million, respectively.

		2023		**2022**
SCF obligations outstanding at the beginning of the year	**$**	**30,833**	$	30,144
Additions		**163,591**		133,148
Settlements		**(158,115)**		(132,459)
SCF obligations outstanding at the end of the year	**$**	**36,309**	$	30,833

Collection and payment periods tend to be longer for our operations located outside the United States due to local business practices. We have also seen an increasing trend in pressure from certain customers to lengthen their payment terms. As the majority of our products are made to order, we have not needed to keep significant amounts of finished goods inventory to meet customer requirements. However, some of our contracts specify an amount of finished goods safety stock we are required to maintain.

To the extent our financial position allows and there is a clear financial benefit, we from time-to-time benefit from early payment discounts with some suppliers. We have lengthened the payment terms with our suppliers to be in line with customer trends. While we have offered third party alternatives for our suppliers to receive payments sooner, we generally do not utilize these offerings from our customers as the economic conditions currently are not beneficial for us.

ADOPTION OF RECENT ACCOUNTING PRONOUNCEMENTS

Changes to U.S. GAAP are established by the Financial Accounting Standards Board ("FASB") in the form of Accounting Standards Updates ("ASUs") to the FASB's Accounting Standards Codification.

In September 2022, the FASB issued ASU 2022-04, Liabilities-Supplier Finance Programs (Topic 405), which enhances the transparency of supplier finance programs and requires certain disclosures for a buyer in a supplier finance program. The requirements are effective for fiscal years beginning after December 15, 2022, including interim periods within those fiscal years, except for the amendment on roll forward information, which is effective for fiscal years beginning after December 13, 2023. Early adoption is permitted. We adopted this guidance in the fourth quarter of 2022 and expanded our disclosure to include a roll forward of our supply chain finance program.

In March 2020, the FASB issued ASU 2020-04, which provides optional expedients and exceptions for applying U.S. GAAP to contracts, hedging relationships and other transactions affected by reference rate reform if certain criteria are met. The amendments to this update apply only to contracts, hedging relationships and other transactions that reference LIBOR or another reference rate expected to be discontinued because of reference rate reform. ASU 2020-04 was further amended in January 2021 by ASU 2021-01 which clarified the applicability of certain provisions. Both standards are effective upon issuance and could be adopted any time prior to December 31, 2022. The guidance in ASU 2020-04 and ASU 2021-01 is optional and may be elected over time as reference rate reform activities occur. We adopted this guidance in the second quarter of 2023 and have transitioned away from LIBOR to SOFR for USD balances under our revolving credit facility.

In November 2023, the FASB issued ASU 2023-07, Improvement to Reportable Segment Disclosures, which requires enhanced disclosures about significant segment expenses on an annual and interim basis. The amendments in ASU 2023-07 are effective for fiscal years beginning after December 15, 2023 and interim periods within fiscal years beginning after December 15, 2024, with early adoption permitted, and are to be applied on a retrospective basis. We are evaluating the impact of the standard on our segment reporting disclosures.

In December 2023, the FASB issued ASU 2023-09, Improvements to Income Tax Disclosures, which is intended to improve income tax disclosure requirements by requiring (i) consistent categories and greater disaggregation of information in the rate reconciliation and (ii) the disaggregation of income taxes paid by jurisdiction. The guidance makes several other changes to income tax disclosure requirements. The amendments is ASU 2023-09 are effective for fiscal years beginning after December 15, 2024, with early adoption permitted, and is required to be applied prospectively with the option of retrospective application. We are evaluating the impact of the standard on our income tax disclosures.

Other accounting standards that have been issued by the FASB or other standards-setting bodies did not have a material impact on our consolidated financial statements.

NOTE 2 REVENUE

Segment financial information for the prior periods has been recast to conform to the current presentation. Refer to Note 18 - Segment Information. Revenue by segment and geography based on shipped from locations for the years ended December 31, 2023, 2022 and 2021 is as follows:

	For the Year Ended December 31, 2023				
Segment	**Europe**	**Domestic**	**Latin America**	**Asia**	**Total**
Aptar Pharma	$ 973,158	$ 426,005	$ 41,409	$ 80,421	$ 1,520,993
Aptar Beauty	814,576	226,573	146,283	80,265	1,267,697
Aptar Closures	214,045	348,509	84,372	51,834	698,760
Total	**$ 2,001,779**	**$ 1,001,087**	**$ 272,064**	**$ 212,520**	**$ 3,487,450**

	For the Year Ended December 31, 2022				
Segment	**Europe**	**Domestic**	**Latin America**	**Asia**	**Total**
Aptar Pharma	$ 836,447	$ 426,401	$ 27,075	$ 71,333	$ 1,361,256
Aptar Beauty	723,540	284,052	128,342	86,601	1,222,535
Aptar Closures	213,408	389,706	80,046	55,298	738,458
Total	**$ 1,773,395**	**$ 1,100,159**	**$ 235,463**	**$ 213,232**	**$ 3,322,249**

	For the Year Ended December 31, 2021				
Segment	**Europe**	**Domestic**	**Latin America**	**Asia**	**Total**
Aptar Pharma	$ 830,552	$ 374,063	$ 21,482	$ 58,527	$ 1,284,624
Aptar Beauty	675,079	300,658	117,920	88,189	1,181,846
Aptar Closures	219,551	407,102	76,641	57,457	760,751
Total	**$ 1,725,182**	**$ 1,081,823**	**$ 216,043**	**$ 204,173**	**$ 3,227,221**

We perform our obligations under a contract with a customer by transferring goods and/or services in exchange for consideration from the customer. The timing of performance will sometimes differ from the timing of the invoicing for the associated consideration from the customer, thus resulting in the recognition of a contract asset or a contract liability. We recognize a contract asset when we transfer control of goods or services to a customer prior to invoicing for the related performance obligation. The contract asset is transferred to accounts receivable when the product is shipped and invoiced to the customer. We recognize a contract liability if the customer's payment of consideration precedes the entity's performance.

The opening and closing balances of our contract asset and contract liabilities are as follows:

	Balance as of December 31, 2022	Balance as of December 31, 2023	Increase/ (Decrease)
Contract asset (current)	$ 16,736	$ 18,033	$ 1,297
Contract liability (current)	$ 80,241	$ 60,507	$ (19,734)
Contract liability (long-term)	$ 25,361	$ 37,756	$ 12,395

The differences in the opening and closing balances of our contract asset and contract liabilities are primarily the result of timing differences between our performance and the invoicing. The total amount of revenue recognized during the current year against contract liabilities is $150.5 million, including $69.4 million relating to contract liabilities at the beginning of the year. Current contract assets and long-term contract assets are included within the prepaid and other and miscellaneous assets, respectively, while current contract liabilities and long-term contract liabilities are included within accounts payable, accrued and other liabilities and deferred and other non-current liabilities, respectively, within our Consolidated Balance Sheets.

Determining the Transaction Price

In most cases, the transaction price for each performance obligation is stated in the contract. In determining the variable amounts of consideration within the transaction price (such as volume-based customer rebates), we include an estimate of the expected amount of consideration as revenue. We apply the expected value method based on all of the information (historical, current, and forecast) that is reasonably available and identifies reasonable estimates based on this information. We apply the method consistently throughout the contract when estimating the effect of an uncertainty on the amount of variable consideration to which it will be entitled.

Product Sales

We primarily manufacture and sell drug and consumer product dosing, dispensing and protection technologies. The amount of consideration is typically fixed for customers. At the time of delivery, the customer is invoiced the agreed-upon price. Revenue from product sales is typically recognized upon manufacture or shipment, when control of the goods transfers to the customer.

To determine when the control transfers, we typically assess, among other things, the shipping terms of the contract, shipping being one of the indicators of transfer of control. For a majority of product sales, control of the goods transfers to the customer at the time of shipment of the goods. Once the goods are shipped, we are precluded from redirecting the shipment to another customer. Therefore, our performance obligation is satisfied at the time of shipment. For sales in which control transfers upon delivery, shipping and/or handling costs that occur before the customer obtains control of the goods are deemed to be fulfillment activities and are accounted for as fulfillment costs and revenue is recorded upon final delivery to the customer location. We have elected to account for shipping and handling costs that occur after the customer has obtained control of a good as fulfillment costs rather than as a promised service. We do not have any material significant payment terms as payment is typically received shortly after the point of sale.

There also exist instances where we manufacture highly customized products that have no alternative use to us and for which we have an enforceable right to payment for performance completed to date. For these products, we transfer control and recognize revenue over time by measuring progress toward completion using the output method based on the number of products produced. As we normally make our products to a customer's order, the time between production and shipment of our products is typically within a few weeks. We believe this measurement provides a faithful depiction of the transfer of goods as the costs incurred reflect the value of the products produced.

As a part of its customary business practice, we offer a standard warranty that the products will materially comply with the technical specifications and will be free from material defects. Because such warranties are not sold separately, do not provide for any service beyond a guarantee of a product's initial specifications, and are not required by law, there is no revenue deferral for these types of warranties.

Tooling Sales

We also build or contract for molds and other tools (collectively defined as "tooling") necessary to produce our products. As with product sales, we recognize revenue when control of the tool transfers to the customer. If the tooling is highly customized with no alternative use to us and we have an enforceable right to payment for performance completed to date, we transfer control and recognize revenue over time by measuring progress toward completion using the input method based on costs incurred relative to total estimated costs to completion. Otherwise, revenue for the tooling is recognized at the point in time when the customer approves the tool. We do not have any significant payment terms as payment is typically either received during the mold-build process or shortly after completion.

In certain instances, we offer extended warranties on our tools above and beyond the normal standard warranties. We normally receive payment at the inception of the contract and recognize revenue over the term of the contract. We do not have any material extended warranties as of December 31, 2023 or December 31, 2022.

Service Sales

We also provide services to our customers. As with product sales, we recognize revenue based on completion of each performance obligation of the service contract. Milestone deliverables and upfront payments are tied to specific performance obligations and recognized upon satisfaction of the individual performance obligation.

Contract Costs

We do not incur significant costs to obtain or fulfill revenue contracts.

Credit Risk

We are exposed to credit losses primarily through our product sales, tooling sales and services to our customers. We assess each customer's ability to pay for the products we sell by conducting a credit review. The credit review considers our expected billing exposure and timing for payment and the customer's established credit rating or our assessment of the customer's creditworthiness based on our analysis of their financial statements when a credit rating is not available. We also consider contract terms and conditions, country and political risks, and business strategy in our evaluation. A credit limit is established for each customer based on the outcome of this review.

We monitor our ongoing credit exposure through active review of customer balances against contract terms and due dates. Our activities include timely account reconciliation, dispute resolution and payment confirmation. We may employ collection agencies and legal counsel to pursue recovery of defaulted receivables.

Practical Expedients

Significant financing component: We elected not to adjust the promised consideration for the time value of money for contracts where the difference between the time of payment and performance is one year or less.

Remaining performance obligations: We elected not to disclose the aggregate amount of the transaction price allocated to remaining performance obligations for our contracts that are one year or less, as the revenue is expected to be recognized within the next year. In addition, we have elected not to disclose the expected consideration related to performance obligations where we recognize revenue in the amount it has a right to invoice (e.g., usage-based pricing terms).

NOTE 3 INVENTORIES

Inventories, by component net of reserves, consisted of:

	2023	2022
Raw materials	**$ 145,798**	$ 159,041
Work in process	**176,191**	153,592
Finished goods	**191,064**	174,173
Total	**$ 513,053**	$ 486,806

NOTE 4 GOODWILL AND OTHER INTANGIBLE ASSETS

The changes in the carrying amount of goodwill for the year ended December 31, 2023 are as follows by reporting segment:

	Aptar Pharma	Aptar Beauty	Aptar Closures	Total
Balance as of December 31, 2021	$ 520,197	$ 325,719	$ 128,241	$ 974,157
Acquisition	3,029	—	—	3,029
Foreign currency exchange effects	(24,484)	(6,708)	(362)	(31,554)
Balance as of December 31, 2022	$ 498,742	$ 319,011	$ 127,879	$ 945,632
Reclassification due to segment change	—	(39,472)	39,472	—
Acquisitions	—	4,603	114	4,717
Foreign currency exchange effects	9,705	2,955	409	13,069
Balance as of December 31, 2023	**$ 508,447**	**$ 287,097**	**$ 167,874**	**$ 963,418**

Effective January 1, 2023, we realignedtwo of our segment, allowing us to better serve our customers and position us for long-term profitable growth; see Note 18 - Segment Information for additional information. As a result of this segment realignment, we reassigned a total of $39.5 million of goodwill from the Beauty reporting unit to the Closures reporting unit using the relative fair value approach.

We have completed the annual impairment analysis of our reporting units as of October 1, 2023. Due to the realignment of the Beauty and Closures segments mentioned above, management determined it appropriate to calculate the fair value of both reporting units and compare with their associated carrying amounts as of January 1, 2023. Further, as we performed our annual goodwill impairment assessment, due to events or circumstances that were unfavorable for injectables and active material science solutions, management determined it appropriate to calculate the fair value of both reporting units and compare with their associated carrying amounts as of October 1, 2023.

We estimated the fair values of the affected businesses based upon the present value of their estimated future cash flows. Our determination of fair value involved judgment and the use of significant estimates and assumptions, including assumptions regarding the projected revenue growth rates, projected EBITDA margins, the terminal growth factor, as well as the discount rate to calculate estimated future cash flows. We believe that our assumptions used in discounting future cash flows are appropriate.

Based on our review of macroeconomic, industry, and market events and circumstances as well as the overall financial performance of the reporting units, we determined that it was more likely than not that the fair value of these reporting units was greater than their carrying amounts. No impairment was recognized during the years ended December 31, 2023, 2022 or 2021.

The table below shows a summary of intangible assets for the years ended December 31, 2023 and 2022.

	Weighted Average Amortization Period (Years)	2023 Gross Carrying Amount	2023 Accumulated Amortization	2023 Net Value	2022 Gross Carrying Amount	2022 Accumulated Amortization	2022 Net Value
Amortized intangible assets:							
Patents	9.9	**$ 7,362**	**$ (1,754)**	**$ 5,608**	$ 8,044	$ (1,968)	$ 6,076
Acquired technology	11.2	**142,837**	**(70,520)**	**72,317**	135,191	(56,628)	78,563
Customer relationships	13.5	**308,889**	**(124,648)**	**184,241**	305,994	(99,130)	206,864
Trademarks and trade names	7.6	**43,932**	**(33,368)**	**10,564**	43,998	(28,190)	15,808
License agreements and other	31.8	**17,213**	**(6,732)**	**10,481**	15,425	(6,992)	8,433
Total intangible assets	13.3	**$ 520,233**	**$ (237,022)**	**$ 283,211**	$ 508,652	$ (192,908)	$ 315,744

Aggregate amortization expense for the intangible assets above for the years ended December 31, 2023, 2022 and 2021 was $44,720, $43,574 and $41,072, respectively.

Future estimated amortization expense for the years ending December 31 is as follows:

2024	$ 40,021
2025	40,952
2026	38,596
2027	29,249
2028	22,710
2029 and thereafter	111,683

Future amortization expense may fluctuate depending on changes in foreign currency rates. The estimates for amortization expense noted above are based upon foreign exchange rates as of December 31, 2023.

NOTE 5 ACCOUNTS PAYABLE, ACCRUED AND OTHER LIABILITIES

At December 31, 2023 and 2022, accounts payable, accrued and other liabilities consisted of the following:

	2023	2022
Accounts payable, principally trade	**$ 328,571**	$ 320,281
Accrued employee compensation costs	**222,010**	209,566
Customer deposits and other unearned income	**60,507**	80,241
Other accrued liabilities	**182,001**	184,297
Total	**$ 793,089**	$ 794,385

NOTE 6 INCOME TAXES

Income before income taxes consists of:

Years Ended December 31,	2023	2022	2021
United States	**$ 49,681**	$ 65,350	$ 101,353
International	**325,144**	269,354	220,302
Total	**$ 374,825**	$ 334,704	$ 321,655

The provision (benefit) for income taxes is composed of:

Years Ended December 31,	2023	2022	2021
Federal:			
Current	**$ 11,777**	$ 12,791	$ 11,932
Deferred	**(10,931)**	(783)	(5,980)
	$ 846	$ 12,008	$ 5,952
State:			
Current	**$ 1,300**	$ 2,265	$ 4,917
Deferred	**(675)**	(99)	(5,188)
	$ 625	$ 2,166	$ (271)
International:			
Current	**$ 97,455**	$ 92,199	$ 75,524
Deferred	**(8,277)**	(11,224)	(3,188)
	$ 89,178	$ 80,975	$ 72,336
Total	**$ 90,649**	$ 95,149	$ 78,017

A reconciliation of the provision for income taxes with the amount computed by applying the statutory federal income tax rate of 21% to income before provision for income taxes is as follows:

Years Ended December 31,	2023	2022	2021
Income tax at statutory rate	**$ 78,713**	$ 70,288	$ 67,547
State income taxes, net of federal tax effect	**362**	1,475	1,616
Excess tax benefits from share-based compensation	**(5,935)**	(3,306)	(16,060)
Deferred tax (benefits) charges, incl. tax rate changes	**(3,512)**	(2,349)	(1,040)
Valuation allowance	**158**	1,486	4,485
Legal entity reorganization	**3,630**	5,850	—
Rate differential on earnings of foreign operations	**18,917**	19,165	20,831
Other items, net	**(1,684)**	2,540	638
Actual income tax provision	**$ 90,649**	$ 95,149	$ 78,017
Effective income tax rate	**24.2 %**	28.4 %	24.3 %

The provision for income taxes for 2023 and 2022 include a $3.6 million and $5.9 million charge, respectively, for taxes related to a legal entity reorganization intended to enhance our dividend and cash management capabilities. The provision for income tax is favorably impacted by excess tax benefits on deductible share-based compensation. The tax provision for 2023 reflects a $5.9 million benefit from this item compared with a $3.3 million and $16.1 million tax benefit for 2022 and 2021, respectively. The valuation allowance for all years reflects losses in jurisdictions where we cannot tax effect the loss. Our mix of earnings has an unfavorable tax rate impact since a majority of our pretax income is earned in higher tax jurisdictions.

Significant deferred tax assets and liabilities as of December 31, 2023 and 2022 are composed of the following temporary differences:

	2023	2022
Deferred Tax Assets:		
Net operating loss carryforwards	**$ 49,016**	$ 45,823
Operating and finance leases	**20,440**	20,974
Pension liabilities	**13,608**	8,178
Share-based compensation	**7,326**	9,970
U.S. state tax credits	**6,110**	6,777
Vacation and bonus	**16,915**	14,681
U.S. capitalized research expenditures	**35,563**	27,840
Inventory	**7,166**	4,736
Accrued liabilities and other reserves	**9,622**	10,346
Other	**16,470**	11,744
Total gross deferred tax assets	**$ 182,236**	$ 161,069
Less valuation allowance	**(48,856)**	(46,239)
Net deferred tax assets	**$ 133,380**	$ 114,830
Deferred Tax Liabilities:		
Acquisition related intangibles	**$ 57,426**	$ 59,084
Depreciation and amortization	**25,541**	29,142
Operating and finance leases	**22,715**	23,041
Other	**6,988**	6,563
Total gross deferred tax liabilities	**$ 112,670**	$ 117,830
Net deferred tax assets (liabilities)	**$ 20,710**	$ (3,000)

We evaluate the deferred tax assets and record a valuation allowance when it is believed it is more likely than not that the benefit will not be realized. We have established a valuation allowance for $42.7 million of the $49.0 million of tax effected net operating loss carryforwards. These losses are generally in locations that have not produced cumulative three year operating profit. A valuation allowance of $4.1 million has also been established against the $6.1 million of U.S. state tax credit carryforwards.

There is no expiration date on $44.7 million of the tax-effected net operating loss carryforwards and $4.3 million (tax effected) will expire in the years 2024 to 2043. The U.S. state tax credit carryforwards of $6.1 million (tax effected) will expire in the years 2024 to 2038. We have carried forward tax losses in Luxembourg for $131.4 million for which no benefit has been recorded in the Consolidated Financial Statements since there is no expectation of realization.

None of the earnings accumulated outside of the U.S. will be subject to U.S. taxation under the current U.S. federal income tax laws. We maintain our assertion that all other cash and distributable reserves at our non-U.S. affiliates will continue to be indefinitely reinvested, with the exception of earnings in Germany and the pre-2020 earnings in Italy, Switzerland and Colombia. We estimate the amount of additional local income tax and withholding tax that would be payable on distributions to be in the range of $15 million to $20 million if earnings accumulated outside the U.S. are repatriated to the U.S.

Income Tax Uncertainties

We provide a liability for the amount of tax benefits realized from uncertain tax positions.A reconciliation of the beginning and ending amount of income tax uncertainties is as follows:

	2023	2022	2021
Balance at January 1	**$ 6,919**	$ 7,225	$ 4,504
Increases based on tax positions for the current year	**985**	1,433	262
Increases (Decreases) based on tax positions of prior years	**(997)**	(1,616)	3,348
Settlements	**(901)**	(80)	(567)
Lapse of statute of limitations	**(64)**	(43)	(322)
Balance at December 31	**$ 5,942**	$ 6,919	$ 7,225

As of December 31, 2023, the total amount of unrecognized tax benefits was $6.9 million, of which $5.9 million, if recognized, would favorably impact our effective tax rate. We estimate that it is reasonably possible that the liability for uncertain tax positions will decrease by approximately $1.5 million in the next 12 months from the resolution of various uncertain positions as a result of the completion of tax audits, litigation and the expiration of the statute of limitations in various jurisdictions.

We recognize interest and penalties accrued related to unrecognized tax benefits as a component of income taxes. As of December 31, 2023, 2022 and 2021, we had approximately $3.4 million, $4.9 million and $4.6 million, respectively, accrued for the payment of interest and penalties, of which approximately $0.2 million, $0.3 million and $1.1 million was recognized in income tax expense for the years ended December 31, 2023, 2022 and 2021, respectively.

Aptar or its subsidiaries file income tax returns in the U.S. Federal jurisdiction and various state and foreign jurisdictions. The major tax jurisdictions we file in, with the years still subject to income tax examinations, are listed below:

Major Tax Jurisdiction	**Tax Years Subject to Examination**
United States — Federal	2020-2023
United States — State	2019-2023
France	2020-2023
Germany	2019-2023
Italy	2017-2023
China	2013-2023

NOTE 7 DEBT

Revolving Credit Facility and Overdrafts

At December 31, 2023 and 2022, our revolving credit facility and overdrafts consisted of the following:

		2023		**2022**
Revolving credit facility 4.84% to 6.46%	**$**	**80,662**	$	—
Overdrafts 0.30% to 5.99%		**1,132**		3,810
	$	**81,794**	$	3,810

On June 30, 2021, we entered into an amended and restated multi-currency revolving credit facility (the "revolving credit facility") with a syndicate of banks to replace the then-existing facility maturing July 2022 (the "prior credit facility") and to amend and restate the unsecured term loan facility extended to our wholly-owned UK subsidiary under the prior credit facility (as amended, the "amended term facility"). The revolving credit facility matures in June 2026, subject to a maximum of two one-year extensions in certain circumstances, and provides for unsecured financing of up to $600 million available in the U.S. and to our wholly-owned UK subsidiary. The amended term facility matured in July 2022 and was repaid in full. The revolving credit facility can be drawn in various currencies including USD, EUR, GBP, and CHF to the equivalent of $600 million, which may be increased by up to $300 million subject to the satisfaction of certain conditions. As of December 31, 2023, $36.5 million and €40.0 million ($44.2 million) was utilized under the revolving credit facility in the U.S. and no balance was utilized by our wholly-owned UK subsidiary. As of December 31, 2022, no balance was utilized under the revolving credit facility in the U.S. and no balance was utilized by our wholly-owned UK subsidiary.

There are no compensating balance requirements associated with our revolving credit facility. Each borrowing under the revolving credit facility will bear interest at rates based on SOFR (in the case of USD), EURIBOR (in the case of EUR), SONIA (in the case of GBP), SARON (in the case of CHF), prime rates or other similar rates, in each case plus an applicable margin. In May 2023, the revolving credit facility was amended to make SOFR the default borrowing rate for USD. The revolving credit facility also provides mechanics relating to a transition away from designated benchmark rates for other available currencies and the replacement of any such applicable benchmark by a replacement alternative benchmark rate or mechanism for loans made in the applicable currency. A facility fee on the total amount of the revolving credit facility is also payable quarterly, regardless of usage. The applicable margins for borrowings under the revolving credit facility and the facility fee percentage may change from time to time depending on changes in our consolidated leverage ratio. We incurred approximately $3.9 million and $1.2 million in interest and fees related to our credit facility and money market borrowing arrangement during 2023 and 2022, respectively.

Average borrowings under the revolving credit facility and money market borrowing arrangement were $60.5 million and $38.5 million for 2023 and 2022, respectively. The average annual interest rate on the revolving credit facility and money market borrowing arrangement was 5.2% and 1.2% for 2023 and 2022, respectively.

In October 2020, we entered into an unsecured money market borrowing arrangement to provide short term financing of up to $80 million that is available in the U.S. No borrowing on this facility is permitted over a quarter end date. As such, no balance was utilized under this arrangement as of December 31, 2023 or December 31, 2022.

Long-Term Obligations

On July 19, 2023, we repaid in full the €100 million 0.98% Senior Notes that were due in July 2023.

On March 7, 2022, we issued $400 million aggregate principal amount of 3.60% Senior Notes due March 2032 in an underwritten public offering. The form and terms of the notes were established pursuant to an Indenture, dated as of March 7, 2022, as amended and supplemented by a First Supplemental Indenture, dated as of March 7, 2022, each between the Company and U.S. Bank Trust Company, National Association, as trustee. Interest is payable semi-annually in arrears. The notes are unsecured obligations and rank equally in right of payment with all of our other existing and future senior, unsecured indebtedness.

We redeemed all $75.0 million of our 3.25% senior unsecured notes during the second quarter of 2022 at a price equal to the principal amount plus accrued interest and a $0.4 million make-whole payment.

We redeemed all $125.0 million of our 3.49% senior unsecured notes during the third quarter of 2022 at a price equal to the principal amount plus accrued interest.

At December 31, 2023 and 2022, our long-term obligations consisted of the following:

	December 31, 2023	December 31, 2022
Notes payable 0.00% – 16.42%, due in monthly and annual installments through 2030	**$ 14,988**	$ 29,167
Senior unsecured notes 1.0%, due in 2023	**—**	106,995
Senior unsecured notes 3.4%, due in 2024	**50,000**	50,000
Senior unsecured notes 3.5%, due in 2024	**100,000**	100,000
Senior unsecured notes 1.2%, due in 2024	**220,810**	213,990
Senior unsecured notes 3.6%, due in 2025	**125,000**	125,000
Senior unsecured notes 3.6%, due in 2026	**125,000**	125,000
Senior unsecured notes 3.6%, due in 2032, net of discount of $0.8 million	**399,154**	399,050
Finance Lease Liabilities	**26,478**	26,934
Unamortized debt issuance costs	**(3,816)**	(4,558)
	$ 1,057,614	$ 1,171,578
Current maturities of long-term obligations	**(376,426)**	(118,981)
Total long-term obligations	**$ 681,188**	$ 1,052,597

The aggregate long-term maturities, excluding finance lease liabilities and unamortized debt issuance costs, which are discussed in Note 8, due annually for the next five years and thereafter are:

2024	$ 372,835
2025	131,651
2026	131,058
2027	131
2028	60
Thereafter	399,217

Covenants

Our revolving credit facility and corporate long-term obligations require us to satisfy certain financial and other covenants including:

	Requirement	Level at December 31, 2023
Consolidated Leverage Ratio (1)	Maximum of 3.50 to 1.00	1.46 to 1.00
Consolidated Interest Coverage Ratio (1)	Minimum of 3.00 to 1.00	16.06 to 1.00

(1) Definitions of ratios are included as part of the revolving credit facility agreement and the private placement agreements.

NOTE 8 LEASE COMMITMENTS

We lease certain warehouse, plant, and office facilities as well as certain equipment under noncancelable operating and finance leases expiring at various dates through the year 2037. Most of the operating leases contain renewal options and certain leases include options to purchase the related asset during or at the end of the lease term.

Amortization expense related to finance leases is included in depreciation expense while rent expense related to operating leases is included within cost of sales and selling research & development and administrative expenses ("SG&A").

The components of lease expense for the years ended December 31, 2023 and 2022 were as follows:

Year Ended December 31,		**2023**		**2022**
Operating lease cost	**$**	**20,780**	$	21,105
Finance lease cost:				
Amortization of right-of-use assets	**$**	**4,662**	$	4,249
Interest on lease liabilities		**1,220**		1,249
Total finance lease cost	**$**	**5,882**	$	5,498
Short-term lease and variable lease costs	**$**	**20,509**	$	15,454

Supplemental cash flow information related to leases was as follows:

Year Ended December 31,		**2023**		**2022**
Cash paid for amounts included in the measurement of lease liabilities:				
Operating cash flows from operating leases	**$**	**21,512**	$	20,488
Operating cash flows from finance leases		**1,371**		1,264
Financing cash flows from finance leases		**3,682**		3,662
Right-of-use assets obtained in exchange for lease obligations:				
Operating leases	**$**	**14,514**	$	16,754
Finance leases		**2,746**		1,011

Supplemental balance sheet information related to leases was as follows:

	December 31, 2023	December 31, 2022
Operating Leases		
Operating lease right-of-use assets	**$ 59,074**	$ 58,675
Accounts payable, accrued and other liabilities	**$ 14,056**	$ 16,985
Operating lease liabilities	**45,267**	42,948
Total operating lease liabilities	**$ 59,323**	$ 59,933
Finance Leases		
Property, plant and equipment, gross	**$ 49,776**	$ 50,173
Accumulated depreciation	**(13,299)**	(12,781)
Property, plant and equipment, net	**$ 36,477**	$ 37,392
Current maturities of long-term obligations, net of unamortized debt issuance cost	**$ 3,591**	$ 3,234
Long-term obligations, net of unamortized debt issuance cost	**22,887**	23,700
Total finance lease liabilities	**$ 26,478**	$ 26,934
Weighted Average Remaining Lease Term (in years)		
Operating leases	**3.5**	4.6
Finance leases	**5.3**	6.6
Weighted Average Discount Rate		
Operating leases	**5.52 %**	4.01 %
Finance leases	**5.05 %**	4.76 %

Maturities of lease liabilities as of December 31, 2023, were as follows:

	Operating Leases	Finance Leases
Year 1	$ 17,844	$ 4,571
Year 2	14,539	4,437
Year 3	11,939	3,223
Year 4	9,224	6,359
Year 5	4,652	1,716
Thereafter	8,510	10,765
Total lease payments	66,708	31,071
Less imputed interest	(7,385)	(4,593)
Total	$ 59,323	$ 26,478

As of December 31, 2023, we have additional operating leases that have not yet commenced of$0.5 million and no finance leases that have not yet commenced. These operating leases will commence in 2024 with lease terms of 3 to 5 years.

NOTE 9 RETIREMENT AND DEFERRED COMPENSATION PLANS

We have various noncontributory retirement plans covering certain of our domestic and foreign employees. Benefits under our retirement plans are based on participants' years of service and annual compensation as defined by each plan. Annual cash contributions to fund pension costs accrued under our domestic plans are generally at least equal to the minimum funding amounts required by the Employee Retirement Income Security Act of 1974, as amended ("ERISA"). Certain pension commitments under our foreign plans are also funded according to local requirements or at our discretion.

Effective January 1, 2021, our domestic noncontributory retirement plans were closed to new employees and employees who were rehired after December 31, 2020. These employees are instead eligible for additional contribution to their defined contribution 401(k) employee savings plan. All domestic employees with hire/rehire dates prior to January 1, 2021 are still eligible for the domestic pension plans and continue to accrue plan benefits after this date.

The following table presents the changes in the benefit obligations and plan assets for the most recent two years for our domestic and foreign plans.

	Domestic Plans		Foreign Plans	
	2023	**2022**	**2023**	**2022**
Change in benefit obligation:				
Benefit obligation at beginning of year	**$ 163,872**	$ 255,457	**$ 93,999**	$ 123,386
Service cost	**9,638**	15,784	**5,915**	7,547
Interest cost	**8,631**	6,970	**3,642**	1,388
Curtailment/Settlement	**—**	—	**(606)**	68
Prior service cost	**—**	—	**(1,134)**	813
Actuarial loss (gain)	**13,989**	(92,724)	**6,906**	(26,826)
Benefits paid	**(10,117)**	(21,615)	**(6,788)**	(4,615)
Foreign currency translation adjustment (loss) gain	**—**	—	**2,823**	(7,762)
Benefit obligation at end of year	**$ 186,013**	$ 163,872	**$ 104,757**	$ 93,999

	Domestic Plans		Foreign Plans	
	2023	**2022**	**2023**	**2022**
Change in plan assets:				
Fair value of plan assets at beginning of year	**$ 162,151**	$ 193,770	**$ 72,523**	$ 85,421
Actual return on plan assets	**21,207**	(25,517)	**3,978**	(4,897)
Employer contribution	**495**	15,513	**477**	1,871
Benefits paid	**(10,117)**	(21,615)	**(6,788)**	(4,615)
Foreign currency translation adjustment	**—**	—	**2,244**	(5,257)
Fair value of plan assets at end of year	**$ 173,735**	$ 162,151	**$ 72,434**	$ 72,523
Funded status at end of year	**$ (12,278)**	$ (1,721)	**$ (32,323)**	$ (21,476)

The following table presents the funded status amounts recognized in our Consolidated Balance Sheets as of December 31, 2023 and 2022.

	Domestic Plans		Foreign Plans	
	2023	**2022**	**2023**	**2022**
Non-current assets	**$ 2,528**	$ 9,304	**$ 1,664**	$ —
Current liabilities	**(530)**	(515)	**(32)**	(31)
Non-current liabilities	**(14,276)**	(10,510)	**(33,955)**	(21,445)
	$ (12,278)	$ (1,721)	**$ (32,323)**	$ (21,476)

The following table presents the amounts not recognized as components of periodic benefit cost that are recognized in accumulated other comprehensive (gain) loss as of December 31, 2023 and 2022.

	Domestic Plans		Foreign Plans	
	2023	**2022**	**2023**	**2022**
Net actuarial loss (gain)	**$ 1,823**	$ (3,338)	**$ 15,661**	$ 11,383
Net prior service cost	**—**	—	**(162)**	1,150
Tax effects	**1,029**	2,271	**(6,463)**	(5,518)
	$ 2,852	$ (1,067)	**$ 9,036**	$ 7,015

Changes in benefit obligations and plan assets recognized in other comprehensive income in 2023, 2022 and 2021 are as follows:

	Domestic Plans		
	2023	**2022**	**2021**
Current year actuarial (loss) gain	**$ (5,161)**	$ 54,295	$ 28,714
Amortization of net loss	**—**	6,670	10,099
	$ (5,161)	$ 60,965	$ 38,813

	Foreign Plans		
	2023	**2022**	**2021**
Current year actuarial (loss) gain	**$ (5,315)**	$ 19,181	$ 6,257
Current year prior service cost	**1,135**	(818)	—
Transfer actuarial loss	**124**	17	—
Amortization of net loss	**914**	1,688	2,325
Amortization of prior service cost	**177**	177	166
	$ (2,966)	$ 20,245	$ 8,748

Components of net periodic benefit cost:

	Domestic Plans		
	2023	**2022**	**2021**
Service cost	**$ 9,638**	$ 15,784	$ 16,356
Interest cost	**8,631**	6,970	6,366
Expected return on plan assets	**(12,378)**	(12,912)	(12,293)
Amortization of net loss	**—**	6,670	10,099
Net periodic benefit cost	**$ 5,891**	$ 16,512	$ 20,528

	Foreign Plans		
	2023	**2022**	**2021**
Service cost	**$ 5,915**	$ 7,547	$ 8,159
Interest cost	**3,642**	1,388	843
Expected return on plan assets	**(2,340)**	(2,728)	(2,838)
Amortization of net loss	**914**	1,688	2,325
Amortization of prior service cost	**177**	177	166
Net periodic benefit cost	**$ 8,308**	$ 8,072	$ 8,655
Curtailment	**(1)**	(24)	5
Total Net periodic benefit cost	**$ 8,307**	$ 8,048	$ 8,660

The accumulated benefit obligation ("ABO") for our domestic defined benefit pension plans was $171.6 million and $152.4 million at 2023 and 2022, respectively. The ABO for our foreign defined benefit pension plans was $80.1 million and $73.8 million at December 31, 2023 and 2022, respectively.

The following table provides the projected benefit obligation ("PBO"), ABO, and fair value of plan assets for all pension plans with an ABO in excess of plan assets as of December 31, 2023 and 2022.

	Domestic Plans		Foreign Plans	
	2023	**2022**	**2023**	**2022**
Projected benefit obligation	**$ 14,806**	$ 11,025	**$ 56,881**	$ 54,455
Accumulated benefit obligation	**12,156**	10,087	**40,312**	40,481
Fair value of plan assets	**—**	—	**29,372**	34,446

The following table provides the PBO, ABO and fair value of plan assets for all pension plans with a PBO in excess of plan assets as of December 31, 2023 and 2022.

	Domestic Plans		Foreign Plans	
	2023	**2022**	**2023**	**2022**
Projected benefit obligation	**$ 14,806**	$ 11,025	**$ 81,534**	$ 71,730
Accumulated benefit obligation	**12,156**	10,087	**56,969**	52,173
Fair value of plan assets	**—**	—	**47,544**	47,236

Assumptions:

	Domestic Plans			Foreign Plans		
	2023	**2022**	**2021**	**2023**	**2022**	**2021**
Weighted-average assumptions used to determine benefit obligations at December 31:						
Discount rate	**4.95 %**	5.15 %	2.75 %	**3.20 %**	3.69 %	1.09 %
Rate of compensation increase	**3.24 %**	3.20 %	3.17 %	**3.20 %**	3.21 %	3.05 %
Weighted-average assumptions used to determine net periodic benefit cost for years ended December 31:						
Discount rate	**5.15 %**	2.75 %	2.40 %	**3.69 %**	1.20 %	0.66 %
Expected long-term return on plan assets	**7.00 %**	7.00 %	7.00 %	**3.23 %**	3.53 %	3.56 %
Rate of compensation increase	**3.20 %**	3.17 %	3.17 %	**3.20 %**	3.20 %	3.05 %

We develop the expected long-term rate of return assumptions based on historical experience and by evaluating input from the plans' asset managers, including the managers' review of asset class return expectations and benchmarks, economic indicators and long-term inflation assumptions.

In order to determine the 2024 net periodic benefit cost, we expect to use the December 31, 2023 discount rates, December 31, 2023 rates of compensation increase assumptions and the same assumed long-term returns on domestic and foreign plan assets used for the 2023 net periodic benefit cost.

Our domestic and foreign pension plan weighted-average asset allocations at December 31, 2023 and 2022 by asset category are as follows:

Plan Assets:

	Domestic Plans Assets at December 31,		Foreign Plans Assets at December 31,	
	2023	**2022**	**2023**	**2022**
Equity securities	**48 %**	47 %	**3 %**	5 %
Fixed income securities	**26 %**	27 %	**1 %**	1 %
Corporate debt securities	**—**	—	**1 %**	1 %
Infrastructure	**8 %**	8 %	**—**	—
Hedge funds	**11 %**	10 %	**—**	—
Money market	**1 %**	1 %	**1 %**	1 %
Investment Funds	**—**	—	**94 %**	92 %
Real estate	**5 %**	7 %	**—**	—
Total	**100 %**	100 %	**100 %**	100 %

Our investment strategy for our domestic and foreign pension plans is to maximize the long-term rate of return on plan assets within an acceptable level of risk. The investment policy strives to have assets sufficiently diversified so that adverse or unexpected results from one security type will not have an unduly detrimental impact on the entire portfolio and accordingly, establishes a target allocation for each asset category within the portfolio. The domestic plan asset allocation is reviewed on a quarterly basis and the foreign plan asset allocation is reviewed annually. Rebalancing occurs as needed to comply with the investment strategy. The domestic plan target allocation for 2024 is 61% equity securities and 39% fixed income securities and infrastructure. The foreign plan target allocation for 2024 is 100% investment funds.

Authoritative guidelines require the categorization of assets and liabilities into three levels based upon the assumptions (inputs) used to price the assets or liabilities. Level 1 provides the most reliable measure of fair value, whereas Level 3 generally requires significant management judgment. The three levels are defined as follows:

- Level 1: Unadjusted quoted prices in active markets for identical assets and liabilities.
- Level 2: Observable inputs other than those included in Level 1. For example, quoted prices for similar assets or liabilities in active markets or quoted prices for identical assets or liabilities in inactive markets.
- Level 3: Unobservable inputs reflecting management's own assumptions about the inputs used in pricing the asset or liability.

	Domestic Fair Value Measurement at December 31, 2023				Foreign Fair Value Measurement at December 31, 2023			
(In Thousands $)	**Total**	**(Level 1)**	**(Level 2)**	**(Level 3)**	**Total**	**(Level 1)**	**(Level 2)**	**(Level 3)**
Cash and Short-term Securities (a)	**$ 1,949**	**$ 1,949**	**$ —**	**$ —**	**$ 514**	**$ 514**	**$ —**	**$ —**
USD	—	1,949	—	—	—	—	—	—
EUR	—	—	—	—	—	506	—	—
Others	—	—	—	—	—	8	—	—
Equity Securities (a)	**$ 73,483**	**$ 73,483**	**$ —**	**$ —**	**$ 2,106**	**$ 2,106**	**$ —**	**$ —**
U.S. Large Cap Equities	—	43,156	—	—	—	—	—	—
U.S. Small Cap Equities	—	8,864	—	—	—	—	—	—
International Equities	—	21,463	—	—	—	2,106	—	—
Fixed Income (a)(b)	**$ 29,171**	**$ 29,171**	**$ —**	**$ —**	**$ 831**	**$ 831**	**$ —**	**$ —**
Corporate debts securities	**$ —**	**$ —**	**$ —**	**$ —**	**$ 1,231**	**$ 1,231**	**$ —**	**$ —**
Euro Corporate Bonds (a)	—	—	—	—	—	1,231	—	—
Investment Funds	**$ —**	**$ —**	**$ —**	**$ —**	**$ 67,752**	**$ 23,513**	**$ 44,239**	**$ —**
Mutual Funds in Equities (a)	—	—	—	—	—	5,411	—	—
Mutual Funds in Bonds (a)	—	—	—	—	—	17,256	—	—
Mutual Funds Diversified (a)(b)	—	—	—	—	—	846	44,239	—
Total Investments in Fair Value Hierarchy	**$ 104,603**	**$ 104,603**	**$ —**	**$ —**	**$ 72,434**	**$ 28,195**	**$ 44,239**	**$ —**
Investments at Net Asset Value per Share	69,132	—	—	—	—	—	—	—
Total Investments	**$ 173,735**	**$ 104,603**	**$ —**	**$ —**	**$ 72,434**	**$ 28,195**	**$ 44,239**	**$ —**

	Domestic Fair Value Measurement at December 31, 2022				Foreign Fair Value Measurement at December 31, 2022			
(In Thousands $)	**Total**	**(Level 1)**	**(Level 2)**	**(Level 3)**	**Total**	**(Level 1)**	**(Level 2)**	**(Level 3)**
Cash and Short-term Securities (a)	**$ 1,260**	**$ 1,260**	**$ —**	**$ —**	**$ 516**	**$ 516**	**$ —**	**$ —**
USD	—	1,260	—	—	—	—	—	—
EUR	—	—	—	—	—	505	—	—
Others	—	—	—	—	—	11	—	—
Equity Securities (a)	**$ 66,338**	**$ 66,338**	**$ —**	**$ —**	**$ 3,769**	**$ 3,769**	**$ —**	**$ —**
U.S. Large Cap Equities	—	37,537	—	—	—	—	—	—
U.S. Small Cap Equities	—	7,918	—	—	—	—	—	—
International Equities	—	20,883	—	—	—	3,769	—	—
Fixed Income (a)(b)	**$ 28,443**	**$ 28,443**	**$ —**	**$ —**	**$ 723**	**$ 723**	**$ —**	**$ —**
Corporate debts securities	**$ —**	**$ —**	**$ —**	**$ —**	**$ 1,135**	**$ 1,135**	**$ —**	**$ —**
Euro Corporate Bonds (a)	—	—	—	—	—	1,135	—	—
Investment Funds	**$ —**	**$ —**	**$ —**	**$ —**	**$ 66,380**	**$ 21,952**	**$ 44,428**	**$ —**
Mutual Funds in Equities (a)	—	—	—	—	—	5,221	—	—
Mutual Funds in Bonds (a)	—	—	—	—	—	15,901	—	—
Mutual Funds Diversified (a)(b)	—	—	—	—	—	830	44,428	—
Total Investments in Fair Value Hierarchy	**$ 96,041**	**$ 96,041**	**$ —**	**$ —**	**$ 72,523**	**$ 28,095**	**$ 44,428**	**$ —**
Investments at Net Asset Value per Share	66,110	—	—	—	—	—	—	—
Total Investments	**$ 162,151**	**$ 96,041**	**$ —**	**$ —**	**$ 72,523**	**$ 28,095**	**$ 44,428**	**$ —**

(a) Based on third party quotation from financial institution.
(b) Based on observable market transactions.

Contributions

Annual cash contributions to fund pension costs accrued under our domestic plans are generally at least equal to the minimum funding amounts required by ERISA. We contributed $0.5 million to our domestic defined benefit plans in 2023 and although we haveno minimum funding requirement, we plan to contribute approximately $0.5 million to pay our ongoing SERP annuity contracts in 2024. Contributions to fund pension costs accrued under our foreign plans are made in accordance with local laws or at our discretion. We contributed approximately $0.5 million to our foreign defined benefit plan in 2023 and expect to contribute approximately $0.6 million in 2024.

Estimated Future Benefit Payments

As of December 31, 2023, we expect the plans to make the following estimated benefit payments relating to our defined benefit plans over the next 10 years:

	Domestic Plans	Foreign Plans
2024	$ 10,189	$ 3,738
2025	10,891	3,516
2026	11,191	4,184
2027	11,212	6,726
2028	12,178	5,295
2029 - 2033	72,294	38,398

Other Plans

We have a non-qualified supplemental pension plan for domestic employees which provides for pension amounts that would have been payable from our principal domestic pension plan if it were not for limitations imposed by income tax regulations. The liability for this plan, which is not funded, was $14.8 million and $11.0 million at December 31, 2023 and 2022, respectively. This amount is included in the liability for domestic plans shown above.

We have a defined contribution 401(k) employee savings plan ("401(k) plan") available to substantially all domestic employees. Company matching contributions are made in cash up to a maximum of 3% of the participating employee's salary subject to income tax regulations. For each of the years ended December 31, 2023, 2022 and 2021, total contributions made to these plans were approximately $5.0 million, $5.0 million and $4.5 million, respectively. As discussed above, domestic employees hired after December 31, 2020 will no longer be eligible for the pension plans and will instead receive an annual Aptar Retirement Savings Account contribution of 5% of their eligible earnings in the 401(k) plan. For the years ended December 31, 2023, 2022 and 2021, total contributions for these eligible employees was approximately $2.7 million, $2.0 million and $0.7 million, respectively.

We have several foreign defined contribution plans, which require us to contribute a percentage of the participating employee's salary according to local regulations. For each of the years ended December 31, 2023, 2022 and 2021, total contributions made to these plans were approximately $3.1 million, $2.9 million and $2.9 million, respectively.

We have no additional postretirement or postemployment benefit plans.

NOTE 10 ACCUMULATED OTHER COMPREHENSIVE INCOME/(LOSS)

Changes in Accumulated Other Comprehensive Income/(Loss) by Component:

	Foreign Currency	Defined Benefit Pension Plans	Derivatives	Total
Balance - December 31, 2020	$ (178,025)	$ (102,322)	$ (1,362)	$ (281,709)
Other comprehensive (loss) income before reclassifications	(71,475)	26,409	8,584	(36,482)
Amounts reclassified from accumulated other comprehensive income (loss)	—	9,427	(7,277)	2,150
Net current-period other comprehensive (loss) income	(71,475)	35,836	1,307	(34,332)
Balance - December 31, 2021	$ (249,500)	$ (66,486)	$ (55)	$ (316,041)
Other comprehensive (loss) income before reclassifications	(79,240)	54,149	(6,666)	(31,757)
Amounts reclassified from accumulated other comprehensive income	—	6,386	46	6,432
Net current-period other comprehensive (loss) income	(79,240)	60,535	(6,620)	(25,325)
Balance - December 31, 2022	$ (328,740)	$ (5,951)	$ (6,675)	$ (341,366)
Other comprehensive (loss) income before reclassifications	48,658	(6,711)	(10,086)	31,861
Amounts reclassified from accumulated other comprehensive income	—	771	—	771
Net current-period other comprehensive (loss) income	48,658	(5,940)	(10,086)	32,632
Balance - December 31, 2023	**$ (280,082)**	**$ (11,891)**	**$ (16,761)**	**$ (308,734)**

Reclassifications Out of Accumulated Other Comprehensive Income/(Loss):

Details about Accumulated Other Comprehensive Income Components	Amount Reclassified from Accumulated Other Comprehensive Income			Affected Line in the Statement Where Net Income is Presented
Year Ended December 31,	2023	2022	2021	
Defined Benefit Pension Plans				
Amortization of net loss	**$ 914**	$ 8,358	$ 12,424	(1)
Amortization of prior service cost	**177**	177	166	(1)
	1,091	8,535	12,590	Total before tax
	(320)	(2,149)	(3,163)	Tax benefit
	$ 771	$ 6,386	$ 9,427	Net of tax
Derivatives				
Changes in cross currency swap: interest component	**$ —**	$ (171)	$ (13)	Interest Expense
Changes in cross currency swap: foreign exchange component	**—**	217	(7,264)	Miscellaneous, net
	$ —	$ 46	$ (7,277)	Net of tax
Total reclassifications for the period	**$ 771**	$ 6,432	$ 2,150	

(1) These accumulated other comprehensive income components are included in the computation of total net periodic benefit costs, net of tax (see Note 9 - Retirement and Deferred Compensation Plans for additional details).

NOTE 11 DERIVATIVE INSTRUMENTS AND HEDGING ACTIVITIES

We maintain a foreign exchange risk management policy designed to establish a framework to protect the value of our non-functional currency denominated transactions from adverse changes in exchange rates. Sales of our products can be denominated in a currency different from the currency in which the related costs to produce the product are denominated. Changes in exchange rates on such inter-country sales or intercompany loans can impact our results of operations. Our policy is not to engage in speculative foreign currency hedging activities, but to minimize our net foreign currency transaction exposure defined as firm commitments and transactions recorded and denominated in currencies other than the functional currency. We may use foreign currency forward exchange contracts, options and cross currency swaps to economically hedge these risks.

For derivative instruments designated as hedges, we formally document the nature and relationships between the hedging instruments and the hedged items, as well as the risk management objectives, strategies for undertaking the various hedge transactions, and the method of assessing hedge effectiveness at inception. Quarterly thereafter, we formally assess whether the derivatives that are used in hedging transactions are highly effective in offsetting changes in the fair value or cash flows of the hedged item. Additionally, in order to designate any derivative instrument as a hedge of an anticipated transaction, the significant characteristics and expected terms of any anticipated transaction must be specifically identified, and it must be probable that the anticipated transaction will occur. All derivative financial instruments used as hedges are recorded at fair value in the Consolidated Balance Sheets (See Note 12 – Fair Value).

Cash Flow Hedge

For derivative instruments that are designated and qualify as cash flow hedges, the changes in fair values are recorded in accumulated other comprehensive loss and included in changes in derivative gain/loss. The changes in the fair values of derivatives designated as cash flow hedges are reclassified from accumulated other comprehensive loss to net income when the underlying hedged item is recognized in earnings. Cash flows from the settlement of derivative contracts designated as cash flow hedges offset cash flows from the underlying hedged items and are included in operating activities in the Consolidated Statements of Cash Flows.

Net Investment Hedge

A significant number of our operations are located outside of the United States. Because of this, movements in exchange rates may have a significant impact on the translation of the financial condition and results of operations of our foreign subsidiaries. A weakening U.S. dollar has an additive effect on our financial condition and results of operations. Conversely, a strengthening U.S. dollar relative to foreign currencies has a dilutive translation effect. In some cases we maintain debt in these subsidiaries to offset the net asset exposure. In the event we plan on a full or partial liquidation of any of our foreign subsidiaries where our net investment is likely to be monetized, we will consider hedging the currency exposure associated with such a transaction.

On July 6, 2022, we entered into aseven year USD/EUR fixed-to-fixed cross currency interest rate swap to effectively hedge the interest rate exposure relating to $203 million of the $400 million 3.60% Senior Notes due March 2032, which were issued by AptarGroup, Inc. on March 7, 2022. This USD/EUR swap agreement exchanged $203 million of fixed-rate 3.60% USD debt to €200 million of fixed-rate 2.5224% EUR debt. We pay semi-annual fixed rate interest payments on the euro notional amount of €2.5 million and receive semi-annual fixed rate interest payments on the USD notional amount of $3.7 million. This swap has been designated as a net investment hedge to effectively hedge the foreign exchange risk associated with €200 million of our euro denominated net assets. We elected the spot method for recording the net investment hedge. Gains and losses resulting from the settlement of the excluded components are recorded in interest expense in the Consolidated Statements of Income. Gains and losses resulting from the fair value adjustments to the cross currency swap agreements are recorded in accumulated other comprehensive loss as the swaps are effective in hedging the designated risk. As of December 31, 2023, the fair value of the cross currency swap was a $22.2 million liability. The swap agreement will mature on September 15, 2029.

Other

As of December 31, 2023, we have recorded the fair value of foreign currency forward exchange contracts of $0.4 million in prepaid and other and $0.2 million in accounts payable, accrued and other liabilities in the Consolidated Balance Sheets. All forward exchange contracts outstanding as of December 31, 2023 had an aggregate notional contract amount of $50.8 million.

Fair Value of Derivative Instruments in the Consolidated Balance Sheets as of December 31, 2023 and December 31, 2022

		December 31, 2023		December 31, 2022	
	Balance Sheet Location	Derivatives Designated as Hedging Instruments	Derivatives not Designated as Hedging Instruments	Derivatives Designated as Hedging Instruments	Derivatives not Designated as Hedging Instruments
Derivative Assets					
Foreign Exchange Contracts	Prepaid and other	$ —	**$ 386**	$ —	$ 1,107
		$ —	**$ 386**	$ —	$ 1,107
Derivative Liabilities					
Foreign Exchange Contracts	Accounts payable, accrued and other liabilities	**$ —**	**$ 221**	$ —	$ 269
Cross Currency Swap Contract (1)	Accounts payable, accrued and other liabilities	**22,199**	**—**	8,840	—
		$ 22,199	**$ 221**	$ 8,840	$ 269

(1) This cross currency swap contract is composed of both an interest component and a foreign exchange component.

The Effect of Derivatives Designated as Hedging Instruments on Accumulated Other Comprehensive Income (Loss) for the Fiscal Years Ended December 31, 2023 and December 31, 2022

Derivatives in Cash Flow Hedging Relationships	Amount of Gain (Loss) Recognized in Other Comprehensive Income on Derivative 2023	2022	Location of (Loss) Gain Recognized in Income on Derivatives	Amount of Gain (Loss) Reclassified from Accumulated Other Comprehensive Income on Derivative 2023	2022	Total Amount of Affected Income Statement Line Item
Cross currency swap contract:						
Interest component	**$ —**	$ 229	Interest expense	**$ —**	$ 171	**$ (40,418)**
Foreign exchange component	**(10,086)**	(6,894)	Miscellaneous, net	**—**	(217)	**3,212**
	$ (10,086)	$ (6,665)		**$ —**	$ (46)	

The Effect of Derivatives Not Designated as Hedging Instruments on the Consolidated Statements of Income for the Fiscal Years Ended December 31, 2023 and December 31, 2022

Derivatives Not Designated as Hedging Instruments	Location of (Loss) Gain Recognized in Income on Derivatives	Amount of (Loss) Gain Recognized in Income on Derivatives 2023	2022
Foreign Exchange Contracts	Other (Expense) Income: Miscellaneous, net	**$ (668)**	$ 606
		$ (668)	$ 606

Description	Gross Amount	Gross Amounts Offset in the Statement of Financial Position	Net Amounts Presented in the Statement of Financial Position	Gross Amounts not Offset in the Statement of Financial Position		Net Amount
				Financial Instruments	Cash Collateral Received	
December 31, 2023						
Derivative Assets	**$ 386**	**$ —**	**$ 386**	**$ —**	**$ —**	**$ 386**
Total Assets	**$ 386**	**$ —**	**$ 386**	**$ —**	**$ —**	**$ 386**
Derivative Liabilities	**$ 22,420**	**$ —**	**$ 22,420**	**$ —**	**$ —**	**$ 22,420**
Total Liabilities	**$ 22,420**	**$ —**	**$ 22,420**	**$ —**	**$ —**	**$ 22,420**
December 31, 2022						
Derivative Assets	$ 1,107	$ —	$ 1,107	$ —	$ —	$ 1,107
Total Assets	$ 1,107	$ —	$ 1,107	$ —	$ —	$ 1,107
Derivative Liabilities	$ 9,109	$ —	$ 9,109	$ —	$ —	$ 9,109
Total Liabilities	$ 9,109	$ —	$ 9,109	$ —	$ —	$ 9,109

NOTE 12 FAIR VALUE

Authoritative guidelines require the categorization of assets and liabilities into three levels based upon the assumptions (inputs) used to price the assets or liabilities. Level 1 provides the most reliable measure of fair value, whereas Level 3 generally requires significant management judgment. The three levels are defined as follows:

- Level 1: Unadjusted quoted prices in active markets for identical assets and liabilities.
- Level 2: Observable inputs other than those included in Level 1. For example, quoted prices for similar assets or liabilities in active markets or quoted prices for identical assets or liabilities in inactive markets.
- Level 3: Unobservable inputs reflecting management's own assumptions about the inputs used in pricing the asset or liability.

As of December 31, 2023, the fair values of our financial assets and liabilities were categorized as follows:

	Total	Level 1	Level 2	Level 3
Assets				
Investment in equity securities [(1)]	**$ 1,106**	**$ 1,106**	**$ —**	**$ —**
Foreign exchange contracts [(2)]	**386**	**—**	**386**	**—**
Convertible notes	**5,650**	**—**	**—**	**5,650**
Total assets at fair value	**$ 7,142**	**$ 1,106**	**$ 386**	**$ 5,650**
Liabilities				
Foreign exchange contracts [(2)]	**$ 221**	**$ —**	**$ 221**	**$ —**
Cross currency swap contract [(2)]	**22,199**	**—**	**22,199**	**—**
Contingent consideration obligation	**—**	**—**	**—**	**—**
Total liabilities at fair value	**$ 22,420**	**$ —**	**$ 22,420**	**$ —**

As of December 31, 2022, the fair values of our financial assets and liabilities were categorized as follows:

	Total	Level 1	Level 2	Level 3
Assets				
Investment in equity securities [1]	$ 5,297	$ 5,297	$ —	$ —
Foreign exchange contracts [2]	1,107	—	1,107	—
Convertible notes	5,650	—	—	5,650
Total assets at fair value	$ 12,054	$ 5,297	$ 1,107	$ 5,650
Liabilities				
Foreign exchange contracts [2]	$ 269	$ —	$ 269	$ —
Cross currency swap contract [2]	8,840	—	8,840	—
Contingent consideration obligation	25,310	—	—	25,310
Total liabilities at fair value	$ 34,419	$ —	$ 9,109	$ 25,310

(1) Investment in PureCycle Technologies ("PCT" or "PureCycle"). See Note 20 - Investment in Equity Securities for discussion of this investment.
(2) Market approach valuation technique based on observable market transactions of spot and forward rates.

The carrying amounts of our other current financial instruments such as cash and equivalents, accounts and notes receivable, notes payable and current maturities of long-term obligations approximate fair value due to the short-term maturity of the instrument. We consider our long-term debt obligations a Level 2 liability and utilize the market approach valuation technique based on interest rates that are currently available to us for issuance of debt with similar terms and maturities. The estimated fair value of our long-term obligations was $0.6 billion and $0.9 billion as of December 31, 2023 and December 31, 2022, respectively.

During the first quarter of 2022, we invested $5.0 million in a convertible note in Enable Injections, Inc. This investment is recorded at fair value and is a Level 3 fair value measurement.

During the second quarter of 2022, we invested $1.0 million in a convertible note in Siklus Refill Pte. Ltd. ("Siklus"). During the fourth quarter of 2022, Siklus repaid $0.4 million of its convertible note. This investment is recorded at fair value and is a Level 3 fair value measurement.

As discussed in Note 19 – Acquisitions, we had a contingent consideration obligation to the selling equity holders of:
- Fusion in connection with the Fusion acquisition based on 2022 cumulative performance targets, and
- Noble in connection with the Noble acquisition based on 2024 cumulative performance targets

We consider these obligations a Level 3 liability and have estimated the aggregate fair value for these contingent consideration arrangements as follows:

	December 31, 2023	December 31, 2022
Fusion Acquisition	$ —	$ 25,310
Noble Acquisition	—	—
	$ —	$ 25,310

Changes in the fair value of these obligations are recorded within selling, research & development and administrative expenses in our Consolidated Statements of Income. Significant changes to the inputs, as noted above, can result in a significantly higher or lower fair value measurement. The following table provides a summary of changes in our Level 3 fair value measurements:

Balance, December 31, 2021	$ 33,908
Increase in fair value recorded in earnings	(8,598)
Balance, December 31, 2022	$ 25,310
Payments	(25,310)
Balance, December 31, 2023	$ —

NOTE 13 COMMITMENTS AND CONTINGENCIES

In the normal course of business, we are subject to a number of lawsuits and claims both actual and potential in nature. While management believes the resolution of these claims and lawsuits will not have a material adverse effect on our financial position, results of operations or cash flows, claims and legal proceedings are subject to inherent uncertainties, and unfavorable outcomes could occur that could include amounts in excess of any accruals which management has established. Were such unfavorable final outcomes to occur, it is possible that they could have a material adverse effect on our financial position, results of operations and cash flows.

We have various purchase commitments for raw materials, supplies, and property and equipment obtained in the normal course of business. As of December 31, 2023, we have unconditional purchase commitments of approximately $53.4 million of which the majority relate to open purchase orders for fixed assets over the next five years, for which no liabilities have been recorded.

Under our Certificate of Incorporation, we have agreed to indemnify our officers and directors for certain events or occurrences while the officer or director is, or was, serving at our request in such capacity. The maximum potential amount of future payments we could be required to make under these indemnification agreements is unlimited; however, we have a directors and officers liability insurance policy that covers a portion of our exposure. As a result of our insurance policy coverage, we believe the estimated fair value of these indemnification agreements is minimal. We have no liabilities recorded for these agreements as of December 31, 2023.

A fire caused damage to our facility in Annecy, France in June 2016. We were insured for the damages caused by the fire, including business interruption insurance. During the second quarter of 2022, we filed a lawsuit against the insurance company to recover a part of our claim. We reached a settlement with the insurance company during the fourth quarter of 2023 for $6.6 million, which is recorded in Miscellaneous income (expense), net in our Consolidated Statements of Income.

We are periodically subject to loss contingencies resulting from custom duties assessments. We accrue for anticipated costs when an assessment has indicated that a loss is probable and can be reasonably estimated. We have received claims worth approximately $13 million in principal and $5 million to $6 million for interest and penalties. We are currently defending our position with respect to these claims in the respected administrative procedures. Due to uncertainty in the probability of settlement and the timing of our appeal, no liability is recorded as of December 31, 2023.

We will continue to evaluate these liabilities periodically based on available information, including the progress of remedial investigations, the status of discussions with regulatory authorities regarding the methods and extent of remediation and the apportionment of costs and penalties among potentially responsible parties.

NOTE 14 STOCK REPURCHASE PROGRAM

On April 18, 2019, we announced a share repurchase authorization of up to $350 million of common stock. This authorization replaces previous authorizations and has no expiration date. Aptar may repurchase shares through the open market, privately negotiated transactions or other programs, subject to market conditions.

In 2023, 2022 and 2021, we repurchased approximately 399 thousand, 860 thousand and 615 thousand shares, respectively, of our outstanding common stock at a total cost of $47.6 million, $92.1 million and $78.1 million, respectively. As of December 31, 2023, there was $60.7 million of authorized share repurchases available to us.

NOTE 15 CAPITAL STOCK

We have 199 million authorized shares of common stock. The number of shares of common stock and treasury stock and the share activity were as follows:

	Common Shares			Treasury Shares		
	2023	**2022**	**2021**	**2023**	**2022**	**2021**
Balance at the beginning of the year	**70,848,810**	70,370,812	69,516,805	**5,555,027**	4,852,709	4,528,051
Employee option exercises	**679,878**	301,463	634,572	**(178,326)**	(157,682)	(290,316)
Director option exercises	**—**	—	47,500	**—**	—	—
Restricted stock vestings	**150,970**	176,535	171,935	**—**	—	—
Common stock repurchases	**—**	—	—	**398,594**	860,000	614,974
Balance at the end of the year	**71,679,658**	70,848,810	70,370,812	**5,775,295**	5,555,027	4,852,709

The cash dividends paid on the common stock for the years ended December 31, 2023, 2022 and 2021 aggregated $103.7 million, $99.5 million and $98.5 million, respectively.

NOTE 16 STOCK-BASED COMPENSATION

We issue restricted stock units ("RSUs"), which consist of time-based and performance-based awards, to employees under stock awards plans approved by stockholders. In addition, RSUs are issued to non-employee directors under a Restricted Stock Unit Award Agreement for Directors pursuant to the Company's 2018 Equity Incentive Plan. RSUs granted to employees vest according to a specified performance period and/or vesting period. Time-based RSUs generally vest over three years. Performance-based RSUs vest at the end of the specified performance period, generallythree years, assuming required performance or market vesting conditions are met.

For awards granted in the first quarter of 2023, our performance-based RSUs will vest solely based on our return of invested capital ("ROIC"). Award share payouts depend on the extent to which the ROIC performance goal has been achieved, but the final payout is adjusted by a total shareholder return ("TSR") modifier.

At the time of vesting, the vested shares of common stock are issued in the employee's name. RSUs granted to directors are only time-based and generally vest over one year.

The fair value of both time-based RSUs and performance-based RSUs pertaining to internal performance metrics is determined using the closing price of our common stock on the grant date. The fair value of performance-based RSUs pertaining to TSR is estimated using a Monte Carlo simulation. Inputs and assumptions used to calculate the fair value are shown in the table below. The fair value of these RSUs is expensed over the vesting period using the straight-line method or using the graded vesting method when an employee becomes eligible to retain the award at retirement.

Year Ended December 31,	**2023 (1)**	**2022**	**2021**
Fair value per stock award	**$ 116.17**	$ 141.95	$ 171.63
Grant date stock price	**$ 111.38**	$ 114.52	$ 141.59
Assumptions:			
Aptar's stock price expected volatility	**20.00 %**	20.20 %	21.40 %
Expected average volatility of peer companies	**39.70 %**	41.70 %	50.00 %
Correlation assumption	**33.30 %**	41.20 %	58.10 %
Risk-free interest rate	**3.83 %**	2.04 %	0.32 %
Dividend yield assumption	**1.36 %**	1.33 %	1.02 %

(1) The 2023 award inputs and assumptions are related to PSU-ROIC awards with a TSR modifier.

A summary of RSU activity as of December 31, 2023, and changes during the period then ended is presented below:

	Time-Based RSUs		**Performance-Based RSUs**	
	Units	**Weighted Average Grant-Date Fair Value**	**Units**	**Weighted Average Grant-Date Fair Value**
Nonvested at January 1, 2023	**426,361**	**$ 111.60**	**610,871**	**$ 118.77**
Granted	**123,657**	**110.55**	**151,499**	**115.69**
Vested	**(193,820)**	**105.00**	**(99,182)**	**89.33**
Forfeited	**(20,324)**	**111.17**	**(148,805)**	**96.24**
Nonvested at December 31, 2023	**335,874**	**$ 115.15**	**514,383**	**$ 130.10**

Included in the December 31, 2023 time-based RSUs are 11,508 units granted to non-employee directors and 10,589 units vested related to non-employee directors.

Year Ended December 31,	**2023**	**2022**	**2021**
Compensation expense	**$ 37,015**	$ 40,937	$ 38,643
Fair value of units vested	**29,100**	32,013	32,414
Intrinsic value of units vested	**33,914**	33,024	42,970

The actual tax benefit realized for the tax deduction from RSUs was approximately $5.9 million, $8.0 million and $7.2 million for the years ended December 31, 2023, 2022 and 2021, respectively. As of December 31, 2023, there was $41.1 million of total unrecognized compensation cost relating to RSU awards which is expected to be recognized over a weighted average period of 1.7 years.

Historically we issued stock options to our employees and non-employee directors. We did not issue stock options between 2019 and 2022. Stock options were awarded in the first quarter of 2023 with the exercise price equal to the market price on the date of grant; however, Aptar executive officers received stock options with an exercise price that was 110% of the closing market price on the date of grant. Stock option grants generally vest ratably overthree years and expire 10 years after grant.

The Company uses historical data to estimate expected life and volatility. The weighted-average fair value of stock options granted under the stock awards plans were $19.84 and $24.23 per share for executive officers and all others employees, respectively, during 2023.These values were estimated on the respective dates of grant using the Black-Scholes option-pricing model with the following weighted-average assumptions:

Stock Award Plans:	
Year Ended December 31,	**2023**
Dividend Yield	**1.41 %**
Expected Stock Price Volatility	**16.55 %**
Risk-free Interest Rate	**3.57 %**
Expected Life of Option (years)	**7.0**

A summary of option activity under our stock plans as of December 31, 2023, and changes during the period then ended is presented below:

	Stock Awards Plans		**Director Stock Option Plans**	
	Options	**Weighted Average Exercise Price**	**Options**	**Weighted Average Exercise Price**
Outstanding, January 1, 2023	**2,623,944**	**$ 73.34**	**51,700**	**$ 63.91**
Granted	**315,005**	**116.19**	**—**	**—**
Exercised	**(749,899)**	**69.94**	**(32,700)**	**62.36**
Forfeited or expired	**(6,266)**	**93.23**	**—**	**—**
Outstanding at December 31, 2023	**2,182,784**	**$ 80.63**	**19,000**	**$ 66.59**
Exercisable at December 31, 2023	**1,871,178**	**$ 74.70**	**19,000**	**$ 66.59**
Weighted-Average Remaining Contractual Term (Years):				
Outstanding at December 31, 2023	**3.5**		**0.4**	
Exercisable at December 31, 2023	**2.6**		**0.4**	
Aggregate Intrinsic Value:				
Outstanding at December 31, 2023	**$ 93,830**		**$ 1,084**	
Exercisable at December 31, 2023	**$ 91,533**		**$ 1,084**	
Intrinsic Value of Options Exercised During the Years Ended:				
December 31, 2023	**$ 38,706**		**$ 1,978**	
December 31, 2022	$ 20,608		$ —	
December 31, 2021	$ 69,862		$ 4,248	

Year Ended December 31,	**2023**	**2022**	**2021**
Compensation expense (included in SG&A)	**$ 3,929**	$ —	$ 185
Compensation expense (included in Cost of sales)	**349**	—	42
Compensation expense, Total	**$ 4,278**	$ —	$ 227
Compensation expense, net of tax	**4,278**	—	174
Grant date fair value of options vested	**2,663**	—	2,421

The increase in stock option expense is due to the newly issued options as discussed above. Cash received from option exercises was approximately $4.0 million, $28.5 million and $59.9 million for the years ended December 31, 2023, 2022 and 2021, respectively. The actual tax benefit realized for the tax deduction from option exercises was approximately $9.1 million, $4.4 million and $16.5 million in the years ended December 31, 2023, 2022 and 2021, respectively. As of December 31, 2023, there was $2.7 million of total unrecognized compensation cost relating to stock option awards which is expected to be recognized over a weighted-average period of 2.0 years.

NOTE 17 EARNINGS PER SHARE

Basic net income per share is calculated by dividing net income attributable to Aptar by the weighted-average number of common shares outstanding during the period. Diluted net income per share is calculated by dividing the net income attributable to Aptar by the weighted-average number of common and common equivalent shares outstanding during the applicable period. The difference between basic and diluted earnings per share is attributable to stock based compensation awards. Stock-based compensation awards for which total employee proceeds exceed the average market price over the applicable period would have an antidilutive effect on earnings per share, and accordingly, are excluded from the calculation of diluted earnings per share. The reconciliation of basic and diluted earnings per share ("EPS") for the years ended December 31, 2023, 2022 and 2021 are as follows:

		Income (Numerator)	Shares (Denominator)		Per Share Amount
For the Year Ended December 31, 2023					
Basic EPS					
Income available to common stockholders	**$**	**284,487**	**65,616**	**$**	**4.34**
Effect of Dilutive Securities					
Stock options			**874**		
Restricted stock			**415**		
Diluted EPS					
Income available to common stockholders	**$**	**284,487**	**66,905**	**$**	**4.25**
For the Year Ended December 31, 2022					
Basic EPS					
Income available to common stockholders	$	239,288	65,402	$	3.66
Effect of Dilutive Securities					
Stock options			978		
Restricted stock			339		
Diluted EPS					
Income available to common stockholders	$	239,288	66,719	$	3.59
For the Year Ended December 31, 2021					
Basic EPS					
Income available to common stockholders	$	244,097	65,663	$	3.72
Effect of Dilutive Securities					
Stock options			1,600		
Restricted stock			419		
Diluted EPS					
Income available to common stockholders	$	244,097	67,682	$	3.61

NOTE 18 SEGMENT INFORMATION

During the year ended December 31, 2022, our organizational structure consisted ofthree market-focused business segments: Pharma, Beauty + Home and Food + Beverage. Effective January 1, 2023, we realigned two of our segments, allowing us to better serve our customers and positioning us for long-term profitable growth. We continue to have three reporting segments; Aptar Pharma and Aptar Beauty are named for the markets they serve with multiple product platforms, while Aptar Closures is named primarily for a single product platform that serves all available markets.

The Aptar Closures business serves multiple markets, including food, beverage, personal care, home care, beauty and healthcare. Closures that were developed in the previous Beauty + Home segment were moved to Aptar Closures, together with the operations of legacy Food + Beverage. This means that Aptar's food protection business and our elastomeric flow-control technology business report through the Aptar Closures segment. The realignment brings us closer to how our customers are structured and operate their business.

At the same time, we have simplified and focused our Beauty + Home segment to better leverage our complex spray and dispensing solutions for prestige and mass brands in the beauty, personal care and home care markets. For many of our customers, personal care products are considered part of "beauty" and so we renamed this segment, Aptar Beauty.

The segment realignment had no impact on our Consolidated Statements of Income, Balance Sheets, and Cash Flows. Segment financial information for the prior periods has been recast to conform to the current presentation.

The accounting policies of the segments are the same as those described in Note 1 – Summary of Significant Accounting Policies. We evaluate performance of our reporting segments and allocate resources based upon Adjusted EBITDA. Adjusted EBITDA is defined as earnings before net interest, taxes, depreciation, amortization, unallocated corporate expenses, restructuring initiatives, acquisition-related costs, net unrealized investment gains and losses related to observable market price changes on equity securities and other special items.

Financial information regarding our reporting segments is shown below:

In thousands

Year Ended December 31,	**2023**	**2022**	**2021**
Total Sales:			
Aptar Pharma	**$ 1,521,837**	$ 1,372,449	$ 1,297,996
Aptar Beauty	**1,297,477**	1,246,018	1,204,312
Aptar Closures	**706,847**	748,055	768,497
Total Sales	**$ 3,526,161**	$ 3,366,522	$ 3,270,805
Less: Intersegment Sales:			
Aptar Pharma	**$ 844**	$ 11,193	$ 13,372
Aptar Beauty	**29,780**	23,483	22,466
Aptar Closures	**8,087**	9,597	7,746
Total Intersegment Sales	**$ 38,711**	$ 44,273	$ 43,584
Net Sales:			
Aptar Pharma	**$ 1,520,993**	$ 1,361,256	$ 1,284,624
Aptar Beauty	**1,267,697**	1,222,535	1,181,846
Aptar Closures	**698,760**	738,458	760,751
Net Sales	**$ 3,487,450**	$ 3,322,249	$ 3,227,221
Adjusted EBITDA (1):			
Aptar Pharma	**$ 502,633**	$ 441,622	$ 425,714
Aptar Beauty	**163,716**	151,887	125,451
Aptar Closures	**103,693**	86,109	108,615
Corporate & Other, unallocated	**(62,320)**	(62,930)	(52,314)
Acquisition-related costs (2)	**(480)**	(231)	(3,811)
Restructuring Initiatives (3)	**(45,004)**	(6,597)	(23,240)
Net unrealized investment (loss) gain (4)	**(2,775)**	(3,323)	2,709
Depreciation and amortization	**(248,593)**	(233,706)	(234,853)
Interest Expense	**(40,418)**	(40,827)	(30,284)
Interest Income	**4,373**	2,700	3,668
Income before Income Taxes	**$ 374,825**	$ 334,704	$ 321,655
Depreciation and Amortization:			
Aptar Pharma	**$ 109,366**	$ 94,396	$ 90,510
Aptar Beauty	**83,399**	80,498	83,379
Aptar Closures	**52,095**	52,866	53,555
Corporate & Other	**3,733**	5,946	7,409
Depreciation and Amortization	**$ 248,593**	$ 233,706	$ 234,853
Capital Expenditures:			
Aptar Pharma	**$ 196,083**	$ 164,396	$ 154,077
Aptar Beauty	**83,872**	74,203	87,442
Aptar Closures	**52,160**	44,223	47,225
Corporate & Other	**14,729**	29,491	29,686
Transfer of Corporate Expenditures (5)	**(34,502)**	(1,886)	(10,495)
Capital Expenditures	**$ 312,342**	$ 310,427	$ 307,935
Total Assets:			
Aptar Pharma	**$ 2,111,779**	$ 1,872,843	$ 1,833,512
Aptar Beauty	**1,412,203**	1,398,813	1,370,854
Aptar Closures	**765,930**	779,654	819,332
Corporate & Other	**161,978**	152,148	117,666
Total Assets	**$ 4,451,890**	$ 4,203,458	$ 4,141,364

(1) We evaluate performance of our reporting segments and allocate resources based upon Adjusted EBITDA. Adjusted EBITDA is defined as earnings before net interest, taxes, depreciation, amortization, unallocated corporate expenses, restructuring initiatives, acquisition-related costs, net unrealized investment gains and losses related to observable market price changes on equity securities and other special items.

(2) Acquisition-related costs include transaction costs and purchase accounting adjustments related to acquisitions and investments (see Note 19 – Acquisitions and Note 20 – Investment in Equity Securities for further details).

(3) Restructuring Initiatives includes expense items for the years ended December 31, 2023, 2022 and 2021 as follows (see Note 21 – Restructuring Initiatives for further details):

In thousands

Year Ended December 31,	**2023**	**2022**	**2021**
Restructuring Initiatives by Plan:			
Optimization initiative	**$ 45,445**	$ 6,224	$ —
Prior year initiatives	**(441)**	373	23,240
Total Restructuring Initiatives	**$ 45,004**	$ 6,597	$ 23,240
Restructuring Initiatives by Segment:			
Aptar Pharma	**$ 4,852**	$ —	$ 76
Aptar Beauty	**20,683**	5,539	8,149
Aptar Closures	**17,927**	1,058	2,702
Corporate & Other	**1,542**	—	12,313
Total Restructuring Initiatives	**$ 45,004**	$ 6,597	$ 23,240

(4) Net unrealized investment (loss) gain represents the change in fair value of our investment in PCT (see Note 20 - Investment in Equity Securities for further details).

(5) The transfer of corporate expenditures represents amounts of projects managed by corporate for the benefit of specific entities within each segment. Once the projects are complete, all related costs are allocated from corporate to and paid by the appropriate entity and the associated assets are then depreciated at the entity level. The increase in 2023 relates to a project build in Suzhou, China.

Geographic Information

The following are net sales and long-lived asset information by geographic area and product information for the years ended December 31, 2023, 2022 and 2021:

	2023	2022	2021
Net Sales to Unaffiliated Customers (1):			
United States	**$ 1,001,087**	$ 1,100,159	$ 1,081,823
Europe:			
France	**1,077,695**	938,637	906,057
Germany	**564,528**	512,709	486,928
Italy	**172,215**	154,823	161,676
Other Europe	**187,341**	167,226	170,521
Total Europe	**2,001,779**	1,773,395	1,725,182
China	**152,609**	156,577	148,671
Other Foreign Countries	**331,975**	292,118	271,545
Total	**$ 3,487,450**	$ 3,322,249	$ 3,227,221
Property, Plant and Equipment, Net			
United States	**$ 357,729**	$ 346,382	$ 321,511
Europe:			
France	**550,738**	482,091	455,105
Germany	**225,860**	194,898	197,643
Italy	**42,240**	42,522	50,828
Other Europe	**63,864**	53,317	58,121
Total Europe	**882,702**	772,828	761,697
China	**112,017**	98,469	74,535
Other Foreign Countries	**125,615**	125,985	118,134
Total	**$ 1,478,063**	$ 1,343,664	$ 1,275,877

(1) Sales are attributed to countries based upon where the sales invoice to unaffiliated customers is generated.

No single customer or group of affiliated customers represents greater than 5% of our net sales in 2023, 2022 or 2021.

NOTE 19 ACQUISITIONS

Business Combinations

On August 1, 2023, we paid the remaining $5.2 million purchase price in relation to the 2021 Hengyu acquisition. No further liability remains outstanding for this acquisition.

On March 1, 2023, we completed the acquisition of all the outstanding capital stock of iD SCENT. Located in Lyon, France, iD SCENT is an expert producer of paper fragrance sampling solutions that present multiple sustainability features. The purchase price was approximately $9.4 million (net of $1.4 million cash acquired) and was funded with cash on hand. The results of iD SCENT have been included in the consolidated financial statements within our Aptar Beauty segment since the date of acquisition.

Also on March 1, 2023, we completed the acquisition of 80% of the equity interests of Gulf Closures W.L.L. ("Gulf Closures"). Gulf Closures, located in Bahrain, is a closure manufacturer for beverage products. The purchase price for 80% ownership was approximately $1.5 million (net of $1.2 million cash acquired) and was funded with cash on hand. This values the full company equity at approximately $3.3 million and implies a non-controlling interest valued at approximately $0.7 million as of the acquisition date. The results of Gulf Closures have been included in the consolidated financial statements within our Aptar Closures segment since the date of acquisition.

On August 31, 2022, we completed the acquisition of all the outstanding capital stock of Metaphase Design Group Inc. ("Metaphase"). Metaphase, located in St. Louis, Missouri, is a leading expert in ergonomic and industrial design of handheld devices including medical devices. The purchase price was approximately $5.1 million (net of $0.1 million cash acquired) and was funded with cash on hand. As of the acquisition date, $1.0 million was held in restricted cash for an indemnity escrow. The results of Metaphase have been included in the consolidated financial statements within our Aptar Pharma segment since the date of acquisition.

For the year ended December 31, 2023, we recognized $0.3 million in transaction costs related to the acquisitions of iD SCENT and Gulf Closures. For the year ended December 31, 2022, we recognized $0.2 million in transaction costs related to the acquisition of Metaphase. These costs are reflected in the selling, research & development and administration section of the Consolidated Statements of Income and within acquisition-related costs as disclosed in Note 18 – Segment Information. Pro forma 2023 and 2022 reported results of operations for the acquisitions have not been presented as the effects of these business combinations individually and in aggregate were not material to the consolidated results of operations.

Goodwill in the amount of $3.8 million was recorded related to the 2023 acquisitions, of which $3.7 million is included in the Aptar Beauty segment and $0.1 million is included in the Aptar Closures segment. $3.0 million was recorded related to the 2022 Metaphase acquisition and is included in the Aptar Pharma segment. Goodwill is calculated as the excess of the consideration transferred over the net assets acquired and represents the estimated future economic benefits arising from other assets acquired that could not be individually identified and separately recognized. Goodwill acquired in our 2023 acquisitions has expanded our portfolio of fragrance sampling solutions, and has expanded our market opportunities and strengthens our presence in the Middle East region, while goodwill in our 2022 acquisition expanded our portfolio of services as well as the ability to become a single source provider to our pharmaceutical and biotech customers. Goodwill will not be amortized, but will be tested for impairment at least annually. For 2023 and 2022 acquisitions, no goodwill will be deductible for tax purposes.

NOTE 20 INVESTMENT IN EQUITY SECURITIES

Our investment in equity securities consisted of the following:

	December 31, 2023	December 31, 2022
Equity Method Investments		
BTY	**$ 33,090**	$ 31,490
Sonmol	**4,751**	4,997
Desotec GmbH	**905**	863
Other Investments		
PureCycle	**1,106**	5,297
YAT	**5,352**	5,508
Loop	**2,894**	2,894
Others	**1,105**	1,259
	$ 49,203	$ 52,308

Equity Method Investments

Jinyu

On December 10, 2023, we entered into a Share Purchase Agreement to acquire 40% of the equity interests in Ningbo Jinyu Technology Industry Co., Ltd. (referred to as "Jinyu"), a leading manufacturer of dispensing technologies in China for approximately $84 million. This transaction is expected to close during 2024, subject to satisfaction and completion of various closing conditions.

BTY

On January 1, 2020, we acquired 49% of the equity interests in three related companies: Suzhou Hsing Kwang, Suqian Hsing Kwang and Suzhou BTY (collectively referred to as “BTY”) for an approximate purchase price of $32 million. We have a call option to acquire an additional 26% to 31% of BTY’s equity interests following the initial lock-up period of 5 years based on a predetermined formula. Subsequent to the second lock-up period, which ends 3 years after the initial lock-up period, we have a call option to acquire the remaining equity interests of BTY based on a predetermined formula. Additionally, the selling shareholders of BTY have a put option for the remaining equity interest to be acquired by Aptar based on a predetermined formula. The BTY entities are leading Chinese manufacturers of high quality, decorative metal components, metal-plastic sub-assemblies, and complete color cosmetics packaging solutions for the beauty industry. For the years ended December 31, 2023, 2022 and 2021, Aptar had purchases of $14.3 million, $11.4 million and $6.3 million, respectively, from BTY. As of December 31, 2023 and 2022, approximately $1.8 million and $1.5 million, respectively, was due to BTY and included in accounts payable, accrued and other liabilities on our Consolidated Balance Sheets.

Sonmol

On April 1, 2020, we invested $5 million to acquire 30% of the equity interests in Healthcare, Inc., Shanghai Sonmol Internet Technology Co., Ltd. and its subsidiary, Shanghai Sonmol Medical Equipment Co., Ltd. (collectively referred to as "Sonmol"). Sonmol is a leading Chinese pharmaceutical company that provides consumer electric devices and connected devices for asthma control.

Desotec GmbH

During 2009, we invested €574 thousand to acquire 23% of the equity interests in Desotec GmbH, a leading manufacturer of special assembly machines for bulk processing for the pharmaceutical, beauty and closures markets.

Other Investments

In prior years, we invested, through a series of transactions, an aggregate amount of $2.9 million in preferred equity investments in Loop, a sustainability company.

In prior years, we also invested, through a series of transactions, $3.0 million in PureCycle and received $0.7 million of equity in exchange for our resource dedication for technological partnership and support. In March 2021, PureCycle was purchased by a special purpose acquisition company and was subsequently listed on Nasdaq under the ticker PCT. At that time, our investment in PureCycle was converted into shares of PCT resulting in less than a 1% ownership interest. This investment is now recorded at fair value based on observable market prices for identical assets and the change in fair value is recorded as a net investment gain or loss in the Consolidated Statements of Income.

We have sold the following PCT shares related to the PureCycle investment:

	Shares Sold	Proceeds	Realized Gain
October 2021	191,349	$ 2,434	$ 2,000
March 2022	107,600	$ 1,088	$ 841
August 2022	50,000	$ 511	$ 372
July 2023	248,859	$ 2,659	$ 1,968
August 2023	261,590	$ 2,945	$ 2,220

For the years ended December 31, 2023, 2022 and 2021 we recorded the following net investment gain or loss on our investment in PureCycle:

	2023	2022	2021
Net investment gain (loss)	$ 1,413	$ (2,110)	$ 4,709

On July 7, 2021, we invested approximately $5.9 million to acquire 10% of the equity interests in YAT, a multi-functional, science-driven online skincare solutions company.

There were no indications of impairment noted in the year ended December 31, 2023 related to these investments.

NOTE 21 RESTRUCTURING INITIATIVES

In late 2017, we began a business transformation to drive profitable sales growth, increase operational excellence, enhance our approach to innovation and improve organizational effectiveness. The primary focus of the plan was the previous Beauty + Home segment; however, certain global general and administrative functions were also addressed. As of the end of 2021, we had completed the vast majority of our planned initiatives related to our transformation plan. During 2023, 2022 and 2021, we recognized $0.4 million of income, $0.4 million of restructuring costs and $23.2 million of restructuring costs related to this plan, respectively.

During the third quarter of 2022, we began an initiative to better leverage our fixed cost base through growth and cost reduction measures. For the years ended December 31, 2023 and 2022, we recognized $45.4 million and $6.2 million, respectively, of restructuring costs related to this initiative. The cumulative expense incurred as of December 31, 2023 was $51.6 million.

As of December 31, 2023, we have recorded the following activity associated with our optimization initiative:

	Beginning Reserve at 12/31/2022	Net Charges for the Year Ended 12/31/2023	Cash Paid	Interest and FX Impact	Ending Reserve at 12/31/2023
Employee severance	$ 4,993	$ 37,167	$ (12,608)	$ (2,474)	$ 27,078
Professional fees and other costs	—	8,278	(5,486)	18	2,810
Totals	$ 4,993	$ 45,445	$ (18,094)	$ (2,456)	$ 29,888

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of AptarGroup, Inc.

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of AptarGroup, Inc. and its subsidiaries (the "Company") as of December 31, 2023 and 2022, and the related consolidated statements of income, comprehensive income, changes in equity and cash flows for each of the three years in the period ended December 31, 2023, including the related notes, and schedule of valuation and qualifying accounts for each of the three years in the period ended December 31, 2023 listed in the index appearing under Item 15(a)(2) (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2023, 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, 2023 and 2022, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2023 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, 2023, based on criteria established in Internal Control - Integrated Framework (2013) issued by the COSO.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying 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 matters communicated below are matters arising from the current period audit of the consolidated financial statements that were communicated or required to be communicated to the audit committee and that (i) relate to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Goodwill Impairment Assessment – Injectables and Active Material Science Solutions Reporting Units

As described in Notes 1 and 4 to the consolidated financial statements, the Company's consolidated goodwill balance was $963.4 million as of December 31, 2023, and as disclosed by management, the goodwill associated with the Injectables and Active Material Science Solutions reporting units was $171.2 million and $161.6 million, respectively. Management evaluates goodwill for impairment at the reporting unit level on an annual basis, or whenever indicators of impairment exist. Management calculated the fair value of the Injectables and Active Material Science Solutions reporting units and compared them with the associated carrying amounts as of October 1, 2023. Management estimated the fair values of the Injectables and Active Material Science Solutions reporting units by discounting future cash flows. Management's determination of fair value involved judgment and the use of significant estimates and assumptions, including assumptions regarding projected revenue growth rates, projected EBITDA margins, the terminal growth factor, as well as the discount rate to calculate the estimated future cash flows.

The principal considerations for our determination that performing procedures relating to the goodwill impairment assessment of the Injectables and Active Material Science Solutions reporting units is a critical audit matter are (i) the significant judgment by management when developing the fair value estimate of the Injectables and Active Material Science Solutions reporting units; (ii) a high degree of auditor judgment, subjectivity, and effort in performing procedures and evaluating management's significant assumptions related to projected revenue growth rates and projected EBITDA margins for the Injectables reporting unit and projected revenue growth rates, projected EBITDA margins, and discount rate for the Active Material Science Solutions reporting unit; and (iii) the audit effort involved the use of professionals with specialized skill and knowledge.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to management's goodwill impairment assessment, including controls over the valuation of the Injectables and Active Material Science Solutions reporting units. These procedures also included, among others (i) testing management's process for developing the fair value estimate of the Injectables and Active Material Science Solutions reporting units; (ii) evaluating the appropriateness of the discounted future cash flows; (iii) testing the completeness and accuracy of the underlying data used in the discounted future cash flows; and (iv) evaluating the reasonableness of the significant assumptions used by management related to projected revenue growth rates and projected EBITDA margins for the Injectables reporting unit and projected revenue growth rates, projected EBITDA margins, and discount rate for the Active Material Science Solutions reporting unit. Evaluating management's assumptions related to projected revenue growth rates and projected EBITDA margins involved evaluating whether the assumptions used by management were reasonable considering (i) the current and past performance of the Injectables and Active Material Science Solutions reporting units; (ii) the consistency with external market and industry data; and (iii) whether the assumptions were consistent with evidence obtained in other areas of the audit. Professionals with specialized skill and knowledge were used to assist in the evaluation of the appropriateness of the discounted future cash flows and the reasonableness of the discount rate assumption for the Active Material Science Solutions reporting unit.

Revenue Recognition – Product Sales

As described in Notes 1 and 2 to the consolidated financial statements, product sales include the manufacturing and sale of drug and consumer product dosing, dispensing and protection technologies. The Company's consolidated net sales were $3.5 billion for the year ended December 31, 2023, of which the majority is related to product sales at the time of shipment of the goods. Management recognizes revenue from these product sales when (or as) the performance obligations are satisfied (i.e., when the customer obtains control of the good or service). To determine when control transfers, management assesses, among other things, the shipping terms of the contract, shipping being one of the indicators of transfer of control. For a majority of product sales, control of the goods transfers to the customer at the time of shipment of the goods.

The principal consideration for our determination that performing procedures relating to revenue recognition for product sales is a critical audit matter is a high degree of auditor effort in performing procedures related to the Company's revenue recognition for product sales at the time of shipment of the goods.

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 revenue recognition process, including controls over the recording of product sales upon satisfaction of the performance obligation at the time of shipment. These procedures also included, among others (i) testing the completeness and accuracy of certain data provided by management; (ii) testing certain revenue transactions by agreeing certain information between the sales order and related delivery document and billing document, and where applicable, obtaining and inspecting source documents, such as invoices, sales contracts, shipping documents, and cash receipts; (iii) testing certain revenue transactions, on a sample basis, by obtaining and inspecting source documents, such as invoices, sales contracts, shipping documents, and cash receipts; (iv) testing credit memos, on a sample basis, by obtaining and inspecting source documents, such as credit memos, invoices, and customer correspondence; and (v) testing outstanding customer invoice balances at year end, on a sample basis, by obtaining and inspecting source documents, such as confirmations, invoices, sales contracts, shipping documents, and subsequent cash receipts.

/s/ PricewaterhouseCoopers LLP

Chicago, Illinois
February 9, 2024

We have served as the Company's auditor since 1992.

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

None.

ITEM 9A. CONTROLS AND PROCEDURES

DISCLOSURE CONTROLS AND PROCEDURES

Management has evaluated, with the participation of the chief executive officer and chief financial officer of the Company, the effectiveness of our disclosure controls and procedures (as such term is defined in Rule 13a-15(e) under the Securities Exchange Act of 1934) as of December 31, 2023. Based on that evaluation, the chief executive officer and chief financial officer have concluded that these controls and procedures were effective as of such date.

MANAGEMENT'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Rule 13a-15(f) under the Securities Exchange Act of 1934. 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 has evaluated, with the participation of the chief executive officer and chief financial officer of the Company, the effectiveness of our internal control over financial reporting as of December 31, 2023 based on the framework in *Internal Control—Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on that evaluation under the framework in *Internal Control—Integrated Framework*, management has concluded that our internal control over financial reporting was effective as of December 31, 2023.

PricewaterhouseCoopers LLP, an independent registered public accounting firm, has issued an attestation report on the effectiveness of our internal control over financial reporting. This report appears on page 79.

CHANGES IN INTERNAL CONTROL OVER FINANCIAL REPORTING

During the fiscal quarter ended December 31, 2023, we implemented ERP systems at one operating unit. Consequently, the control environments have been modified at this location to incorporate the controls contained within the new ERP systems. Except for the foregoing, no changes in our internal control over financial reporting (as such term is defined in Rule 13a-15(f) under the Securities Exchange Act of 1934) occurred during our fiscal quarter ended December 31, 2023 that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

Rule 10b5-1 Plan Elections

During the year ended December 31, 2023, no director or officer of the Company adopted, modified or terminated a "Rule 10b5-1 trading arrangement" or "non-Rule 10b5-1 trading arrangement," as each term is defined in Item 408 of Regulation S-K.

ITEM 9C. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS

Not applicable.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Information with respect to directors may be found under the caption “Election of Directors” in our Proxy Statement for the Annual Meeting of Stockholders to be held on May 1, 2024 (the “2024 Proxy Statement”) and is incorporated herein by reference.

Information with respect to executive officers may be found under the caption “Information About Our Executive Officers” in Part I of this report and is incorporated herein by reference.

Information with respect to audit committee members and audit committee financial experts may be found under the caption “Corporate Governance—Audit Committee” in the 2024 Proxy Statement and is incorporated herein by reference.

Information with respect to our Code of Business Conduct may be found under the caption “Corporate Governance—Code of Business Conduct” in the 2024 Proxy Statement and is incorporated herein by reference. Our Code of Business Conduct is available through the Corporate Governance link on the Investors page of our website (www.aptar.com).

The information set forth under the heading “Delinquent Section 16(a) Reports” in the 2024 Proxy Statement, if any, is incorporated herein by reference.

ITEM 11. EXECUTIVE COMPENSATION

The information set forth under the headings “Board Compensation”, “Executive Officer Compensation” and “Compensation Committee Report” in the 2024 Proxy Statement is incorporated herein by reference. The information included under the heading “Compensation Committee Report” in the 2024 Proxy Statement shall not be deemed to be “soliciting” material or to be “filed” with the SEC or subject to Regulation 14A or 14C, or to the liabilities of Section 18 of the Securities Exchange Act of 1934, as amended.

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

The information set forth under the heading “Security Ownership of Certain Beneficial Owners, Directors and Management” and “Equity Compensation Plan Information” in the 2024 Proxy Statement is incorporated herein by reference.

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

The information set forth under the heading “Transactions with Related Persons” and “Corporate Governance—Independence of Directors” in the 2024 Proxy Statement is incorporated herein by reference.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

Information with respect to the independent registered public accounting firm fees and services may be found under the caption “Ratification of the Appointment of PricewaterhouseCoopers LLP as the Independent Registered Public Accounting Firm for 2024” in the 2024 Proxy Statement. Such information is incorporated herein by reference.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) The following documents are filed as a part of this report:

	Description	
1)	*All Financial Statements*	
	The financial statements are set forth under Item 8 of this report on Form 10-K	
	Consolidated Statements of Income for the Years Ended December 31, 2023, 2022 and 2021	36
	Consolidated Statements of Comprehensive Income for the Years Ended December 31, 2023, 2022 and 2021	37
	Consolidated Balance Sheets as of December 31, 2023 and 2022	38
	Consolidated Statements of Changes in Equity for the Years Ended December 31, 2023, 2022 and 2021	40
	Consolidated Statements of Cash Flows for the Years Ended December 31, 2023, 2022 and 2021	41
	Notes to Consolidated Financial Statements	43
	Report of Independent Registered Public Accounting Firm (PCAOB ID 238)	79
2)	*II – Valuation and Qualifying Accounts*	91

All other schedules have been omitted because they are not applicable or not required.

(b) Exhibits required by Item 601 of Regulation S-K are incorporated by reference to the Index to Exhibits on pages 85-89 of this report.

ITEM 16. FORM 10-K SUMMARY

None.

INDEX TO EXHIBITS

Exhibit Number	Description
3.1	Amended and Restated Certificate of Incorporation of AptarGroup, Inc., as amended, filed as Exhibit 4(a) to the Company's Registration Statement on Form S-8, filed on July 25, 2008, is hereby incorporated by reference.
3.2	Amended and Restated By-Laws of AptarGroup, Inc., filed as Exhibit 3.1 to the Company's current report on Form 8-K filed on October 13, 2023, is hereby incorporated by reference.
	The Company hereby agrees to provide the Commission, upon request, copies of instruments defining the rights of holders of long-term debt of the Company and its subsidiaries as are specified by item 601(b)(4)(iii)(A) of Regulation S-K.
4.1	Note Purchase Agreement dated as of July 31, 2008, among AptarGroup, Inc. and the purchasers listed on Schedule A thereto, filed as Exhibit 4.1 to the Company's quarterly report on Form 10-Q for the quarter ended June 30, 2008, is hereby incorporated by reference.
4.2	First Amendment to 2008 Note Purchase Agreement, dated as of November 30, 2010, among the Company and each of the institutions listed as signatories thereto, filed as Exhibit 4.2 to the Company's current report on Form 8-K filed on December 1, 2010, is hereby incorporated by reference.
4.3	Second Supplemental Note Purchase Agreement, dated as of September 5, 2012, among the Company and each of the purchasers listed in Exhibit A thereto, filed as Exhibit 4.1 to the Company's current report on Form 8-K filed on September 5, 2012, is hereby incorporated by reference.
4.4	Form of AptarGroup, Inc. 3.40% Series 2008-C-2 Senior Notes Due September 5, 2024, filed as Exhibit 4.3 to the Company's current report on Form 8-K filed on September 5, 2012, is hereby incorporated by reference.
4.5	Note Purchase Agreement, dated as of December 16, 2014, among the Company and each of the purchasers listed in Schedule B thereto, filed as Exhibit 4.1 to the Company's current report on Form 8-K filed on December 17, 2014, is hereby incorporated by reference.
4.6	Form of AptarGroup, Inc. 3.49% Series 2014-A-2 Senior Notes due February 26, 2024 (included as a part of Exhibit 4.5), filed as Exhibit 4.3 to the Company's current report on Form 8-K filed on December 17, 2014, is hereby incorporated by reference.
4.7	Form of AptarGroup, Inc. 3.61% Series 2014-A-3 Senior Notes due December 16, 2025 (included as a part of Exhibit 4.5), filed as Exhibit 4.4 to the Company's current report on Form 8-K filed on December 17, 2014, is hereby incorporated by reference.
4.8	Form of AptarGroup, Inc. 3.61% Series 2014-A-4 Senior Notes due February 26, 2026 (included as a part of Exhibit 4.5), filed as Exhibit 4.5 to the Company's current report on Form 8-K filed on December 17, 2014, is hereby incorporated by reference.
4.9	Second Amendment to 2008 Note Purchase Agreement, dated as of December 16, 2014, among the Company and each of the noteholders listed on the signature pages thereto, filed as Exhibit 4.7 to the Company's current report on Form 8-K filed on December 17, 2014, is hereby incorporated by reference.
4.10	Note Purchase and Guaranty Agreement, dated as of July 19, 2017, among AptarGroup UK Holdings, Limited and each of the purchasers listed in Purchasers Schedule thereto, filed as Exhibit 4.1 to the Company's current report on Form 8-K filed on July 25, 2017, is hereby incorporated by reference.
4.11	Form of AptarGroup, Inc. 0.98% Series D Senior Notes due July 19, 2023 (included as a part of Exhibit 4.10), filed as Exhibit 4.2 to the Company's current report on Form 8-K filed on July 25, 2017, is hereby incorporated by reference.
4.12	Form of AptarGroup, Inc. 1.17% Series E Senior Notes due July 19, 2024 (included as a part of Exhibit 4.10), filed as Exhibit 4.3 to the Company's current report on Form 8-K filed on July 25, 2017, is hereby incorporated by reference.
4.13	Assignment, Assumption and Amendment Agreement, dated as of March 1, 2022, among AptarGroup, Inc., AptarGroup UK Holdings Limited, and the holders of the 0.98% Series D Senior Notes due July 19, 2023 and 1.17% Series E Senior Notes due July 19, 2024, filed as Exhibit 4.4 to the Company's quarterly report on Form 10-Q for the quarter ended March 31, 2022, is hereby incorporated by reference.
4.14	Third Amendment to the 2008 Note Purchase Agreement, dated as of July 19, 2017, among the Company and each of the noteholders listed on the signature pages thereto, filed as Exhibit 4.4 to the Company's current report on Form 8-K filed on July 25, 2017, is hereby incorporated by reference.
4.15	First Amendment to 2014 Note Purchase Agreement, dated as of July 19, 2017, among the Company and each of the noteholders listed on the signature pages thereto, filed as Exhibit 4.5 to the Company's current report on Form 8-K filed on July 25, 2017, is hereby incorporated by reference.
4.16	Description of the Company's Securities, filed as Exhibit 4.17 to the Company's annual report on Form 10-K for the fiscal year ended December 31, 2020, is hereby incorporated by reference.
4.17	Indenture, dated as of March 7, 2022, between AptarGroup, Inc. and U.S. Bank Trust Company, National Association, as trustee, filed as Exhibit 4.1 to AptarGroup, Inc.'s current report on Form 8-K filed on March 7, 2022, is hereby incorporated by reference.
4.18	First Supplemental Indenture, dated as of March 7, 2022, between AptarGroup, Inc. and U.S. Bank Trust Company, National Association, as trustee, filed as Exhibit 4.2 to AptarGroup, Inc.'s current report on Form 8-K filed on March 7, 2022, is hereby incorporated by reference.

Exhibit Number	Description
4.19	Form of 3.600% Senior Notes due 2032 (included as a part of Exhibit 4.18).
10.1	AptarGroup, Inc. 2000 Stock Awards Plan, filed as Appendix A to the Company's Proxy Statement, dated April 6, 2000, is hereby incorporated by reference.**
10.2	AptarGroup, Inc. 2004 Stock Awards Plan, filed as Appendix A to the Company's Proxy Statement, dated March 26, 2004, is hereby incorporated by reference.**
10.3	AptarGroup, Inc. 2004 Director Stock Option Plan, filed as Appendix B to the Company's Proxy Statement, dated March 26, 2004, is hereby incorporated by reference.**
10.4	AptarGroup, Inc., Stock Option Agreement for Employees pursuant to the AptarGroup, Inc. 2004 Stock Awards Plan, filed as Exhibit 10.1 to the Company's quarterly report on Form 10-Q for the quarter ended September 30, 2004, is hereby incorporated by reference.**
10.5	AptarGroup, Inc. Stock Option Agreement for Non-Employee Directors pursuant to the AptarGroup, Inc. 2004 Director Option Plan, filed as Exhibit 10.2 to the Company's quarterly report on Form 10-Q for the quarter ended September 30, 2004, is hereby incorporated by reference.**
10.6	AptarGroup, Inc. Stock Option Agreement for Employees pursuant to the AptarGroup, Inc. 2000 Stock Awards Plan, filed as Exhibit 10.3 to the Company's quarterly report on Form 10-Q for the quarter ended September 30, 2004, is hereby incorporated by reference.**
10.7	AptarGroup, Inc. Restricted Stock Award Agreement pursuant to the AptarGroup, Inc. 2000 Stock Awards Plan, filed as Exhibit 10.4 to the Company's quarterly report on Form 10-Q for the quarter ended September 30, 2004, is hereby incorporated by reference.**
10.8	Form of AptarGroup, Inc. Stock Option Agreement for Employees pursuant to the AptarGroup, Inc. 2014 Stock Awards Plan, filed as Exhibit 10.2 to the Company's quarterly report on Form 10-Q for the quarter ended June 30, 2014, is hereby incorporated by reference.**
10.9	Form of AptarGroup, Inc. Restricted Stock Unit Award Agreement pursuant to the AptarGroup, Inc. 2014 Stock Awards Plan, filed as Exhibit 10.3 to the Company's quarterly report on Form 10-Q for the quarter ended June 30, 2014, is hereby incorporated by reference.**
10.10	Supplementary Pension Plan—France dated August 24, 2001, filed as Exhibit 10.2 to the Company's quarterly report on Form 10-Q for the quarter ended March 31, 2004, is hereby incorporated by reference.**
10.11	AptarGroup, Inc. Supplemental Retirement Plan (amended and restated effective January 1, 2009), filed as Exhibit 10.1 to the Company's quarterly report on Form 10-Q for the quarter ended September 30, 2008, is hereby incorporated by reference.**
10.12	Employment Agreement, dated November 21, 2016, between AptarGroup, Inc. and Stephan B. Tanda, filed as Exhibit 10.1 to the Company's current report on Form 8-K filed on November 22, 2016, is hereby incorporated by reference.**
10.13	Employment Agreement effective January 1, 2012 of Robert W. Kuhn, filed as Exhibit 10.2 to the Company's quarterly report on Form 10-Q for the quarter ended September 30, 2012, is hereby incorporated by reference.**
10.14	Employment Agreement dated March 30, 2011 and amended February 10, 2016 of Gael Touya, filed as Exhibit 10.17 to the Company's annual report on Form 10-K for the fiscal year ended December 31, 2015, is hereby incorporated by reference.**
10.15	Amendment No. 2 to the Employment Agreement dated March 30, 2011 and amended February 10, 2016 of Gael Touya, filed as Exhibit 10.1 to the Company's quarterly report on Form 10-Q for the quarter ended September 30, 2020, is hereby incorporated by reference.**
10.16	Expatriate Letter Agreement, dated as of January 25, 2022, among AptarGroup, Inc., Aptar Europe Holding SAS and Gael Touya, including the Employment Contract Amendment Suspending the French Contract, filed as Exhibit 10.1 to AptarGroup, Inc.'s current report on Form 8-K filed on January 25, 2022, is hereby incorporated by reference.**
10.17	Employment Agreement effective December 1, 2019 of Marc Prieur, filed as Exhibit 10.16 to the Company's annual report on Form 10-K for the fiscal year ended December 31, 2020, is hereby incorporated by reference.**
10.18	Addendum to Employment Agreement of Marc Prieur dated April 14, 2021, filed as Exhibit 10.1 to the Company's quarterly report on Form 10-Q for the quarter ended March 31, 2021, is hereby incorporated by reference.**
10.19	AptarGroup, Inc. 2008 Stock Option Plan, filed as Exhibit 10.3 to the Company's current report on Form 8-K filed on May 1, 2008, is hereby incorporated by reference.**
10.20	AptarGroup, Inc. 2008 Director Stock Option Plan, filed as Exhibit 10.1 to the Company's current report on Form 8-K filed on May 1, 2008, is hereby incorporated by reference.**
10.21	Form of AptarGroup, Inc. Stock Option Agreement for Employees pursuant to the AptarGroup, Inc. 2008 Stock Option Plan, filed as Exhibit 10.4 to the Company's quarterly report on Form 10-Q for the quarter ended June 30, 2008, is hereby incorporated by reference.**
10.22	Form of AptarGroup, Inc. Stock Option Agreement for Directors pursuant to the AptarGroup, Inc. 2008 Director Stock Option Plan, filed as Exhibit 10.5 to the Company's quarterly report on Form 10-Q for the quarter ended June 30, 2008, is hereby incorporated by reference.**

Exhibit Number	Description
10.23	Form of AptarGroup, Inc. Restricted Stock Unit Award Agreement pursuant to the AptarGroup, Inc. 2004 Stock Awards Plan, filed as Exhibit 10.34 to the Company's annual report on Form 10-K for the fiscal year ended December 31, 2009, is hereby incorporated by reference.**
10.24	Form of AptarGroup, Inc. Stock Option Agreement for Employees pursuant to the AptarGroup, Inc. 2011 Stock Awards Plan, filed as Exhibit 10.2 to the Company's quarterly report on Form 10-Q for the quarter ended September 30, 2011, is hereby incorporated by reference.**
10.25	Form of AptarGroup, Inc. Restricted Stock Unit Award Agreement pursuant to the AptarGroup, Inc. 2011 Stock Awards Plan, filed as Exhibit 10.3 to the Company's quarterly report on Form 10-Q for the quarter ended September 30, 2011, is hereby incorporated by reference.**
10.26	AptarGroup, Inc. 2011 Stock Awards Plan, filed as Exhibit 10.1 to the Company's current report on Form 8-K filed on May 10, 2011, is hereby incorporated by reference.**
10.27	AptarGroup, Inc. 2014 Stock Awards Plan, filed as Exhibit 10.1 to the Company's current report on Form 8-K filed on May 12, 2014, is hereby incorporated by reference.**
10.28	Amendment to Stock Option Award Agreements, filed as Exhibit 10.1 to the Company's quarterly report on Form 10-Q for the quarter ended September 30, 2015, is hereby incorporated by reference.**
10.29	AptarGroup Performance Incentive Plan, filed as Exhibit 10.1 to the Company's current report on Form 8-K filed on May 13, 2013, is hereby incorporated by reference.**
10.30	AptarGroup, Inc. 2014 Long-Term Incentive Program (as Amended and Restated) under the AptarGroup, Inc. Performance Incentive Plan, filed as Exhibit 10.28 to the Company's annual report on Form 10-K for the fiscal year ended December 31, 2013, is hereby incorporated by reference.**
10.31	AptarGroup, Inc. 2014 Long-Term Incentive Program (as Amended and Restated) under the AptarGroup, Inc. Performance Incentive Plan filed as Exhibit 10.31 to the Company's annual report on Form 10-K for the fiscal year ended December 31, 2014, is hereby incorporated by reference.**
10.32	AptarGroup, Inc. 2015 Director Restricted Stock Unit Plan, filed as Exhibit 4(c) to the Company's Registration Statement on Form S-8, filed on May 6, 2015, is hereby incorporated by reference.**
10.33	Form of AptarGroup, Inc. 2015 Restricted Stock Unit Award Agreement for Directors pursuant to the AptarGroup, Inc. 2015 Director Restricted Stock Unit Plan, filed as Exhibit 10.2 to the Company's quarterly report on Form 10-Q for the quarter ended June 30, 2015, is hereby incorporated by reference.**
10.34	AptarGroup, Inc. 2016 Equity Incentive Plan, filed as Exhibit 10.1 to the Company's current report on Form 8-K filed on May 9, 2016, is hereby incorporated by reference.**
10.35	Form of AptarGroup, Inc. Stock Option Agreement for Employees pursuant to the AptarGroup, Inc. 2016 Equity Incentive Plan, filed as Exhibit 10.1 to the Company's quarterly report on Form 10-Q for the quarter ended March 31, 2016, is hereby incorporated by reference.**
10.36	Form of AptarGroup, Inc. Restricted Stock Unit Award Agreement pursuant to the AptarGroup, Inc. 2016 Equity Incentive Plan, filed as Exhibit 10.2 to the Company's quarterly report on Form 10-Q for the quarter ended March 31, 2016, is hereby incorporated by reference.**
10.37	Form of AptarGroup, Inc. 2016 Restricted Stock Unit Award Agreement for Directors pursuant to the AptarGroup, Inc. 2016 Equity Incentive Plan, filed as Exhibit 10.3 to the Company's quarterly report on Form 10-Q for the quarter ended March 31, 2016, is hereby incorporated by reference.**
10.38	Amended and Restated Credit Agreement, dated as of June 30, 2021, among AptarGroup, Inc., AptarGroup UK Holdings Limited, the financial institutions party thereto as Lenders and Wells Fargo Bank, National Association, as administrative agent and swingline lender, filed as Exhibit 10.1 to the Company's current report on Form 8-K filed on July 2, 2021, is hereby incorporated by reference.
10.39	AptarGroup 2018 Performance Incentive Plan, filed as Exhibit 10.1 to the Company's current report on Form 8-K filed on February 8, 2018, is hereby incorporated by reference.**
10.40	AptarGroup, Inc. Restricted Stock Unit Award Agreement (Service-Based Vesting Form), filed as Exhibit 10.43 to the Company's annual report on Form 10-K for the fiscal year ended December 31, 2017, is hereby incorporated by reference.**
10.41	AptarGroup, Inc. Restricted Stock Unit Award Agreement (Performance-Based Vesting Form), filed as Exhibit 10.44 to the Company's annual report on Form 10-K for the fiscal year ended December 31, 2017, is hereby incorporated by reference.**
10.42	AptarGroup, Inc. 2018 Equity Incentive Plan (as amended and restated effective May3, 2023), filed as Exhibit 4.3 to the Company's Registration Statement on Form S-8 filed on May 4, 2023, is hereby incorporated by reference.**
10.43	2018 Equity Incentive Plan Restricted Stock Unit Award Agreement (Service-Based Vesting Form), filed as Exhibit 10.1 to the Company's quarterly report on Form 10-Q for the quarter ended June 30, 2018, is hereby incorporated by reference.**
10.44	2018 Equity Incentive Plan Restricted Stock Unit Award Agreement (Performance-Based Vesting Form), filed as Exhibit 10.2 to the Company's quarterly report on Form 10-Q for the quarter ended June 30, 2018, is hereby incorporated by reference.**

Exhibit Number	Description
10.45	2018 Equity Incentive Plan Restricted Stock Unit Award Agreement for Directors, filed as Exhibit 10.3 to the Company's quarterly report on Form 10-Q for the quarter ended June 30, 2018, is hereby incorporated by reference.**
10.46	Form of AptarGroup, Inc. Retention Award Restricted Stock Unit Award Agreement (Service-Based Vesting Form) (French employee version) pursuant to the AptarGroup, Inc. 2018 Equity Incentive Plan, filed as Exhibit 10.1 to the Company's quarterly report on Form 10-Q for the quarter ended June 30, 2019, is hereby incorporated by reference.**
10.47	Form of AptarGroup, Inc. Retention Award Restricted Stock Unit Award Agreement (Service-Based Vesting Form) (Non-French employee version) pursuant to the AptarGroup, Inc. 2018 Equity Incentive Plan, filed as Exhibit 10.2 to the Company's quarterly report on Form 10-Q for the quarter ended June 30, 2019, is hereby incorporated by reference.**
10.48	Form of AptarGroup, Inc. Restricted Stock Unit Award Agreement (Service-Based Vesting Form) (French employee version) pursuant to the AptarGroup, Inc. 2018 Equity Incentive Plan, filed as Exhibit 10.3 to the Company's quarterly report on Form 10-Q for the quarter ended June 30, 2019, is hereby incorporated by reference.**
10.49	Form of AptarGroup, Inc. Restricted Stock Unit Award Agreement (Service-Based Vesting Form) (Non-French employee version) pursuant to the AptarGroup, Inc. 2018 Equity Incentive Plan, filed as Exhibit 10.4 to the Company's quarterly report on Form 10-Q for the quarter ended June 30, 2019, is hereby incorporated by reference.**
10.50	Form of AptarGroup, Inc. Restricted Stock Unit Award Agreement (Service-Based Vesting Form) (Chinese employee version) pursuant to the AptarGroup, Inc. 2018 Equity Incentive Plan, filed as Exhibit 10.5 to the Company's quarterly report on Form 10-Q for the quarter ended June 30, 2019, is hereby incorporated by reference.**
10.51	Form of AptarGroup, Inc. Restricted Stock Unit Award Agreement (Performance-Based Vesting Form) (French employee version) pursuant to the AptarGroup, Inc. 2018 Equity Incentive Plan, filed as Exhibit 10.6 to the Company's quarterly report on Form 10-Q for the quarter ended June 30, 2019, is hereby incorporated by reference.**
10.52	Form of AptarGroup, Inc. Restricted Stock Unit Award Agreement (Performance-Based Vesting Form) (Non-French employee version) pursuant to the AptarGroup, Inc. 2018 Equity Incentive Plan, filed as Exhibit 10.7 to the Company's quarterly report on Form 10-Q for the quarter ended June 30, 2019, is hereby incorporated by reference.**
10.53	AptarGroup, Inc. Employment Agreement of Xiangwei Gong as of May 30, 2018, filed as Exhibit 10.8 to the Company's quarterly report on Form 10-Q for the quarter ended June 30, 2019, is hereby incorporated by reference.**
10.54	Form of AptarGroup, Inc. Restricted Stock Unit Award Agreement (Performance-Based Vesting Form) (U.S./Mexico/Argentina employee version) pursuant to the AptarGroup, Inc. 2018 Equity Incentive Plan, filed as Exhibit 10.1 to the Company's quarterly report on Form 10-Q for the quarter ended March 31, 2020, is hereby incorporated by reference.**
10.55	Form of AptarGroup, Inc. Restricted Stock Unit Award Agreement (Performance-Based Vesting Form) (French employee version) pursuant to the AptarGroup, Inc. 2018 Equity Incentive Plan, filed as Exhibit 10.2 to the Company's quarterly report on Form 10-Q for the quarter ended March 31, 2020, is hereby incorporated by reference.**
10.56	Form of AptarGroup, Inc. Restricted Stock Unit Award Agreement (Performance-Based Vesting Form) (All Other Employees) pursuant to the AptarGroup, Inc. 2018 Equity Incentive Plan, filed as Exhibit 10.3 to the Company's quarterly report on Form 10-Q for the quarter ended March 31, 2020, is hereby incorporated by reference.**
10.57	Form of AptarGroup, Inc. Restricted Stock Unit Award Agreement (Service-Based Vesting Form) (U.S./Mexico/Argentina employee version) pursuant to the AptarGroup, Inc. 2018 Equity Incentive Plan, filed as Exhibit 10.4 to the Company's quarterly report on Form 10-Q for the quarter ended March 31, 2020, is hereby incorporated by reference.**
10.58	Form of AptarGroup, Inc. Restricted Stock Unit Award Agreement (Service-Based Vesting Form) (non-French employee version) pursuant to the AptarGroup, Inc. 2018 Equity Incentive Plan, filed as Exhibit 10.57 to the Company's annual report on Form 10-K for the fiscal year ended December 31, 2020, is hereby incorporated by reference.**
10.59	Form of AptarGroup, Inc. Restricted Stock Unit Award Agreement (Service-Based Vesting Form) (French employee version) pursuant to the AptarGroup, Inc. 2018 Equity Incentive Plan, filed as Exhibit 10.6 to the Company's quarterly report on Form 10-Q for the quarter ended March 31, 2020, is hereby incorporated by reference.**
10.60	Amendment No. 1 to Employment Agreement dated as of February 17, 2022 between AptarGroup, Inc. and Stephan Tanda, filed as Exhibit 10.59 to the Company's annual report on Form 10-K for the fiscal year ended December 31, 2021, is hereby incorporated by reference.**
10.61	Amendment No. 1 to Employment Agreement dated as of February 17, 2022 between AptarGroup, Inc. and Robert Kuhn, filed as Exhibit 10.60 to the Company's annual report on Form 10-K for the fiscal year ended December 31, 2021, is hereby incorporated by reference.**

Exhibit Number	Description
10.62	Amendment No. 1 to Employment Agreement dated as of February 17, 2022 between AptarGroup, Inc. and Xiangwei Gong, filed as Exhibit 10.61 to the Company's annual report on Form 10-K for the fiscal year ended December 31, 2021, is hereby incorporated by reference.**
10.63	Form of AptarGroup, Inc. Restricted Stock Unit Award Agreement (Performance-Based Vesting Form) (U.S./Mexico/Argentina employee version) pursuant to the AptarGroup, Inc. 2018 Equity Incentive Plan (2022), filed as Exhibit 10.62 to the Company's annual report on Form 10-K for the fiscal year ended December 31, 2021, is hereby incorporated by reference.**
10.64	Form of AptarGroup, Inc. Restricted Stock Unit Award Agreement (Performance-Based Vesting Form) (French employee version) pursuant to the AptarGroup, Inc. 2018 Equity Incentive Plan (2022), filed as Exhibit 10.63 to the Company's annual report on Form 10-K for the fiscal year ended December 31, 2021, is hereby incorporated by reference.**
10.65	Form of AptarGroup, Inc. Restricted Stock Unit Award Agreement (Performance-Based Vesting Form) (All Other Employees) pursuant to the AptarGroup, Inc. 2018 Equity Incentive Plan (2022), filed as Exhibit 10.64 to the Company's annual report on Form 10-K for the fiscal year ended December 31, 2021, is hereby incorporated by reference.**
10.66	Form of AptarGroup, Inc. Restricted Stock Unit Award Agreement (Service-Based Vesting Form) (U.S./Mexico/Argentina employee version) pursuant to the AptarGroup, Inc. 2018 Equity Incentive Plan (2022), filed as Exhibit 10.65 to the Company's annual report on Form 10-K for the fiscal year ended December 31, 2021, is hereby incorporated by reference.**
10.67	Form of AptarGroup, Inc. Restricted Stock Unit Award Agreement (Service-Based Vesting Form) (non-French employee version) pursuant to the AptarGroup, Inc. 2018 Equity Incentive Plan (2022), filed as Exhibit 10.66 to the Company's annual report on Form 10-K for the fiscal year ended December 31, 2021, is hereby incorporated by reference.**
10.68	Form of AptarGroup, Inc. Restricted Stock Unit Award Agreement (Service-Based Vesting Form) (French employee version) pursuant to the AptarGroup, Inc. 2018 Equity Incentive Plan (2022), filed as Exhibit 10.67 to the Company's annual report on Form 10-K for the fiscal year ended December 31, 2021, is hereby incorporated by reference.**
10.69	Amendment No. 2 to Employment Agreement dated as of February 16, 2023 between AptarGroup, Inc. and Robert Kuhn filed as exhibit 10.69 to the Company's annual report on Form 10-K for the fiscal year ended December 31, 2022, is hereby incorporated by reference.**
10.70	Amendment No. 1 to Amended and Restated Credit Agreement, dated as of May 2, 2023, among AptarGroup, Inc., AptarGroup UK Holdings Limited, the financial institutions party thereto as Lenders and Wells Fargo Bank, National Association, as administrative agent and swingline lender, filed as Exhibit 10.2 to the Company's quarterly report on Form 10-Q for the quarter ended June 30, 2023, is hereby incorporated by reference.
97*	AptarGroup, Inc.'s Policy on Recoupment and Forfeiture of Incentive Compensation.
21*	List of Subsidiaries.
23*	Consent of Independent Registered Public Accounting Firm.
31.1*	Certification Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2*	Certification Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1*	Certification Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2*	Certification Pursuant to 18 U.S.C. Section 1350 as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101*	The following financial information from AptarGroup, Inc.'s annual report on Form 10-K for the fiscal year ended December 31, 2023, filed with the SEC on February 9, 2024, formatted in Inline Extensible Business Reporting Language (XBRL): (i) the Cover Page (ii) the Consolidated Statements of Income for the years ended December 31, 2023, 2022 and 2021, (iii) the Consolidated Statements of Comprehensive Income for the years ended December 31, 2023, 2022 and 2021, (iv) the Consolidated Balance Sheets as of December 31, 2023 and 2022, (v) the Consolidated Statements of Cash Flows for the years ended December 31, 2023, 2022 and 2021, (vi) the Consolidated Statements of Changes in Equity for the years ended December 31, 2023, 2022 and 2021 and (vii) Notes to the Consolidated Financial Statements.
104*	Cover Page Interactive Data File (embedded within the Inline XBRL document).

* Filed or furnished herewith.

** Management contract or compensatory plan or arrangement.

SIGNATURES

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

AptarGroup, Inc.

(Registrant)

Date: February 9, 2024

By /s/ Robert W. Kuhn
Robert W. Kuhn
Executive Vice President and Chief Financial Officer

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

Signature	Title	Date
/s/ CANDACE MATTHEWS Candace Matthews	Chair of the Board and Director	February 9, 2024
/s/ STEPHAN B. TANDA Stephan B. Tanda	President and Chief Executive Officer and Director (Principal Executive Officer)	February 9, 2024
/s/ ROBERT W. KUHN Robert W. Kuhn	Executive Vice President and Chief Financial Officer (Principal Accounting and Financial Officer)	February 9, 2024
/s/ GEORGE L. FOTIADES George L. Fotiades	Director	February 9, 2024
/s/ SARAH GLICKMAN Sarah Glickman	Director	February 9, 2024
/s/ GIOVANNA KAMPOURI MONNAS Giovanna Kampouri Monnas	Director	February 9, 2024
/s/ ISABEL MAREY-SEMPER Isabel Marey-Semper	Director	February 9, 2024
/s/ B. CRAIG OWENS B. Craig Owens	Director	February 9, 2024
/s/ MATTHEW TREROTOLA Matthew Trerotola	Director	February 9, 2024
/s/ RALF K. WUNDERLICH Ralf K. Wunderlich	Director	February 9, 2024
/s/ JULIE XING Julie Xing	Director	February 9, 2024

AptarGroup, Inc
SCHEDULE II – VALUATION AND QUALIFYING ACCOUNTS

For the years ended December 31, 2023, 2022 and 2021

Dollars in thousands

	Balance at Beginning Of Period	Charged to Costs and Expenses	Charged to Other Accounts	Deductions from Reserve (a)	Balance at End of Period
2023					
CECL	**$ 9,519**	**$ 8,077**	**$ 12**	**$ (1,391)**	**$ 16,217**
Deferred tax valuation allowance	**46,239**	**1,498**	**2,495**	**(1,376)**	**48,856**
2022					
CECL	$ 7,374	$ 3,213	$ —	$ (1,068)	$ 9,519
Deferred tax valuation allowance	47,149	3,754	380	(5,044)	46,239
2021					
CECL	$ 5,918	$ 1,601	$ 391	$ (536)	$ 7,374
Deferred tax valuation allowance (b)	23,105	5,355	20,572	(1,883)	47,149

(a) Write-off accounts considered uncollectible, net of recoveries and foreign currency impact adjustments.
(b) The 2021 increase to the deferred tax valuation allowance in the charged to other accounts reflects the establishment of a $20.5 million deferred tax valuation allowance as part of the purchase accounting for the Voluntis acquisition.