



A Global Leader Transforming Animal Care

\$4.42B REVENUE

\$979M ADJUSTED EBITDA1

\$0.92 ADJUSTED EPS¹

Reaching the World's Animals

6

Core Species

Pet health & farm animals: Dogs, cats, cattle, swine, poultry, and aqua 200+

Brands

sold for pets & farm animals

9

Blockbusters

>\$100M in annual revenue

18

Manufacturing sites

55%

Revenue from outside the U.S.

90+

Countries served

~9,300

Employees worldwide

~2,000

Representatives

~1,000

Employees

Diversified Portfolio

of pet health and livestock products

Non-GAAP financial measure. See inside of back cover for further information *Facts and figures shown are as of Dec. 31, 2023.



FROM OUR CEO



Dear Fellow Shareholders,

As Elanco enters its 70th year, we are closer than ever to bringing to life our vision and delivering compelling long-term value. We have set a strong foundation for success as we enter our next era of growth and innovation rooted in our steadfast commitment to delivering consistent high-impact innovation. Over the past five years, since our IPO, we have established ourselves as an independent animal health industry leader that can reach the world's animals through our diverse, durable product portfolio focused on delivering value to our customers and the animals in their care.

As one of the longest-standing brands in our industry, we are at the forefront of innovation, serving veterinarians, farmers, and pet owners. In the past year, Elanco has returned to full-year revenue growth, significantly increased the contribution from new products, and successfully paid down debt. We have momentum in many parts of our business and are making strategic tradeoffs with the expectation of delivering increased value in high-potential opportunities, notably global pet health and livestock sustainability.

Elanco's significant progress in 2023 was anchored by our strategic Innovation, Portfolio, and Productivity framework. Let's take a closer look at the momentum we've built within each pillar of our strategy:

Innovation

In 2023, we made strides in advancing our pipeline, marked by the conditional approval and launch of our Canine Parvovirus Monoclonal Antibody (CPMA) and the successful approval and launch of Adtab, a new over-the-counter oral parasiticide for pets in Europe.

Additionally, we successfully submitted three late-stage potential blockbuster products: Zenrelia, Credelio Quattro, and Bovaer. These three differentiated products will initially be focused on the U.S. market, but we expect globalization

of strategic products over time. We're encouraged by the completed submissions for Zenrelia in nine additional markets, including the EU, U.K., and Australia.

Importantly, our team has diligently delivered targeted lifecycle management and extended the life and value of existing brands, helping stabilize and protect our core revenue. In 2023, we exceeded our innovation revenue expectations by doubling innovation from 2022 and remain on track to deliver our anticipated \$600-\$700 million contribution by 2025.

Building on this momentum, we are also advancing a pipeline of development projects with expected differentiated profiles and blockbuster potential. This next wave of innovation has the opportunity to contribute meaningful growth and earnings in the second half of the decade, further solidifying our position as a leader in animal health. Our journey in innovation is a testament to our commitment to improving animal health and our relentless pursuit of excellence.

Portfolio

Importantly, Elanco has taken disciplined actions to concentrate our portfolio on the most significant value-creation opportunities in pet health and livestock sustainability.

The total company return to constant currency revenue growth of 1% in 2023 can be attributed to the stabilization of our core portfolio, facilitated by enhanced commercial capabilities, our global omnichannel approach, and the contribution of new products. Price growth was 4%, an increase over our previous 2% average, with contribution balanced across Pet Health and Farm Animal. Our focused investment in critical commercial capabilities and expanded share of voice is expected to maximize the value of our current portfolio and anticipated launches in 2024 and beyond.

We remain committed to investing in high-value commercial, R&D, and manufacturing opportunities to drive growth further.

Productivity

Improving cash conversion remains a critical priority across our organization. We've driven cross-functional efforts to enhance net working capital performance, particularly on balance sheet inventory management. This focus resulted in gradual improvement in the second half of 2023, with inventory becoming a source of cash in the fourth quarter.

In 2023, we paid down \$76 million of gross debt, ending with a net leverage ratio of 5.6x. Importantly, we reached a significant operational milestone by completing our ERP system integration, freeing up an estimated \$100 million for debt paydown in 2024.

This momentum continues as we made strategic decisions to sharpen our focus on our highest potential opportunities. In the first quarter of 2024, we announced that we entered into an agreement to sell our aqua business to Merck Animal Health for approximately \$1.3 billion in cash. The proceeds from this transaction combined with improved free cash flow from the business, will accelerate deleveraging with net debt to adjusted EBITDA expected in the high-3x to low-4x range by the end of 2025.

Elanco's Long-term Value Proposition

We believe Elanco has extraordinary potential in the attractive animal health space. Our industry has demonstrated incredible resilience, with growth of 5% over the last 5 and 10 years and growth observed each year for the past two decades.

Elanco is set to bring six potential blockbuster products to the market by 2025. In attractive markets, these differentiated products are expected to be margin-accretive over time. We expect growth will lead to improved cash conversion and increased debt paydown, further strengthening our financial position. The momentum in our business underscores Elanco's compelling value proposition for customers, investors, and stakeholders.

As we enter our 70th year as a company, we are humbled by the opportunity to serve our customers around the globe — farmers, veterinarians, pet owners, and the animals in their care — and we are deeply grateful for the determination and delivery of our Elanco team worldwide.

We appreciate your investment in Elanco and look forward to our continued momentum as we enter our next era of innovation and growth.

Sincerely,

Jeff Simmons

President & CEO of Elanco Animal Health

Board of Directors

R. David Hoover

Chairman, Elanco Animal Health Former CEO, Ball Corporation

Kapila Kapur Anand

Retired Partner, KPMG LLP

John Bilbrev

Former CEO and President, The Hershey Company

William Doyle

Executive Chairman, Novocure Ltd.

Art Garcia

Former CFO, Ryder System, Inc. **Michael Harrington**

Former General Counsel, Eli Lilly and Company

Paul Herendeen

Former CFO, Bausch Health Companies, Inc.

Deborah Kochevar, D.V.M., Ph.D, DACVCP

Senior Fellow, The Fletcher School of Law and Diplomacy and Dean Emerita, Cummings School of Veterinary Medicine, Tufts University

Lawrence Kurzius

Executive Chairman, McCormick & Company, Inc.

Kirk McDonald

Former CEO, GroupM North America

Denise Scots-Knight

CEO and Co-Founder, Mereo BioPharma Group plc

Jeffrey Simmons

President and CEO, Elanco Animal Health

Kathy Turner

Former Senior Vice President and Chief Marketing Officer, IDEXX

Craig Wallace

President, C.S. Wallace Investments + Strategy

Elanco Executive Officers

Jeffrey N. Simmons

President and Chief Executive Officer

Tim Bettington

Executive Vice President, Corporate Strategy and Market Development

Dr. Ramiro M. Cabral

Executive Vice President, Elanco International

Ellen de Brabander, Ph.D.

Executive Vice President, Innovation and Regulatory Affairs

David Kinard

Executive Vice President, Human Resources, Communications and Administration

Grace McArdle

Executive Vice President, Manufacturing and Quality

Rajeev (Bobby) Modi

Executive Vice President, U.S. Pet Health and Global Digital Transformation

Shiv O'Neill

Executive Vice President, General Counsel and Corporate Secretary

José Manuel Correia de Simas

Executive Vice President, U.S. Farm Animal Business

Todd Young

Executive Vice President and Chief Financial Officer

left to right: D. Kinard, J. Simas, T. Young, E. de Brabander, J. Simmons, B. Modi, G. McArdle, S. O'Neill, R. Cabral, T. Bettington



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

Commission file number 001-38661



Elanco Animal Health Incorporated

(Exact name of Registrant as specified in its charter)

INDIANA 82-5497352

(State or other jurisdiction of incorporation or organization)

(I.R.S. Employer

Identification No.)

2500 INNOVATION WAY, GREENFIELD, INDIANA 46140 (Address and zip code of principal executive offices)

Registrant's telephone number, including area code (877) 352-6261

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, no par value

ELAN

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 I No I

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 I No I

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 a "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging
growth company" in Rule 12b-2 of the Exchange Act.

Accelerated filer □	Large accelerated filer ⊠
Smaller reporting company □	Non-accelerated filer □
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.

□

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 Exchange Act).

Yes 🛮 No 🗈

Aggregate market value of the common equity held by non-affiliates computed by reference to the price at which the common equity was last sold as of June 30, 2023, the last business day of the Registrant's most recently completed second fiscal quarter, was approximately \$4.9 billion. The registrant has no non-voting common stock.

The number of shares of common stock outstanding as of February 21, 2024 was 492,970,011.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive proxy materials for its 2024 Annual Meeting of Shareholders are incorporated by reference into Part III hereof.

ELANCO ANIMAL HEALTH INCORPORATED FORM 10-K

FOR THE YEAR ENDED DECEMBER 31, 2023

TABLE OF CONTENTS

PART 1		
Item 1.	BUSINESS	6
Item 1A.	RISK FACTORS	19
Item 1B.	UNRESOLVED STAFF COMMENTS	39
Item 1C.	CYBERSECURITY	40
Item 2.	PROPERTIES	42
Item 3.	LEGAL PROCEEDINGS	42
Item 4.	MINE SAFETY DISCLOSURES	42
PART II		
Item 5.	MARKET FOR THE REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS, AND ISSUER PURCHASES OF EQUITY SECURITIES	43
Item 6.	(RESERVED)	43
Item 7.	MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS	45
Item 7A.	QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK	55
Item 8.	FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA	56
Item 9.	CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE	100
Item 9A.	CONTROLS AND PROCEDURES	100
Item 9B.	OTHER INFORMATION	100
Item 9C.	DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT	101
PART III		
Item 10.	DIRECTORS, EXECUTIVE OFFICERS, AND CORPORATE GOVERNANCE	101
Item 11.	EXECUTIVE COMPENSATION	101
Item 12.	SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS	101
Item 13.	CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE	101
Item 14.	PRINCIPAL ACCOUNTANT FEES AND SERVICES	102
PART IV		
Item 15.	EXHIBITS AND FINANCIAL STATEMENT SCHEDULES	103
Item 16.	FORM 10-K SUMMARY	106
SIGNATURES		107

FORWARD-LOOKING STATEMENTS AND RISK FACTOR SUMMARY

This Annual Report on Form 10-K (Form 10-K) includes forward-looking statements within the meaning of the federal securities laws. These forward-looking statements include, without limitation, statements concerning the impact on Elanco Animal Health Incorporated and its subsidiaries (collectively, Elanco, the Company, we, us or our) caused by the integration of business acquisitions, expected synergies and cost savings, product launches, global macroeconomic conditions, expectations relating to liquidity and sources of capital, our expected compliance with debt covenants, cost savings, expenses and reserves relating to restructuring actions, our industry and our operations, performance and financial condition, and including, in particular, statements relating to our business, growth strategies, distribution strategies, product development efforts and future expenses.

Forward-looking statements are based on our current expectations and assumptions regarding our business, the economy and other future conditions. Because forward-looking statements relate to the future, by their nature, they are subject to inherent uncertainties, risks and changes in circumstances that are difficult to predict. As a result, our actual results may differ materially from those contemplated by the forward-looking statements. Important risk factors that could cause actual results to differ materially from those in the forward-looking statements include regional, national or global political, economic, business, competitive, market and regulatory conditions, including but not limited to the following:

- operating in a highly competitive industry;
- the success of our research and development (R&D) and licensing efforts:
- the impact of disruptive innovations and advances in veterinary medical practices, animal health technologies and alternatives to animal-derived protein;
- competition from generic products that may be viewed as more cost-effective;
- changes in regulatory restrictions on the use of antibiotics in farm animals;
- an outbreak of infectious disease carried by farm animals;
- risks related to the evaluation of animals;
- consolidation of our customers and distributors;
- the impact of increased or decreased sales into our distribution channels resulting in fluctuation in our revenues;
- our dependence on the success of our top products;
- our ability to complete acquisitions and divestitures and successfully integrate the businesses we acquire;
- our ability to implement our business strategies or achieve targeted cost efficiencies and gross margin improvements;
- manufacturing problems and capacity imbalances;
- fluctuations in inventory levels in our distribution channels
- risks related to the use of artificial intelligence (AI) in our business;
- our dependence on sophisticated information technology and infrastructure and the impact of breaches of our information technology systems;
- the impact of weather conditions, including those related to climate change, and the availability of natural resources;
- demand, supply and operational challenges associated with the effects of a human disease outbreak, epidemic, pandemic or other widespread public health concern;
- the loss of key personnel or highly skilled employees;
- adverse effects of labor disputes, strikes and/or work stoppages;
- the effect of our substantial indebtedness on our business, including restrictions in our debt agreements that limit our operating flexibility, changes in our credit ratings that lead to higher borrowing expenses and may restrict access to credit and changes in interest rates that may adversely affect our earnings and cash flows;
- changes in interest rates;
- risks related to the write-down of goodwill or identifiable intangible assets;

- the lack of availability or significant increases in the cost of raw materials;
- risks related to our presence in foreign markets;
- risks related to currency rate fluctuations;
- risks related to underfunded pension plan liabilities;
- our current plans not to pay dividends and restrictions on our ability to pay dividends;
- the potential impact that actions by activist shareholders could have on the pursuit of our business strategies;
- risks related to certain governance provisions in our constituent documents;
- risks related to tax expense or exposure;
- actions by regulatory bodies, including as a result of their interpretation of studies on product safety;
- the possible slowing or cessation of acceptance and/or adoption of our farm animal sustainability initiatives;
- the impact of increased regulation or decreased governmental financial support related to the raising, processing or consumption of farm animals;
- risks related to the modification of foreign trade policy;
- the impact of litigation, regulatory investigations, and other legal matters, including the risk to our reputation and the risk that our insurance policies may be insufficient to protect us from the impact of such matters;
- challenges to our intellectual property rights or our alleged violation of rights of others;
- misuse, off-label or counterfeiting use of our products;
- unanticipated safety, quality or efficacy concerns and the impact of identified concerns associated with our products;
- insufficient insurance coverage against hazards and claims;
- compliance with privacy laws and security of information; and
- risks related to environmental, health and safety laws and regulations.

See "Item 1A. Risk Factors" in Part I of this Form 10-K for a further description of these and other factors. Although we have attempted to identify important risk factors, there may be other risk factors not presently known to us or that we presently believe are not material that could cause actual results and developments to differ materially from those made in or suggested by the forward-looking statements contained in this Form 10-K. If any of these risks materialize, or if any of the above assumptions underlying forward-looking statements prove incorrect, actual results and developments may differ materially from those made in or suggested by the forward-looking statements contained in this Form 10-K. We caution you against relying on any forward-looking statements, which should also be read in conjunction with the other cautionary statements that are included elsewhere in this Form 10-K. Any forward-looking statement made by us in this Form 10-K speaks only as of the date hereof. Factors or events that could cause our actual results to differ may emerge from time to time, and it is not possible for us to predict all of them. We undertake no obligation to publicly update or to revise any forward-looking statement, whether as a result of new information, future developments or otherwise, except as may be required by law.

PART I

ITEM 1. BUSINESS

Overview

Elanco Animal Health Incorporated and its subsidiaries (collectively, Elanco, the Company, we, us, or our) is a global leader in animal health, dedicated to innovating and delivering products and services to prevent and treat disease in farm animals and pets. We partner with farmers, pet owners, veterinarians and society to create value and help our customers improve the health of animals in their care, while also making a meaningful impact on the communities we serve. Our diverse, durable product portfolio is sold in more than 90 countries and serves animals across many species, primarily: dogs and cats (collectively, pet health) and cattle, poultry, swine, sheep and aqua (collectively, farm animal). With this ability to reach the world's animals, we are committed to fulfilling our customer promise: *To be your advocate and continually earn your trust, improving the health of animals and creating value through innovative products, expertise and service*. Through our customer promise and our commitment to excellence, we strive to advance the well-being of animals, people and the planet, enabling us to realize our vision of Food and Companionship Enriching Life.

With a heritage dating back to 1954, we were formerly a business unit of Eli Lilly and Company (Lilly), becoming an independently incorporated company on September 18, 2018, and finalizing our separation from Lilly in March 2019. In August 2020 we acquired Bayer Animal Health, marking the largest acquisition in industry history. This acquisition enabled us to become a more diverse, durable and global company with greater reach and scale. This acquisition also helped us expand our portfolio, creating a better balance between our pet health and farm animal products and between the U.S. and international markets, while also expanding our omnichannel presence in both the veterinary clinic and in retail markets, including e-commerce.

We have continuously strengthened and expanded our three-pronged strategy: *Innovation*, *Portfolio* and *Productivity*, which remains our foundation for sustained growth and profitability. Over time, we expect to achieve revenue growth and improved profitability by delivering consistent, high-impact *Innovation* and prioritizing large market opportunities in major geographies. Our focused strategy prioritizes certain assets, including late-stage potential blockbusters, while maximizing life cycle management and refilling the early-stage pipeline to achieve a consistent flow of innovation. We also continue to optimize our diverse *Portfolio* to grow, leveraging our deep, established customer relationships and expanding product offerings. We will also continue to drive geographic and channel expansion, to reach more of the world's animals. Further, we continue to focus on our strategic *Productivity* initiatives to improve earnings and cash flows.

In addition, we continue to enhance our approach to sustainability and environmental, social and governance (ESG) principles, focusing on the four interconnected pillars below, which we refer to as Elanco's $Healthy\ Purpose^{\tau M}$, designed to create a meaningful impact today and for years to come:

Healthier Animals: We are helping pets and farm animals live healthy, high-quality lives by continuously expanding our portfolio and identifying new and innovative animal care products, practices and services to support animal health and well-being.

Healthier People: We help improve people's lives and livelihoods by promoting animal companionship and enabling healthier and more plentiful and environmentally friendly production of meat, milk, fish and eggs.

Healthier Planet: We are committed to minimizing our own environmental footprint, while leveraging product and service innovations to help our customers advance their own sustainability efforts.

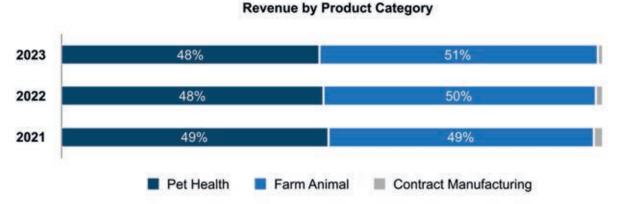
Healthier Enterprise: We are committed to growing our business with integrity and excellence with respect to all stakeholders, fostering an inclusive culture where employees can make a difference – encouraging ownership, growth and well-being.

Our business and operations are exposed to and are impacted by various global macroeconomic factors. For example, in recent years we have been impacted by operating challenges across the globe due to the Russia-Ukraine conflict, conditions related to the COVID-19 pandemic, supply chain disruptions, a rising interest rate environment, foreign currency exchange rate volatility and inflationary pressures, among others. Continued evolution of these conditions has led to economic slowdowns in certain countries and/or regions and volatility in consumer behavior. We

continue to monitor these factors and have worked with our customers, employees, suppliers and other stakeholders to mitigate their impacts. For additional information on these macroeconomic challenges and the impact on our business, operations, financial condition and results, see "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations" and "Item 1A. Risk Factors".

Commercial Operations

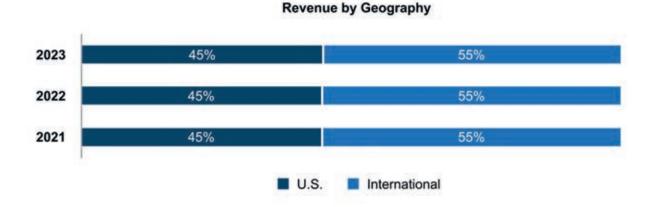
We operate our business as a single segment within the animal health industry, dedicated to fulfilling our vision of Food and Companionship Enriching Life. We advance this vision by offering a comprehensive portfolio of products in the pet health and farm animal product categories. Our reported revenue by product category was as follows:



Contract manufacturing represents revenue from arrangements in which we manufacture products on behalf of a third party.

International Operations

Our operations are conducted globally. The United States (U.S.) is our largest market, accounting for 45% of our total revenue in 2023. By total revenue, China, Brazil and the United Kingdom (U.K.) are our largest markets outside the U.S. Emerging market economies are an important component of our growth strategy and will serve as a base upon which we expect to build our commercial and local innovation capabilities. Our reported revenue by geographic region was as follows:



Products

We have a diverse portfolio of products marketed under approximately 200 brands, including products for both pets and farm animals.



Pet Health: Our pet health products help pets live longer, healthier and more active lives. Our global pet health portfolio is focused on parasiticides, vaccines and therapeutics. We have one of the broadest parasiticide portfolios in the pet health market based on indications, species and formulations, with products that protect pets from fleas, ticks and internal parasites. Our Advantage Family of brands (AdvantageTM, K-9 AdvantixTM, AdvocateTM, among others) and SerestoTM products are over-the-counter treatments for the prevention and elimination of fleas and ticks and complement our prescription parasiticide products, which include our Credelio Family of brands (CredelioTM, Credelio CafTM, Credelio PlusTM), Interceptor PlusTM, Drontal Family of brands (DoncitTM, DrontalTM, Drontal PlusTM) and TrifexisTM. Our vaccines portfolio provides differentiated prevention coverage for a number of important pet health risks and is available in the U.S. only. In therapeutics, we have a broad pain portfolio for dogs and cats across modes of action, indications and disease stages. Pet owners are increasingly treating osteoarthritis in their pets, and our GalliprantTM product offers a convenient at home solution for pet owners. Additionally, we have products that offer treatment for otitis (ear infections) and treatments for certain cardiovascular and dermatology indications.



Farm Animal: Our farm animal products help farmers improve animal health and wellbeing and raise livestock more sustainably, delivering more food while using fewer resources and enhancing the integrity of the food supply. Our farm animal portfolio of products for cattle (beef and dairy), swine, poultry and aquaculture (cold and warm water) is primarily focused on: 1) efficiency and performance; 2) disease prevention and treatment; 3) food safety; and 4) sustainability. Our products include medicated feed additives, injectable antibiotics, vaccines, insecticides and enzymes, among others. Key farm animal products RumensinTM, BaytrilTM and ExperiorTM are used extensively in cattle, while our MaxibanTM and MontebanTM products are valuable offerings for the control and prevention of intestinal disease in poultry.

In 2023, our top five selling products and/or product families were our *Advantage Family* (cats and dogs), *Seresto* (cats and dogs), *Rumensin* (cattle), our *Credelio Family* (cats and dogs) and *Maxiban* (poultry). These products and product families combined to represent approximately 31% of our total revenue in 2023, although none represented more than 10% individually. Information regarding our principal products and product families, those that represented approximately 1% or more of our revenue in 2023, is as follows:

Pet Health Products

Product	Description	Primary Species
Advantage Family	Family of topical applications that provide broad-spectrum protection against and treatment of fleas, ticks, mosquitoes, lice and biting flies. Certain products within the <i>Advantage Family</i> also provide protection against heartworm, lungworm and other gastrointestinal worm infections, including roundworms, whipworms and hookworms.	Cats, Dogs
Atopica™	Controls atopic dermatitis.	Dogs
Claro™ / Neptra™	One-dose treatment for otitis externa associated with susceptible strains of bacteria and yeast.	Dogs
Credelio Family	Family of oral products that kills adult fleas, treats flea infestations and treats and controls tick infestations.	Cats, Dogs
Drontal Family	Family of injectable and oral tablet dewormers indicated for the removal of tapeworms, hookworms, roundworms and whipworms.	Cats, Dogs
Galliprant	Controls pain and inflammation associated with osteoarthritis.	Dogs
Interceptor Plus	Prevents heartworm disease and helps treat and control roundworm, hookworm, whipworm and tapeworm infections.	Dogs
Milbemax™	Treats and controls parasitic infections due to common intestinal worms.	Cats, Dogs
Onsior TM	Controls postoperative pain and inflammation associated with certain surgeries.	Cats, Dogs

Product	Description	Primary Species
Seresto	Flea and tick collar with a patented low dose, slow-release technology that kills and repels fleas and ticks which may transmit vector-borne diseases and kills lice for up to 8 months.	Cats, Dogs
Trifexis	Prevents heartworm disease, kills fleas, helps prevent flea infestations and also helps treat and control hookworms, roundworms and whipworms.	Dogs
<i>TruCan™</i> (vaccines)	Includes multiple products that collectively protect against distemper, adenovirus, parvovirus, corona, parainfluenza, leptospira canicola and other diseases.	Dogs

Farm Animal Products

Product	Description	Primary Species
AviPro™ (vaccines)	Includes multiple products that collectively protect against Newcastle disease, infectious bronchitis, fowl cholera, paramyxovirus Type 3, Bursal Disease, other diseases and foodborne pathogens like Salmonella.	Poultry
Ваусох™	Oral treatment for control of coccidiosis in swine and clinical coccidiosis in young cattle. Attacks all stages of the parasite.	Cattle, Swine
Baytril	Injectable antibiotic active against bacterial respiratory disease pathogens. Baytril is a shared-class antibiotic.	Cattle, Swine
Catosal™ / Comforta™	Injectable for prevention or treatment of deficiencies of vitamin B12, Cyanocobalamin and phosphorous.	Cattle, Horses
Clynav TM (1)	Immunizes Atlantic salmon to reduce impaired daily weight gain and reduce mortality and cardiac, pancreatic and skeletal muscle lesions caused by pancreas disease following infection.	Aqua
Denagard™	Treats swine dysentery. Denagard is a shared-class antibiotic.	Swine
Experior	Reduces ammonia gas emissions from an animal or its waste.	Cattle
Hemicell	Enzyme supplement for poultry and swine feeds.	Poultry, Swine
Maxiban	Prevents coccidiosis in broiler chickens. <i>Maxiban</i> is an animal-only antibiotic and an ionophore.	Poultry
Monteban	Prevents coccidiosis in broiler chickens. <i>Monteban</i> is an animal-only antibiotic and an ionophore.	Poultry
Pulmotil™	Controls swine respiratory disease and bovine respiratory disease (BRD). <i>Pulmotil</i> is a shared-class antibiotic.	Cattle, Swine
Rumensin	Improves feed and milk production efficiency and increases rate of weight gain in cows. Also prevents and controls coccidiosis for cows, calves (excluding veal	Cattle
	calves) and goats. Rumensin is an animal-only antibiotic and an ionophore.	
Surmax [™] / Maxus [™] / Inteprity	Prevents necrotic enteritis in broiler chickens. <i>Surmax</i> , <i>Maxis</i> and <i>Inteprity</i> are animal-only antibiotics.	Poultry

⁽¹⁾ In February 2024 we announced the pending sale of our aqua business, which includes the *Clynav* product, to a subsidiary of Merck Animal Health. This sale is anticipated to close around mid-year 2024 pending regulatory approvals and subject to other closing conditions. See Note 19. Subsequent Events to the consolidated financial statements for further information.

A key element of our targeted value creation strategy is to drive future revenue growth through consistent, high-impact innovation. We continue to pursue the development of new chemical and biological molecules, as well as additional registrations and indications for current products. Our future growth depends on both our pipeline of new products, including new products we develop internally, develop with partners or that we are able to obtain through licenses or acquisitions, and the life cycle management of our existing products. In 2023, we received conditional approval from the U.S. Department of Agriculture (USDA) and launched our canine parvovirus monoclonal antibody treatment. This product is the first and only approved therapeutic solution to treat canine parvovirus, one of the most contagious and deadly viruses to dogs, if not treated. Additionally, we received European Medicines Agency (EMA) approval and launched $Adtab^{TM}$, an over-the-counter monthly oral flea and tick product for dogs and cats. In 2021 through 2023, we received 36 regulatory approvals in total for new products in major geographies and have delivered many geographic expansion and life cycle management enhancements of existing products across both pet health and farm animal product categories.

Seasonality

While many of our products are sold consistently throughout the year, we do experience seasonality in our pet health business due to increased demand for certain parasiticide product offerings in the first half of the year. For example, based upon historical results, approximately 75% and 60% of total annual revenue contributed by our higher-margin parasiticide products *Seresto* and *Advantage Family*, respectively, has occurred during the first half of the year, which is reflective of the flea and tick season in the Northern Hemisphere.

Sales and Marketing

Through our global sales force of over 2,000 sales representatives, our veterinary consultants and our key distributors, we seek to build strong customer relationships and fulfill demand for our pet health products primarily with veterinarians and, in some markets, pet owners, and for our farm animal products primarily with farm animal producers, veterinarians and nutritionists.

Our sales representatives visit our customers, including consultants, veterinarians, farm animal producers and resellers, to inform, promote and sell our products and to support customers. Our veterinary consultants are available to provide scientific consulting focused on disease management and herd management, training and education on diverse topics, including responsible product use, and generally have advanced degrees in veterinary medicine, veterinary nutrition or other agriculture-related fields. These direct relationships with customers allow us to better understand their needs and provide us access to customer decision makers. Additionally, our sales representatives and veterinary consultants focus on collaborating with our customers to educate and support them on topics such as local disease awareness and to help them adopt new and more sophisticated animal health solutions, which may include the use of our products. In addition, our sales and marketing organization provides enhanced value by supporting farm animal producers to maximize their yields and reduce their costs. Furthermore, our expertise and data analytics help our customers analyze large amounts of health and production data in order to improve production efficiency and business performance.

Customers

We primarily sell our pet health products to third-party distributors and retailers, as well as directly to veterinarians who typically then sell our products to pet owners. We primarily sell our farm animal products to third-party distributors and directly to a diverse set of farm animal producers, including beef and dairy farmers as well as pork, poultry and aquaculture operations. With the acquisition of Bayer Animal Health, we expanded our omnichannel presence in both the veterinary clinic and in retail markets, including e-commerce. Certain top selling pet health products, including the *Advantage Family and Seresto*, are offered through these channels. Our largest customer, an affiliate of AmerisourceBergen Corp., is a third-party veterinary distributor and represented approximately 10% of our revenue in 2023. Our second largest customer, which is also a third-party distributor, represented approximately 6% of our revenue in 2023. No other customer represented greater than 5% of revenue during 2023.

Research and Development

Our R&D efforts focus on delivering consistent, high-impact innovation. Our R&D organization is comprised of internal research, development, regulatory and external innovation collaborations and is led by highly experienced individuals with deep technical knowledge and substantial experience in discovery research, clinical sciences, technological development and regulatory expertise across our pet health and farm animal product categories. We believe this approach will allow us to consistently progress our multi-year innovation projects toward regulatory approvals, while ensuring clear visibility to the innovation portfolio composition, value and progress. As of December 31, 2023, we employed over 1,000 employees in our global R&D and Regulatory Affairs organizations.

Our R&D organization utilizes a fully integrated global network of labs, service centers and development sites supported by a network of third-party partners. We also have a significant international regulatory operation that manages new product submissions and ensures ongoing compliance for our existing commercial portfolio. Our global R&D sites are comprised of the following:

R&D Centers of Excellence with a Global Scope		Major Regional Centers for Key Markets
Kemps Creek, Australia	Speke, U.K.	Sao Paulo, Brazil
Monheim, Germany	Fort Dodge, Iowa	Shanghai, China
Bangalore, India	Greenfield, Indiana (R&D headquarters)	

Basel, Switzerland

Our R&D efforts focus on products that prevent and treat disease, improve and extend quality of life, improve the type of care received by animals and reduce the environmental impact of raising livestock. We seek to concentrate our resources on projects that match our strategy and where we can leverage our broad technical and commercial capabilities. In addition to efforts to support our existing product portfolio, our R&D organization focuses on therapeutics, vaccines, monoclonal antibodies and parasiticides for pets, and pharmaceuticals, vaccines and livestock sustainability projects for farm animals, including a focus on products that reduce emissions produced by farm animals.

New product innovation is a core part of our business strategy. Our approach is a build, buy or partner strategy to develop compelling innovations that originate from our scientists and innovators, academia, agribusiness or external partners including human pharmaceutical, agriculture and biotechnology organizations. We focus our R&D investments on projects that target novel product introductions with new active ingredients, as well as products leveraging known active ingredients in new indications, presentations, combinations and species expansion.

Our R&D efforts are balanced across species, development phases and technology platforms. We apply large and small molecule approaches for both farm animals and pets. Additionally, we employ various delivery strategies for products, including in-feed, injectable, oral and topical formulations developed in conjunction with our manufacturing team to assure production that leverages the capabilities within our internal and external manufacturing network.

Portfolio investment decisions and prioritization are influenced by the probability of technical success, economic value, time to market, portfolio fit and balance. R&D expenses totaled \$327 million in 2023, \$321 million in 2022 and \$369 million in 2021.

Manufacturing and Supply Chain

We have a global manufacturing network of 18 sites comprised of the following:

International		U.S.
Barueri, Brazil	Kiel, Germany	Clinton, Indiana
Prince Edward Island, Canada (1)	Santa Clara, Mexico	Terre Haute, Indiana
Chengdu, China	Manukau, New Zealand	Fort Dodge, Iowa
Wusi, China	Banwol, South Korea	Elwood, Kansas
Huningue, France	Chungli, Taiwan	Kansas City, Kansas
Cuxhaven, Germany	Dong Nai, Vietnam (1)	Winslow, Maine

⁽¹⁾ In February 2024 we announced the pending sale of our aqua business, which includes these manufacturing sites to a subsidiary of Merck Animal Health. This sale is anticipated to close around mid-year 2024 pending regulatory approvals and subject to other closing conditions. See Note 19. Subsequent Events to the consolidated financial statements for further information.

Our products are manufactured both at the sites listed above that are operated by us and across a network of approximately 140 contract manufacturing organizations (CMOs). Our external manufacturing network centrally governs and provides oversight to our global CMO relationships. We select CMOs based on several factors, including: (1) their ability to reliably supply products or materials that meet our quality standards at an optimized cost; (2) their access to specialty products and technologies; (3) capacity; (4) financial analyses; and (5) local presence. Our external manufacturing network seeks to ensure that all CMOs we use adhere to our standards of manufacturing quality.

Pharmaceutical production processes are complex, highly regulated and can vary widely from product to product. Shifting or adding manufacturing capacity can be a lengthy process requiring significant capital expenditures, process modifications and regulatory approvals. We have in the past invested in, and will continue to invest in, improvements to our existing manufacturing facilities and we intend to continue our efficiency improvement programs in our manufacturing and supply chain organization. Our strong quality control and quality assurance programs are managed and coordinated globally and are in place at all internal manufacturing sites and external manufacturing hubs. We also regularly inspect and audit our internal sites and CMO locations.

To maintain supply of our products, we use a variety of techniques, including comprehensive quality and planning and inventory management systems. We generally seek to develop an appropriate inventory strategy to fill market demand until an alternative source of supply can be implemented, in the event a supplier becomes unable to provide the required materials or product. However, various developments have led, and in the future may lead, to interruption or shortages in supply (for example, with U.S. cattle and pet vaccines in 2023) until we establish new sources, implement alternative processes, bring new manufacturing facilities online or pause or discontinue product sales in one or more markets.

Raw Materials

We purchase certain raw materials and active pharmaceutical ingredients (API) necessary for the commercial production of our products from a variety of third-party suppliers. Principal materials used in our manufacturing operations for key brands are typically available from more than one source; however, we may in some instances obtain certain raw or intermediate materials from only a single source. Our active ingredients for biologics are manufactured primarily in internal facilities, while chemically derived active ingredients are sourced from external partners.

Competition

We face intense competition globally. Competition may vary depending on the particular region, species, product category or individual product. We compete principally on the basis of product quality, price, cost-effectiveness, promotional effectiveness, new product development and product differentiation. Certain Elanco products, both existing and new, may compete with other branded or generic products already on the market or that are later developed by competitors. When competitors introduce new products with ease-of-use, therapeutic or cost advantages, our products may become subject to decreased sales and/or price reductions.

Our primary competitors include animal health medicines and vaccines companies such as Zoetis Inc., Boehringer Ingelheim Vetmedica, Inc., the animal health division of Boehringer Ingelheim GmbH, and Merck Animal Health, the

animal health division of Merck & Co., Inc. We also face competition globally from manufacturers of generic drugs, as well as from producers of nutritional health products, such as DSM Nutritional Products AG and Danisco Animal Nutrition & Health, a subsidiary of International Flavors & Fragrances, Inc. There are also several start-up companies working in the animal health area. In addition, we compete with numerous other producers of animal health products throughout the world.

Intellectual Property

Our technology, brands and other intellectual property are important elements of our business. We rely on patent, trademark, copyright and trade secret laws, as well as regulatory exclusivity periods and non-disclosure agreements to protect our intellectual property rights. Our policy is to vigorously protect, enforce and defend our rights to our intellectual property.

Our product portfolio and certain product candidates enjoy the protection of approximately 6,500 patents and applications, filed in over 90 countries, with a concentration in our major markets as well as other markets with strong patent laws and protections. While many of the patents and patent applications in our portfolio are the result of our own work, others have been developed in collaboration with partners, acquired through business transactions or licensed to us by third parties. A subset of our current products or product candidates are covered by patents and patent applications.

Patents for individual products expire at different times based on the date of the patent filing (or occasionally, the date of patent grant) and the legal term of patents in the countries where such patents are obtained. Below is a summary of our recent and upcoming key patent expirations:

- Galliprant is protected by patents in the U.S., Europe, Canada, Japan and other key markets. While patents
 covering the active ingredient, grapiprant, expired in 2021 in all markets except Japan, patents covering the
 physical form of the active ingredient remain in force and will expire between 2026 and 2031, depending on
 jurisdiction. Patent coverage relating to methods of use and formulation will expire in 2035 in most
 jurisdictions.
- Various formulation and method of use patents encompass our spinosad pesticide product, *Trifexis*. The
 Trifexis formulation and method of use patents expired in September 2021 in the U.S., Canada and Australia.
 At this time, there are no indications of market entries for generic versions of *Trifexis* in these countries.
- The Seresto formulation patent will expire in the U.S. in September 2027. In Europe, the formulation patents will expire in June 2025, but in some countries, including Spain and the U.K., supplementary protection certificates (SPCs) have been granted that expire in September 2026.
- Patent coverage for Milbemax/Interceptor chewable products extends through July 2024 in Europe and other key markets, and patent coverage for Interceptor Plus extends through October 2028.
- Certain Advantage Family products, including Advantage, K-9 Advantix and Advocate are off patent.
- The U.S. patent for Experior's active ingredient, lubabegron, is currently scheduled to expire in July 2024, with a pending patent term extension application that could extend protection until April 2025. While the patent term extension application is pending, we plan to request available interim patent extensions to maintain coverage. Coverage for Experior methods of use will expire in 2037 in the U.S. and 2035 in other key markets.

Additionally, many of our vaccine products, including the *TruCan* family of vaccines, are based on proprietary or patented master seeds and formulations. We actively seek to protect our proprietary information, including our trade secrets and proprietary know-how, through a variety of means, including by seeking to require our employees, consultants, advisors and partners to enter into confidentiality agreements and other arrangements upon the commencement of their employment or engagement.

We seek to file and maintain trademarks around the world based on commercial activities in most regions where we have, or desire to have, a business presence for a particular product. We currently maintain more than 14,500 trademark applications and registrations in major regions, primarily identifying products dedicated to the care of livestock and pets.

Regulatory Matters

The sale of animal health products is governed by the laws and regulations specific to each country in which we sell our products. To maintain compliance with these regulatory requirements, we have established processes, systems

and dedicated resources with end-to-end involvement from product concept to launch and maintenance in the market. Our regulatory function is Elanco's key interface with the relevant authorities and is responsible for applying for and obtaining the necessary registrations and post-approvals, extending them if appropriate (e.g., developing claims in additional species), updating (e.g., changes to shelf-life or manufacturing site) and ongoing monitoring of safety and efficacy through our global pharmacovigilance system. In this way, the regulatory function ensures registrations remain valid and our products can continue to be sold. To effectively do this, our regulatory function actively engages in dialogue with the relevant authorities regarding policies that relate to animal health products. In most of our markets, the relevant authority is separate from those governing human medicinal products.

United States

Food and Drug Administration (FDA). The regulatory body that is responsible for the regulation of animal health pharmaceuticals in the U.S. is the Center for Veterinary Medicine (CVM), a division of the FDA. All manufacturers of animal health pharmaceuticals must demonstrate their products to be safe, effective and produced by a consistent method of manufacture as defined under the Federal Food, Drug and Cosmetic Act (FFDCA). The FDA's basis for approving a new animal drug application is documented in a Freedom of Information Summary. Post-approval monitoring of products is required by law, with reports being provided to the CVM's Office of Surveillance and Compliance. Reports of product quality defects, adverse events or unexpected results are maintained and submitted in accordance with the law. Additionally, as part of the drug experience report, we are required to submit all new information pertaining to the safety or effectiveness of a product, regardless of the source.

USDA. The regulatory body in the U.S. for veterinary biologicals is the USDA. The Center for Veterinary Biologics within the Animal and Plant Health Inspection Service in the USDA is responsible for the regulation of animal health biologicals, which includes but is not limited to vaccines, bacterins, allergens, certain antibodies, antitoxins, toxoids, immunostimulants, certain cytokines, antigenic or immunizing components of live microorganisms and diagnostic components of natural or synthetic origin, or that are derived from synthesizing or altering various substances or components of substances such as microorganisms, genes or genetic sequences, carbohydrates, proteins, antigens, allergens or antibodies. All manufacturers of animal health biologicals must show their products to be pure, safe, effective and produced by a consistent method of manufacture as defined under the Virus Serum Toxin Act. Postapproval monitoring of products is also required. Reports of product quality defects, adverse events or unexpected results are maintained and submitted in accordance with the agency requirements.

Environmental Protection Agency (EPA). The main regulatory body in the U.S. for veterinary pesticides is the EPA. The EPA's Office of Pesticide Programs is responsible for the regulation of most pesticide products applied to animals in accordance with a memorandum of understanding between the FDA and the EPA for products that are subject to regulation under both the FFDCA and the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA). All manufacturers of animal health pesticides must show their products will not cause unreasonable adverse effects to humans or the environment as stated in the act. Within the U.S., individual state pesticide authorities must also approve pesticide products that have been approved by the EPA before distribution in that state. Post-approval monitoring of products is required, with reports provided to the EPA and some state regulatory agencies.

European Union (EU)

The EMA is a centralized agency of the EU responsible for the scientific evaluation of many of the Veterinary Medicinal Products (VMP) developed by pharmaceutical companies for use in the EU. The agency has a veterinary review section distinct from the medical review section for human products. The Committee for Veterinary Medicinal Products (CVMP) is responsible for scientific review of the submissions for VMP, including immunological products. If the CVMP concludes that all requirements for quality, safety and efficacy are met and the product benefits outweigh the risks, it issues a positive opinion that is forwarded to the European Commission, which takes the final decision following the European comitology procedure. The centralized marketing authorization is valid in all of the EU and in Northern Ireland. All countries that are not part of the EU but belong to the European Economic Area (EEA), such as Norway, Iceland and Liechtenstein, have been part of the scientific assessment done by the CVMP. These countries issue a national marketing approval in accordance with the European Commission's decision.

If approval is sought for products that either cannot or do not need to follow the centralized procedure, approval can also be achieved by national approval in an EEA country agency. This national authorization can be mutually recognized by other EEA countries/EU member states (Mutual Recognition Procedure). In addition, national and mutual recognition can be done in a combined procedure (Decentralized Procedure).

A series of regulations, directives, guidelines, EU Pharmacopeia Monographs and other legislation provide the requirements for approval in the EU. In general, these requirements are similar to those in the U.S., requiring demonstrated evidence of purity, safety, efficacy and consistency of manufacturing processes.

The European Food Safety Authority (EFSA) is the agency of the EU that provides scientific advice and communicates with respect to existing and emerging risks associated with the food chain. Based on EFSA's mandate, it evaluates applications for feed additives, including coccidiostats, enzymes and several nutritionals for animals.

The European Chemicals Agency (ECHA) is the agency of the EU for the safe use of chemicals. Based on the ECHA's mandate, it conducts the evaluation of biocides for the EU.

We are also governed by each of the national regulatory bodies in the EU.

United Kingdom

The Veterinary Medicines Directorate (VMD) is the main regulatory body in the U.K. responsible for regulating and controlling veterinary pharmaceuticals. A trade agreement between the U.K. and the EU includes regulatory and customs cooperation mechanisms, as well as provisions supporting open and fair competition. The Northern Ireland protocol, which is part of the trade deal, requires that VMD follow EU rules in Northern Ireland. Laws applying to the rest of the U.K. remain largely aligned.

<u>Brazil</u>

The Ministry of Agriculture, Livestock Production and Supply (MAPA) is the regulatory body in Brazil that is responsible for the regulation and control of pharmaceuticals, biologicals and medicinal feed additives for animal use. MAPA's regulatory activities are conducted through the Secretary of Agricultural Defense and its Livestock Products Inspection Department. In addition, regulatory activities are conducted at a local level through the Federal Agriculture Superintendence. These activities include the inspection and licensing of both manufacturing and commercial establishments for veterinary products, as well as the submission, review and approval of pharmaceuticals, biologicals and medicinal feed additives. MAPA is one of the most active regulatory agencies in Latin America, having permanent seats at several international animal health forums, such as Codex Alimentarius, World Organization for Animal Health and Committee of Veterinary Medicines for the Americas.

China

The Ministry of Agriculture and Rural Affairs (MARA) is the regulatory body that is responsible for the regulation and control of pharmaceuticals, biologicals, disinfectants, medicinal feed additives, pesticide and feed/feed additives for animal use. There are three organizations under the MARA that regulate animal health:

The Institute of Veterinary Drug Control (IVDC) is responsible for the evaluation of new applications, renewals, variations, manufacturers, quality methods and tissue residue methods for pharmaceuticals, biologicals, disinfectants and medicinal feed additives.

The feed/feed additive office is responsible for the registration and renewal of feed and feed additives.

The pesticide bureau is responsible for the registration and renewal of pesticide products.

Rest of World

Country-specific regulatory laws typically have provisions that include requirements for certain labeling, safety, efficacy and manufacturers' quality control procedures (to assure the consistency of the products), manufacturing site standards, as well as company records and reports. Many other countries' regulatory agencies either refer to some or all of the requirements of the U.S. or EU and may have additional specific local requirements. Most authorities also consider the standards set by international animal health entities, including the World Organization for Animal Health, Codex Alimentarius and the International Cooperation on Harmonization of Technical Requirements for Registration of Veterinary Medicinal Products (VICH).

Joint FAO/WHO Expert Committee on Food Additives. The Joint FAO/WHO Expert Committee on Food Additives is an international expert scientific committee that is administered jointly by the Food and Agriculture Organization of the United Nations (FAO) and the World Health Organization (WHO). It provides a risk assessment/safety evaluation of residues of veterinary drugs in animal products, exposure and residue definition and maximum residue limit proposals for veterinary drugs. Similarly, the Joint FAO/WHO Meeting on Pesticide Residues (JMPR) is an international expert scientific group administered jointly by the FAO and WHO. JMPR reviews residues and

analytical aspects of the pesticides, estimates the maximum residue levels, reviews toxicological data and estimates acceptable daily intakes for humans of the pesticides under consideration. Elanco works with this committee to establish acceptably safe levels of residual substances in food-producing animals after treatment with veterinary drugs or pesticides. This in turn enables the calculation of appropriate withdrawal times for our products prior to an animal entering the food chain.

Advertising and Promotion Review. Promotion of animal health products is controlled by regulations in many countries. These rules generally restrict advertising and promotion to those claims and uses that have been reviewed and endorsed by the applicable agency. We conduct a review of promotion material for compliance with the local and regional requirements in the markets where we sell animal health products.

Import and Export of Products. The importation and exportation of animal health products is controlled by regulations in many countries. In some jurisdictions this may include obtaining separate permits or licenses by product or by company or filing notices with applicable regulatory agencies prior to import or export of product. We ensure compliance with local, regional and global regulations in the markets where we import/export our animal health products.

International Cooperation on Harmonization of Technical Requirements for Registration of Veterinary Medicinal Products. VICH is a trilateral (EU-Japan-U.S.) program launched in 1996 aimed at harmonizing technical requirements for veterinary product registration. Several other countries have obtained observer status, for example, Canada, New Zealand, Australia, South Africa and the U.K., or are linked to VICH on the basis of the VICH Outreach Forum, a VICH initiative with the main objective of providing a basis for wider international harmonization of technical requirements. In addition, the World Organization for Animal Health is an associate member of VICH.

Environmental, Health and Safety

In addition to the laws and regulations discussed above, we are also subject to various federal, state, local and foreign laws and regulations, both within and outside the U.S., relating to environmental, health and safety (EHS) and sustainability matters. These laws and regulations govern matters such as the emission and discharge of hazardous materials into the ground, air or water; the generation, use, storage, handling, treatment, packaging, transportation, exposure to and disposal of hazardous and biological materials, including recordkeeping, reporting and registration requirements; and the health and safety of our employees. Due to our operations, these laws and regulations also require us to obtain and comply with permits, registrations or other authorizations issued by governmental authorities. These authorities can modify or revoke our permits, registrations or other authorizations and can enforce compliance through fines and injunctions.

Certain environmental laws impose joint and several liability, without regard to fault, for clean-up costs related to the disposal or release of hazardous substances into the environment, including at third-party sites or offsite disposal locations, or at sites that are currently owned or operated (or were formerly owned or operated) where such a disposal or release occurred. Although our current reserves for environmental remediation obligations are not material, we could be subject to liability for the investigation and remediation of legacy environmental contamination caused by historical industrial activity at sites we own or on which we operate. We are also monitoring and investigating environmental contamination from past industrial activity at certain sites. In connection with past divestitures, we have undertaken certain indemnification obligations that may require us, in the future, to conduct or finance environmental clean-ups at sites that we no longer own or operate. We have also entered into indemnification agreements in connection with certain of our past acquisitions, pursuant to which we are, or may be, indemnified for various environmental clean-ups. However, such indemnities are limited in both time and scope and may be further limited in the presence of new information or may not be available at all.

In addition to clean-up actions brought by federal, state, local and foreign governmental entities, private parties could raise personal injury or other claims against us due to the presence of, or exposure to, hazardous materials on, from or otherwise relating to such a property. We have made, and intend to continue to make, necessary expenditures for compliance with applicable EHS laws and regulations.

Human Capital

Employees. As of December 31, 2023, we employed approximately 9,300 full time employees and approximately 500 fixed-duration employees, which are individuals hired for a pre-defined length of time (typically one to four years). Approximately 30% of our global workforce is U.S.-based, while slightly more than 10% of our global employees are members of unions, works councils, trade associations or are otherwise subject to collective bargaining agreements, primarily in Germany and the U.S.

Our Culture. At Elanco, we are committed to fostering an inclusive culture where employees can make a difference, encouraging ownership, growth and well-being. We are committed to creating a culture built on the foundation of the three following values that guide our decisions and the four following behavioral pillars that guide our actions:

Values:

Integrity – Do the right thing in the right way.

Respect – Respect people, our customers and the animals in their care.

Excellence – Be accountable. Continuously improve. Deliver with discipline.

Behavioral Pillars:

Involve – We seek participation and input to gain commitment and passionate performance and create an engaged community. We act with humility as One Elanco, collaborating for the best outcomes for the entire company.

Deliver – We focus on the essential, build mastery and diligently deliver on our commitments to our colleagues, customers and shareholders.

Own – We are accountable and empowered. We ask questions and raise concerns. We are fully invested in Elanco's success.

Innovate – We bring an innovative mindset that drives continuous improvement of our processes, products and services

At Elanco, this culture drives employee performance, and our employees are driven by these values and behavioral pillars. Leadership and employees are encouraged to evaluate performance with these values and behavioral pillars in mind.

Inclusion, Diversity, Equity and Accessibility (IDEA). We are focused on delivering consistent high impact innovation and maximizing the value of our current portfolio. This effort is enhanced by an inclusive workforce with diverse backgrounds, strengths and perspectives. Our efforts to strengthen IDEA are critical to sustaining a purpose-driven culture and strengthening our promises to our employees and customers.

Formed in 2015, our Global Elanco Inclusion, Diversity, Equity and Accessibility Council (EIDEAC) serves as a catalyst for a culture where IDEA is embraced and recognized as business-result drivers. Within this framework, employee development is better supported and opinions and diverse backgrounds are embraced, making us a stronger company. Current EIDEAC focus areas include cultivating dynamic Employee Resource Groups, delivering a high quality annual Multi-Cultural Summit and supporting enterprise-wide aspirational goals for representation of women (globally) and people of color (U.S.) in leadership.

Total Rewards. We invest in our workforce by offering competitive salaries, incentives and benefits. Our pay for performance philosophy is designed to create ownership and help ensure we attract and retain talent, as well as reward and recognize top-performing employees through merit increases and other rewards. We benchmark our total rewards annually to ensure our compensation and benefit programs remain competitive with our peers. Our benefits are one way we support our employees' well-being and live up to our employee promise.

Development. We offer our employees opportunities to advance their careers at Elanco and are passionate about equipping employees with skills and development opportunities to help them thrive while continually meeting the everchanging needs of our customers and other stakeholders in a dynamic and growing industry.

Beyond professional growth and development, Elanco employees actively engage in initiatives aligned to Elanco's *Healthy Purpose* to advance the well-being of animals, people, the planet and our enterprise, enabling us to realize our vision of Food and Companionship Enriching Life.

Available Information

Our website address is www.elanco.com. On our website, specifically within the "Investor Relations" section, we make available, free of charge, our annual, quarterly and current reports, including amendments to such reports, as soon as reasonably practicable after we electronically file such material with, or furnish such material to, the U.S. Securities and Exchange Commission (the SEC). In addition, the SEC maintains an internet site that contains reports, proxy and information statements, and other information regarding issuers, including Elanco, that file electronically with the SEC at www.sec.gov.

Information relating to corporate governance at Elanco, including our Corporate Governance Guidelines, Code of Conduct, Financial Code of Ethics, Articles of Incorporation, Bylaws, Committee Charters; information concerning our executive officers and members of our Board of Directors; and ways to communicate are also available on our website, www.elanco.com. We will provide any of the foregoing information without charge upon written request to Elanco's Corporate Secretary, Elanco, 2500 Innovation Way, Greenfield, Indiana 46140. Information relating to shareholder services is also available on our website.

Information contained on our website is not part of, or incorporated by reference, in this Form 10-K.

ITEM 1A. RISK FACTORS

Our business, financial condition and results of operations are subject to various risks, including but not limited to the risks described below. If any of such risks actually materializes, our business, financial condition and results of operations could be materially adversely affected.

Risks Related to the Animal Health Industry

The animal health industry is highly competitive.

The animal health industry is highly competitive. Our competitors include standalone animal health businesses, the animal health businesses of large pharmaceutical companies, specialty animal health businesses and companies that mainly produce generic products. Several start-up companies also compete in the animal health industry. We believe many of our competitors are conducting R&D activities in areas served by our products and in areas in which we are developing products. We also face competition from manufacturers of drugs globally, as well as producers of nutritional health products. These competitors may have access to greater financial, marketing, technical and other resources. As a result, they may be able to devote more resources to developing, manufacturing, marketing and selling their products, initiating or withstanding substantial price competition or more readily taking advantage of acquisitions or other opportunities. Further, consolidation in the animal health industry could result in existing competitors realizing additional efficiencies or improving portfolio bundling opportunities, thereby potentially increasing their market share and pricing power, which could lead to a decrease in our revenue and profitability. For example, many of our competitors have relationships with key distributors and, because of their size, an ability to offer attractive pricing incentives, which may negatively impact or hinder our relationships with these distributors. In addition to competition from established market participants, new entrants to the animal health medicines and vaccines industry could substantially reduce our market share, render our products obsolete or disrupt our business model.

Competitive pressures could arise from, among other things, differences in safety and efficacy product profiles, limited demand growth or a significant number of additional competitive products being introduced into a particular market, price reductions by competitors, the ability of competitors to capitalize on their economies of scale, the ability of competitors to produce or otherwise procure animal health products at lower costs than we can and the ability of competitors to access more or newer technology than we can. To the extent any of our competitors are more successful with respect to any key competitive factor, or we are forced to reduce, or are unable to raise, the price of any of our products in order to remain competitive, our business, financial condition and results of operations could be materially adversely affected.

Our R&D, acquisition and licensing efforts may fail to generate new products or expand the use of our existing products.

Our future success depends on both our existing product portfolio and our pipeline of new products, including new products that we may develop internally or through joint ventures and products we are able to obtain through licenses or acquisitions. We commit substantial effort, funds and other resources to R&D, primarily through our own dedicated resources but also through collaborations with third parties. We also have acquired or partnered with a number of smaller animal health businesses, and we intend to continue to do so in the future. There are significant risks and uncertainties involved with the execution of these partnerships, many of which are outside our control. We may be unable to determine with accuracy when or whether any of our products now under development will be approved or launched, or we may be unable to develop, license or otherwise acquire product candidates or products. Additionally, we may have insufficient access to capital to fund such investments. In addition, we cannot predict whether any products, once launched, will be commercially successful or will achieve revenue that is consistent with our expectations.

The animal health industry is subject to regional and local trends and regulations and, as a result, products that are successful in some markets may not achieve similar success when introduced into other markets. Furthermore, the timing and cost of our R&D may increase, and our R&D may become less predictable as, among other things, regulations applicable to our industry may make it more time-consuming and/or costly to research, develop and register products. If we are unable to generate new products or expand the use of our existing products, our business, financial condition and results of operations could be materially adversely affected.

Further, as part of our development strategy, we often hire clinical research organizations to perform preclinical testing and clinical trials for drug candidates. Clinical trials and procedures are inherently uncertain and there can be no assurance that these trials or procedures will be enrolled or completed in a timely or cost-effective manner or result in a commercially viable product or indication. Failure to achieve positive clinical trial and/or testing results could have a material adverse effect on our prospects. Furthermore, unfavorable or inconsistent clinical data from current or future clinical trials or procedures conducted by us, our competitors or third parties, or perceptions regarding this clinical data, could adversely affect our ability to obtain necessary approvals and the market's view of our future prospects.

Disruptive innovation and advances in veterinary medical practices, animal health technologies and alternatives to animal-derived protein could negatively affect the market for our products.

The markets for our products are regularly impacted by the introduction and/or broad market acceptance of newly developed or alternative products that address the diseases and conditions for which we sell products, including "green" or "holistic" health products, specially bred disease-resistant animals or replacements for meat, milk, eggs or fish from alternative natural or synthetic sources. For example, the market for our pet health therapeutics has been particularly affected by innovation in new molecules and delivery formulations in recent years. Technological breakthroughs by others may render our products obsolete and reduce or eliminate the market for our products. Introduction or acceptance of competing animal health products and innovation or disruptive protein alternatives could materially adversely affect our business, financial condition and results of operations.

Generic products may be viewed as more cost-effective than our products.

We face competition from products produced by other companies, including generic alternatives to our products. We depend on patents and related exclusivity periods to provide us with exclusive marketing rights for some of our products. Patents for individual products expire at different times based on the date of the patent filing (or sometimes the date of patent grant) and the legal term of patents in the jurisdictions where such patents are obtained. The extent of protection afforded by our patents varies from jurisdiction to jurisdiction and is limited by the scope of the claimed subject matter of our patents, the term of the patent and the availability and enforcement of legal remedies in the applicable jurisdiction. Some of our top products such as the *Advantage Family*, *Rumensin*, *Maxiban*, *Denagard* and *Trifexis* do not have patent protection. Other products are protected by patents that expire over the next several years. As the patents for a brand name product expire, competitors may begin to introduce generic or other alternatives, and as a result, we may face competition from lower-priced alternatives to many of our products. For further information, see "Item 1. Business – Intellectual Property."

Generic competitors are becoming more aggressive in terms of launching products before patent rights expire, and, because of attractive pricing, sales of generic products are an increasing percentage of overall animal health sales in certain regions. Although the impact of generic competition in the animal health industry to date has not typically mirrored that seen in human health, product pricing and the impact of generic competition in the future may more closely mirror human health as a result of changes in industry dynamics, such as channel expansion, customer consolidation, an increase in the availability and use of pet insurance and the potential for generic competition by established animal health businesses. If animal health customers increase their use of new or existing generic products, we may be forced to lower our prices and/or provide discounts or rebates in order to compete with generic products. In such event, our business, financial condition and results of operations could be materially adversely affected.

Regulatory restrictions and bans on the use of antibiotics and productivity products in farm animals, as well as changing market demand, may continue to negatively affect demand for certain of our farm animal products.

Over the past few years, our operational results have been, and may continue to be, affected by regulations and changing market demand. In certain markets, including the U.S., sales of certain of our farm animal products have been negatively affected by an increase in consumer sentiment for proteins and dairy products produced without the use of antibiotics or other products intended to increase animal production.

There are two classes of antibiotics used in animal health: shared-class, or medically important, antibiotics, which are used to treat infectious disease caused by pathogens that occur in both humans and animals; and animal-only antibiotics, which are used to treat infectious disease caused by pathogens that occur in animals only. Concerns that the use of antibiotics in farm animal production may lead to increased antibiotic resistance of human pathogens have resulted in increased regulation and changing market demand. In addition, countries in which we sell or plan to sell our products, such as the U.S., France and Vietnam, have passed restrictions or bans on antibiotic use. Other countries have placed restrictions or bans on the use of specific antibiotics in certain food-producing animals, regardless of the route of administration (in feed or injectable).

In recent years, the percentage of our total revenue from sales of shared-class antibiotics has declined, driven primarily by changing regulations in many markets, as well as changing market demand and our tiered approach to antibiotic stewardship, which has included removing growth promotion from labels and requiring veterinary oversight in the U.S. and other markets. Globally, during 2023, our revenue from shared-class antibiotics decreased 7% in comparison to 2022 and represented 10% of total revenue, while our revenue from animal-only antibiotics increased 6% in comparison to 2022 and represented 15% of total revenue. In 2023, approximately 90% of our revenue from animal-only antibiotics resulted from the sale of ionophores. Ionophores are a special class of animal-only antimicrobials, and because of their animal-only designation, mode of action and spectrum of activity, their use has not to date been impacted by regulations or changing market demand in many international markets.

The impact of changes in regulations and market preferences regarding the use of antibiotics in farm animals could have a material adverse effect on our business, financial condition and results of operations. If there is an increased public perception that consumption of food derived from animals that utilize our products poses a risk to human health, there may be a further decline in the production of those food products and, in turn, demand for our products. In addition, antibiotic resistance concerns will likely result in additional restrictions or bans, expanded regulations or public pressure to further reduce the use of antibiotics in farm animals, increased demand for antibiotic-free protein or changes in the market acceptance or regulatory treatment of ionophores, any of which could materially adversely affect our business, financial condition and results of operations. In addition, our revenue has been impacted by changing trade dynamics with China and other markets that restrict the use of productivity products, such as those containing ractopamine, in farm animals. This has resulted in many U.S. food producers eliminating their use of ractopamine to gain access to those markets. Our farm animal products Optaflexx™ and Paylean™ contain ractopamine. If more producers decide to access such markets or additional markets restrict the use of ractopamine or other productivity products, our business, financial condition and results of operations could be materially adversely affected.

An outbreak of infectious disease carried by farm animals could negatively affect the demand for, and sale and production of, our farm animal products.

Sales of our farm animal products could be materially adversely affected by a general outbreak of infectious disease, or an outbreak of disease carried by farm animals, which could lead to the widespread death or precautionary destruction of farm animals as well as the reduced consumption and demand for animal protein. In addition, outbreaks of disease carried by farm animals may reduce regional or global sales of particular animal-derived food products or result in reduced exports of such products, either due to heightened export restrictions or import prohibitions, which may reduce demand for our farm animal products due to reduced herd or flock sizes.

In recent years, outbreaks of various diseases, including African Swine Fever, avian influenza, foot-and-mouth disease, bovine spongiform encephalopathy (otherwise known as BSE or "mad cow" disease) and porcine epidemic diarrhea virus (otherwise known as PEDV) have negatively impacted sales of our animal health products. The discovery of additional cases of any of these, or new diseases, may result in additional restrictions on animal protein, reduced herd or flock sizes or reduced demand for animal protein, any of which may have a material adverse effect on our business, financial condition and results of operations. In addition, the outbreak of any highly contagious disease near our main production sites could require us to immediately halt production of our products at such sites or force us to incur substantial expenses in procuring raw materials or products elsewhere.

Our R&D relies on evaluations of animals, which may become subject to bans, additional restrictive regulations or increased attention from activism movements.

As an animal health company dedicated to innovating and delivering products and services to prevent and treat disease in animals, we are required to evaluate the effect of our existing and new products in animals in order to register such products. Animal testing in certain industries has been the subject of controversy and adverse publicity. Some organizations and individuals have attempted to ban animal testing or encourage the adoption of new regulations applicable to animal testing. To the extent the activities of such organizations and individuals are successful, our R&D, and by extension our business, financial condition and results of operations, could be materially adversely affected. In addition, negative publicity about us or our industry could harm our reputation. For example, farm animal producers may experience decreased demand for their products or reputational harm as a result of evolving consumer views of animal rights, nutrition, and health-related or other concerns. Any reputational harm to the farm animal industry may also extend to companies in related industries, including our company. Adverse consumer views related to the use of one or more of our products in farm animals also may result in a decrease in the use of such products and could have a material adverse effect on our business, financial condition and results of operations.

Consolidation of our customers and distributors could negatively affect the pricing of our products.

We primarily sell our pet health products to third-party distributors and retailers, as well as directly to veterinarians. We primarily sell our farm animal products to third-party distributors and directly to a diverse set of farm animal producers, including beef and dairy farmers as well as pork, poultry and aquaculture operations. In recent years, there has been a trend toward the concentration of veterinarians in large clinics and hospitals. We have also seen recent consolidation among farm animal producers, particularly swine and poultry producers, and among our distributors. Furthermore, we have seen the expansion of larger cross-border corporate customers and an increase in the consolidation of buying groups (cooperatives of veterinary practices that leverage volume to pursue discounts from manufacturers). The pace of consolidation and structure of markets varies greatly across geographies. If these trends toward consolidation continue, our customers could attempt to improve their profitability by leveraging their buying power to obtain favorable pricing. The resulting decrease in our prices could have a material adverse effect on our business, financial condition and results of operations.

For our pet health products, increased use of alternative distribution channels, or changes within existing distribution channels, could negatively impact our market share, margins and distribution of our products.

In most markets, pet owners have historically purchased their animal health products directly from veterinarians. However, pet owners increasingly have the option to purchase animal health products from sources other than veterinarians, such as online retailers, "big-box" retail stores or other over-the-counter distribution channels. This trend has been demonstrated by the significant shift away from the veterinarian distribution channel in the sale of flea and tick products and has been accelerated by the increased consumer preferences toward e-commerce in recent years. Pet owners also could decrease their reliance on, and visits to, veterinarians as they rely more on internet-based

animal health information. Because we market our pet health prescription products primarily through the veterinarian distribution channel, in the event of a significant decrease in visits to veterinarians by pet owners, our market share for such products could be reduced, materially adversely affecting our business, financial condition and results of operations. In addition, pet owners may substitute human health products for animal health products if human health products are deemed to be lower-cost alternatives.

Legislation has also been proposed in the U.S. and may be proposed in the U.S. or abroad in the future, that could impact the distribution channels for our pet health products. For example, such legislation may require veterinarians to provide pet owners with written prescriptions and disclosure that the pet owner may fill prescriptions through a third party, which may further reduce the number of pet owners who purchase their animal health products directly from veterinarians. Such requirements may lead to increased use of generic alternatives to our products or the increased substitution of our pet health products with other animal health products or human health products if such other products are deemed to be lower-cost alternatives. Many states already have regulations requiring veterinarians to provide prescriptions to pet owners upon request, and the American Veterinary Medical Association has long-standing policies in place to encourage this practice.

Over time, these and other competitive conditions may further increase our use of online retailers, "big-box" retail stores or other over-the-counter distribution channels to sell our pet health products. If we or our major retail customers are not successful in navigating the shifting consumer preferences to distribution channels such as e-commerce, our expected future revenues may be negatively impacted. We may also realize lower margins on sales through retail distribution channels than we do on sales through veterinarians. Any of these events could materially adversely affect our business, financial condition and results of operations. In addition, if one or more of our pet health distributors discontinues or modifies their relationship with us, our business, financial condition and results of operations may be materially adversely affected.

Strategic and Operational Risks

Our results of operations are dependent upon the success of our top products.

If any of our top products experience issues, such as disruptive innovations or the introduction of more effective competitive products, negative publicity, changes in veterinarian or customer preferences, loss of patent protection, material product liability litigation, new or unexpected side effects, manufacturing disruptions and/or regulatory proceedings, our revenue could be negatively impacted, perhaps significantly. Our top five products and/or product families, *Advantage Family, Seresto, Rumensin*, Credelio Family and Maxiban, contributed approximately 31% of our revenue in 2023. Any issues with these top products could have a material adverse effect on our business, financial condition and results of operations.

We may not be able to successfully complete favorable transactions or successfully integrate acquired businesses when we pursue acquisitions, divestitures, joint ventures or other significant transactions.

From time to time, we evaluate potential acquisitions, divestitures or joint ventures to further our strategic objectives. The completion of such transactions is often subject to conditions that may be outside our control, including obtaining the requisite approval of the shareholders of the target company and/or government antitrust/competition approvals. Accordingly, we may not be able to complete announced and signed transactions, and therefore, may not realize the anticipated benefits therefrom.

For example, in February 2024, we announced an agreement to sell our aqua business to a subsidiary of Merck Animal Health (see Note 19. Subsequent Events to the consolidated financial statements for further information). We currently anticipate this divestiture to close around mid-year 2024, and upon closing of the sale, we intend to use the after-tax cash proceeds to accelerate our debt paydown efforts. The closing of this sale remains conditioned on receipt of applicable antitrust and other regulatory approvals, as well as other customary closing conditions. If one or more of these conditions is not satisfied, or is not satisfied timely, the sale may not be able to be consummated. In such an event, this could result in our inability to recover certain costs associated with the proposed divestiture that have already been incurred or that will be incurred, damaged relationships with our customers, partners, suppliers and/or employees, diversion of management's focus and attention from the normal day-to-day operations of the business and/or other potential strategic opportunities, potential litigation relating to the \$55 million termination fee owed to us in the event the sale is not consummated due to a failure to obtain the applicable regulatory approvals and a potential decline in our stock price.

In the event of a material acquisition, we may be required to devote significant management attention and resources to integrating the portfolio and operations of the acquired company. Potential difficulties we may encounter in the integration process include the following:

- the inability to realize the anticipated value from various assets of the acquired company;
- the inability to combine the businesses of the acquired company with ours in a manner that permits us to achieve the cost savings or other synergies anticipated as a result of the transaction or to achieve such cost savings or other anticipated synergies in a timely manner, which could result in us not realizing some anticipated benefits of the transaction in the time frame anticipated, or at all;
- the loss of key employees;
- potential unknown liabilities and unforeseen increased expenses, delays or unfavorable conditions in connection with the closing of the transaction and the subsequent integration; and
- performance shortfalls at our or the acquired company as a result of the diversion of management's attention from ongoing business activities.

Additionally, as a result of our acquisition of Bayer Animal Health, we integrated each business' distinct enterprise resource planning (ERP) systems into one primary platform, a process that was substantially completed in the second quarter of 2023. ERP integrations have inherent risks, which can complicate our business operations and potentially lead to breakdowns in data integrity and may preclude our ability to supply products for a period of time, as was the case in the second quarter of 2023. To the extent future ERP or other integration activities are required related to future acquisitions, divestitures or joint ventures, we could be required to deploy significant resources and attention to these efforts. If we are unable to successfully integrate our systems to support critical business operations and to produce information for business decision-making activities, we could also experience a material adverse impact on our business or an inability to timely and accurately report our financial results.

Future acquisitions could also result in potentially dilutive issuances of equity securities, the incurrence of debt, contingent liabilities or amortization expenses related to intangible assets and increased operating expenses, which could adversely affect our financial condition and results of operations. Furthermore, if we issue equity or debt securities to raise additional funds, our existing shareholders may experience significant dilution, and the new equity or debt securities may have rights, preferences and privileges senior to those of our existing shareholders. Furthermore, if we sell a substantial number of shares of common stock in the public markets, the availability of those shares for sale could adversely affect the market price of our common stock. Such sales, or the perception in the market that holders of a large number of shares intend to sell shares, could depress the market price of our common stock and impair our ability to raise capital through the sale of additional equity securities.

We may not be able to successfully implement future restructuring activities or other significant organizational changes.

We have, from time to time, restructured or made other adjustments to our workforce and manufacturing footprint. For example, related to the acquisition and subsequent integration of Bayer Animal Health, we conducted restructuring programs which included the elimination of positions across several countries, primarily in sales and marketing, R&D, manufacturing and quality, and back-office support. Additionally, in February 2024 our Board of Directors authorized a restructuring plan to improve operational efficiencies and better align our organizational structure with current business needs, top strategic priorities and key growth opportunities. Specifically, the restructuring plan is intended to reallocate resources by shifting international resources from farm animal to pet health as we plan for the global launches of certain potential blockbuster products currently under regulatory review. Further, the restructuring plan is expected to result in changes in how we operate in and sell into the Argentina market, among others, which we anticipate will reduce our foreign currency exposure (see Note 19. Subsequent Events to the consolidated financial statements for further information).

There are significant costs involved with the execution of restructuring programs or other significant organizational changes, including expenses related to severance, asset impairment and other potential charges. There are also significant risks involved with such changes, including the potential for significant business disruption, diversion of management's time and attention from on-going operations, loss of human capital talent, temporarily reduced productivity and the risk of failing to achieve some or all of the anticipated benefits of the restructuring or organizational changes. If we are unable to successfully manage and implement our recently announced restructuring plan, we may not achieve or sustain the expected growth or cost savings benefits of these activities, or do so within the expected

timeframe, and in such instance, our financial condition and results of operations could be negatively affected. We may also need to implement additional restructuring plans or other strategic initiatives in the future in response to market or product changes, performance issues, changes in strategy, acquisitions and/or other internal or external considerations.

Manufacturing problems and capacity imbalances have caused, and may in the future cause, product launch delays, inventory shortages, recalls and/or unanticipated costs.

In order to sell our products, we must be able to produce and ship sufficient quantities to our customers. We own and operate 18 internal manufacturing sites across 11 countries and also employ a network of approximately 140 third-party CMOs. Many of our products involve complex manufacturing processes, are highly regulated and can rely on inputs that are sole sourced from certain manufacturing sites. Shifting or adding manufacturing capacity can be a lengthy process requiring significant capital expenditures, process modifications and regulatory approvals. Due to this, unplanned plant shutdowns, manufacturing or quality assurance difficulties, failure or refusal of a supplier or CMO to supply contracted quantities or difficulties in predicting or variability in demand for our products have caused, and may in the future cause, interruption or higher costs in the supply of certain products, product shortages or pauses or discontinuations of product sales in one or more markets. Further, minor deviations in our manufacturing or logistical processes, such as temperature excursions or improper package sealing, could result, and have in the past resulted in, delays, inventory shortages, unanticipated costs, product recalls, product liability and/or regulatory action. In addition, a number of factors could cause production interruptions, including:

- the failure of us or any of our vendors or suppliers, including logistical service providers, to comply with applicable regulations and quality assurance guidelines;
- mislabeling;
- construction delays;
- equipment malfunctions;
- · shortages of materials;
- labor problems;
- delays in receiving required governmental authorizations or regulatory approvals;
- natural disasters and/or adverse weather conditions;
- power outages;
- criminal and terrorist activities;
- changes in manufacturing production sites and limits to manufacturing capacity due to regulatory requirements, changes in types of products produced, shipping distributions or physical limitations; and
- the outbreak of any highly contagious diseases.

These interruptions could result in launch delays, inventory shortages, recalls, unanticipated costs or issues with our agreements under which we supply third parties, which may materially adversely affect our business, financial condition and results of operations. Further, global transportation and logistics challenges, cost inflation and tight labor markets have caused, and in the future may cause, delays in and/or increased costs related to the distribution of our products, the construction or acquisition of manufacturing capacity, procurement activity and supplier or contract manufacturer arrangements.

In addition, volatility in the overall demand for animal health products in different markets and distribution channels has had, and may continue to have, a number of impacts on our business, including increased costs and disruptions in the supply of our products. Our manufacturing network may be unable to meet the demand for our products, or we may have excess capacity if demand for our products changes. Throughout 2023 we experienced increasing levels of inventory on-hand, in part due to volatility in demand across different markets and distribution channels. In addition to the negative impact on our cash flows, if we are not able to more effectively manage the purchase and production of our inventories to match the timing of customer demand, we may face increased costs for warehousing and the potential for our inventories to become unusable or obsolete.

We have also in the past invested in, and will continue to invest in, improvements to our existing manufacturing facilities and may also invest in new manufacturing plants in the future. These types of projects are subject to risks of delay or cost overruns inherent in any large construction project and require licensing by or approvals from various

regulatory authorities. The unpredictability of a product's regulatory or commercial success or failure, the lead time necessary to construct highly technical and complex manufacturing sites and shifting customer demand (including as a result of market conditions or entry of branded or generic competition) increase the potential for capacity imbalances. In addition, construction of sites is expensive, and our ability to recover costs will depend on the market acceptance and success of the products produced at the new sites, which is uncertain. Significant cost overruns or delays in completing these projects could have an adverse effect on our financial condition and results of operations.

Increased or decreased inventory levels in our distribution channels can lead to fluctuations in our revenues and levels of inventory on-hand.

In addition to selling our products directly to veterinarians, we sell to distributors and retailers who, in turn, sell our products to third parties. Inventory levels at our distributors and retailers increase or decrease as a result of various factors, including end customer demand, new customer contracts, heightened competition, required minimum inventory levels, our ability to renew distribution contracts with expected terms, our ability to implement commercial strategies, regulatory restrictions, unexpected customer behavior, proactive measures taken by us in response to shifting market dynamics and procedures and environmental factors beyond our control. These increases and decreases can lead, and have led, to variations in our quarterly and annual revenues. Failure to appropriately anticipate inventory levels in our distribution channels could materially adversely affect our financial condition and results of operations.

We use machine learning and AI in our business, and challenges with properly managing its use could result in competitive or reputational harm and legal liability and adversely affect our results of operations.

We use AI in multiple ways in our business and continue to expand the use of AI in our operations. Given that machine learning and AI are new and rapidly evolving technologies, their use presents a number of operational, compliance and reputational risks. AI algorithms are currently known to sometimes produce unexpected results or behave in unpredictable ways that can generate irrelevant, nonsensical, deficient, factually inaccurate or biased content and results. Accordingly, AI presents emerging operational, legal and ethical issues. If our use of AI becomes controversial, we may experience reputational harm to our brand, competitive harm or legal liability. At the same time, our competitors may incorporate AI into their operations more quickly than we do or with more successful outcomes, which would also harm our business. We also expect there will be new laws or regulations concerning the use of AI technology, which might be burdensome to comply with and may limit our ability to use this technology. We might not be able to attract and retain the talent to support our AI technology initiatives and maintain our systems. Any disruption or failure in our AI systems or those of third parties on whom we rely could result in delays and operational challenges, and the various operational, compliance and reputational issues could materially adversely affect our business, financial condition and results of operations.

We depend on sophisticated information technology and infrastructure.

We are continuing to enhance a number of our business processes, including our financial reporting and supply chain processes and with respect to where and from whom we obtain information technology systems. We have made, and will continue to make, significant configuration, process and data changes within many of the information technology systems we use. If our information technology systems and processes are not sufficient to support our business and financial reporting functions, or if we fail to properly implement our new business processes, our financial reporting may be delayed or inaccurate and, as a result, our business, financial condition and results of operations may be materially adversely affected. Even if we are able to successfully configure and change our systems, all technology systems, even with implementation of security measures, are vulnerable to disability, failures or unauthorized access. If our information technology systems or our service providers' information technology systems were to fail or be breached, this could materially adversely affect our reputation and our ability to perform critical business functions, and sensitive and confidential data could be compromised.

Our business may be negatively affected by weather conditions and the availability of natural resources.

The animal health industry and demand for many of our products in a particular region are affected by weather conditions, including those related to climate change, varying weather patterns and weather-related pressures from pests, such as ticks. As a result, we may experience regional and seasonal fluctuations in our results of operations. For example, on average, approximately 75% and 60% of total annual revenue contribution from our higher margin parasiticide products *Seresto* and *Advantage Family*, respectively, occurs in the first half of the year, reflective of the flea and tick season in the Northern Hemisphere. As such, fluctuations in our revenue due to seasonality and/or

weather or climate-related factors, many of which are beyond our control, may mean period-to-period comparisons of our results of operations will not necessarily be meaningful.

Farm animal producers depend on the availability of natural resources, including large supplies of fresh water. Their animals' health and their ability to operate could be adversely affected if they experience a shortage of fresh water due to human population growth or floods, droughts or other weather conditions. In the event of adverse weather conditions or a shortage of fresh water, veterinarians or farm animal producers may purchase less of our products.

Further, heat waves may cause stress in animals and lead to increased vulnerability to disease, reduced fertility rates and reduced milk production. Droughts may threaten pasture and feed supplies by reducing the quality and amount of forage available to grazing livestock, while climate change may increase the prevalence of parasites and diseases that affect farm animals. Adverse weather conditions and climate change may also have a material adverse impact on our aquaculture business, as changes in water temperatures could affect the timing of reproduction and growth of various fish species, as well as trigger the outbreak of certain water borne diseases.

In addition, veterinary hospitals and practitioners depend on visits from, and access to, the animals under their care. Veterinarians' patient volume and ability to operate could be adversely affected if they experience prolonged snow, ice or other severe weather conditions, particularly in regions not accustomed to sustained inclement weather.

We could experience demand, supply and operational challenges associated with the effects of a human disease outbreak, epidemic, pandemic or other widespread public health concern.

Our business has been, and may continue to be, negatively impacted by human disease outbreaks, epidemics, pandemics or other widespread public health concerns, such as the COVID-19 pandemic and its variants. These impacts included, and in the event of a future widespread public health concern may in the future include:

- Reductions in demand or significant volatility in demand for one or more of our products, caused by, among
 other things: the temporary inability of our customers to purchase our products due to illness, quarantine,
 travel restrictions and/or financial hardship; decreased veterinary visits; farm animal processing plant
 shutdowns; shifts in demand by trading down to lower priced products; or stockpiling activity;
- Inability to meet customer needs and achieve cost targets due to disruptions in our manufacturing and supply
 chains caused by labor constraints or inability to obtain key raw materials, increased transportation costs or
 other manufacturing and distribution disruptions;
- Failure of third parties on which we rely, including our suppliers, contract manufacturers, distributors, contractors and other external business partners, to meet their obligations, which may be caused by their own financial or operational challenges;
- Limited ability to access the global financial market, which could negatively impact our short-term and long-term liquidity; or
- Significant changes in the political environments in the markets in which we manufacture, sell or distribute
 our products, including lockdowns, import/export restrictions or other governmental mandates that limit or
 close operating and manufacturing facilities, restrict travel to perform necessary business functions or
 otherwise prevent us or our third-party partners, suppliers or customers from sufficiently staffing operations,
 including operations necessary for the production, distribution and sale of our products.

Despite our efforts to manage and limit these impacts, they will likely ultimately be dependent on factors beyond our control, including the duration and severity of any such outbreak, as well as third-party actions taken to contain its spread and mitigate its effects.

A loss of key personnel or highly skilled employees could disrupt our operations.

Our future success depends partly on the continued service of our highly qualified and well-trained key research, engineering, sales, marketing, manufacturing, executive and administrative personnel. We face intense competition for these qualified personnel from our competitors and others, particularly for certain highly technical specialties in geographic areas where we recruit. Due to this intense competition, we may be unable to continue to attract and retain qualified personnel necessary for the development of our business, or to recruit or identify suitable replacement personnel. If we are unsuccessful in our recruitment and retention efforts, our business may be harmed. In addition, if we fail to effectively manage organizational and/or strategic changes, our financial condition, results of operations and reputation, as well as our ability to successfully attract, motivate and retain key employees, could be harmed.

Our business could be materially adversely affected by labor disputes, strikes or work stoppages.

Some of our employees are members of unions, works councils, trade associations or are otherwise subject to collective bargaining agreements in certain jurisdictions. As a result, we are subject to the risk of labor disputes, strikes, work stoppages and other labor-relations matters. We may be unable to negotiate new collective bargaining agreements on similar or more favorable terms, and may experience work stoppages, higher ongoing labor costs or other labor problems in the future at our sites. We may also experience difficulty or delays in implementing changes to our workforce in certain markets. Further, labor-related issues, including at our suppliers or CMOs, could cause a disruption of our operations, which could have a material adverse effect on our business, financial condition and results of operations, potentially resulting in cancelled orders by customers, unanticipated inventory accumulation or shortages and reduced revenue and net income.

Economic, Market and Financial Risks

We have substantial indebtedness.

We had approximately \$5.8 billion of outstanding indebtedness at December 31, 2023. A significant amount of our cash flows from operations is dedicated to servicing this indebtedness and will not be available for other purposes, including our operating, investing or financing needs. Our ability to make scheduled payments or to refinance our debt obligations depends on our financial condition and operating performance, which are subject to prevailing economic and competitive conditions, and to certain financial, business, legislative, regulatory or other factors beyond our control. If our cash flows and capital resources are insufficient to fund our debt service obligations, or we are unable to access capital markets for additional financing on terms acceptable to us, we may be forced to reduce or delay investments and capital expenditures, sell assets, seek additional debt or equity financing or seek to restructure or refinance our indebtedness. These alternative measures may not be successful and may not permit us to meet our scheduled debt service obligations. In such event, we may not be able to execute any such measures on commercially reasonable terms or at all and, even if successful, could still face substantial liquidity problems and might be required to sell material assets or operations to attempt to meet our debt service and other obligations. Further, our debt instruments may restrict our ability to dispose of assets and may restrict the use of proceeds from those dispositions and may also restrict our ability to raise debt or equity financing to be used to repay other indebtedness when it becomes due. We may not be able to consummate those dispositions or to obtain proceeds in an amount sufficient to meet any debt service obligations when due.

In addition, repayment of our indebtedness will depend on the generation of cash flow by our subsidiaries, including certain international subsidiaries, and their ability to make such cash available to us, by dividend, debt repayment or otherwise. Our subsidiaries may not be able to, or may not be permitted to, make adequate distributions to enable us to make required debt repayments. Each subsidiary is a distinct legal entity and, under certain circumstances, legal, tax and contractual restrictions may limit our ability to obtain cash from them. In the event we are not able to receive distributions from our subsidiaries, we may be unable to make required principal and interest payments on our indebtedness.

In February 2024, we announced an agreement to sell our aqua business, which we expect to close around mid-year 2024. Upon closing of the sale, we intend to use the after-tax cash proceeds to accelerate our debt paydown efforts by paying down more than \$1 billion in outstanding indebtedness. However, the closing of this sale remains conditioned on receipt of applicable antitrust and other regulatory approvals, as well as other customary closing conditions. If one or more of these conditions is not satisfied, or is not satisfied timely, the sale may not be able to be consummated, and in such an event, this aforementioned debt paydown would not occur as planned.

In addition, our high level of indebtedness could have other important consequences, including:

- limiting our ability to obtain additional financing to fund future working capital, capital expenditures, business development or other general corporate requirements;
- increasing our vulnerability to general adverse economic and industry conditions;
- making us more highly leveraged than some of our competitors, which may place us at a competitive disadvantage;
- restricting us from making strategic acquisitions, engaging in development activities or exploiting business opportunities; and
- limiting our flexibility in planning for and reacting to changes in the animal health industry.

Our debt agreements contain restrictions that will limit our flexibility in operating our business.

Our credit facilities contain, and any other existing or future indebtedness of ours would likely contain, a number of covenants that impose significant operating and financial restrictions on us, including restrictions on our ability to, among other things:

- incur additional debt, guarantee indebtedness or issue certain preferred shares;
- prepay, redeem or repurchase certain debt;
- pay dividends on or make distributions in respect of, or repurchase or redeem, our capital stock or make other restricted payments;
- make loans or certain investments;
- sell certain assets;
- create liens on certain assets;
- consolidate, merge, sell or otherwise dispose of all or substantially all of our assets;
- enter into certain transactions with our affiliates; and
- substantially alter the businesses we conduct.

In addition, certain of our credit facilities require us to comply with a net total leverage ratio and a minimum fixed charge coverage ratio under certain circumstances (see Note 8. Debt to the consolidated financial statements for further discussion and descriptions of debt covenants). As a result of these covenants, we are limited in the manner in which we conduct our business, and we may be unable to engage in favorable business activities or finance future operations or capital needs. A failure to comply with the covenants under the indenture that governs the senior unsecured notes and credit facilities, or any of our other existing or future indebtedness could result in an event of default, which, if not cured or waived, could have a material adverse effect on our business, financial condition and results of operations. In the event of an event of default under our credit facilities, it is expected that the lenders:

- will not be required to lend any additional amounts to us;
- could elect to declare all borrowings outstanding, together with accrued and unpaid interest and fees, to be due and payable and terminate all commitments to extend further credit;
- could require us to apply all of our available cash to repay these borrowings; or
- could effectively prevent us from making debt service payments on the notes (due to a cash sweep feature).

Such actions by the lenders could cause cross defaults under our other indebtedness, including our senior unsecured notes. If we were unable to cure any covenant noncompliance, the lenders under our credit facilities and any of our other existing or future secured indebtedness could proceed against the collateral granted to them to secure our credit facilities or such other indebtedness. We have pledged a significant portion of our assets as collateral under our credit facilities.

Changes in our credit ratings could increase our interest expense and restrict our access to, and negatively impact the terms of, current or future financings or trade credit.

Credit rating agencies continually revise their ratings for the companies they follow, including us. Credit rating agencies also evaluate our industry as a whole and may change their credit ratings for us based on their overall view of our industry. We cannot be sure that credit rating agencies will maintain their ratings for us or for certain of our debt. The acquisition of Bayer Animal Health had a negative impact on our credit ratings, leading to higher borrowing expenses. Additionally, S&P, Moody's and Fitch downgraded our credit ratings in February, March and April 2023, respectively. Because the ratings of certain of our senior unsecured notes were downgraded, we have been required to pay additional interest under these senior unsecured notes. Any further downgrades could result in requirements to pay additional interest under the 4.900% Senior Notes due 2028. Moreover, any decision to downgrade our ratings could restrict our access to, and negatively impact the terms of, current or future financings and trade credit extended by our suppliers of raw materials or other vendors.

Changes in interest rates may adversely affect our earnings and/or cash flows.

Certain of our credit facilities bear variable interest at the Term SOFR reference rate. Term SOFR measures the cost of borrowing cash overnight, collateralized by U.S. Treasury securities, and is based on directly observable U.S. Treasury-backed repurchase transactions. We are exposed to the risk of rising interest rates, given our level of

variable-rate indebtedness, and Term SOFR rate increases over the course of 2023 have led to an increase in both our interest expense and cash paid for interest. Additionally, the increased interest rate environment, particularly for long-term treasury rates, played a critical role in the goodwill impairment charge we recorded during 2023. Any further increases in Term SOFR or other benchmark rates, including long-term treasury rates, would expose us to additional interest rate risk, additional expense and the potential for additional future impairments. We are also exposed to the risk of rising interest rates to the extent we fund our operations with short-term or variable-rate borrowings. See Part II, Item 7A. Quantitative and Qualitative Disclosure About Market Risk for further discussion around our exposure to changes in interest rates.

We may be required to write down goodwill or identifiable intangible assets.

At December 31, 2023, the net carrying value of our goodwill and other indefinite-lived intangible assets on our consolidated balance sheet was \$5,094 million and \$347 million, respectively. Other indefinite-lived intangible assets primarily consist of in-process R&D (IPR&D) projects acquired as a part of past business combinations. Under accounting principles generally accepted in the United States (GAAP), we are required to annually assess our goodwill and other indefinite-lived assets for impairment, and more frequently whenever events or changes in circumstances indicate an impairment may have occurred. Determining whether an impairment exists or may have occurred, and the amount of the potential impairment, involves qualitative criteria and quantitative data based on management's estimates and assumptions, which require significant judgment and could change given a change in circumstances, future events or as new information becomes available.

Due principally to the sharp increase in long-term treasury rates in the third quarter of 2023, which led to an increased discount rate assumption relative to prior assessments, we recorded a \$1,042 million pre-tax impairment charge. While we believe the estimates and assumptions underlying our goodwill impairment test were reasonable in view of all available information, and no additional impairment to our goodwill or other indefinite-lived intangible assets was recorded during the fourth quarter of 2023, future changes in our discount rate assumption, whether driven by increases in long-term treasury rates or other factors, or future changes in other significant assumptions or the use of alternative estimates and assumptions, could expose us to further goodwill impairment losses. Any impairment of goodwill or other indefinite-lived intangible assets could have a material adverse effect on our results of operations in the period(s) when recognized.

We rely on third parties to provide us with products and materials and are subject to increased material costs and potential disruptions in supply.

Feed, fuel, transportation and other key costs for farm animal producers may continue to increase, or animal protein prices or sales may decrease. Either of these trends could cause deterioration in the financial condition of our farm animal product customers, potentially inhibiting their ability to purchase our products or pay us for products delivered. Our farm animal product customers may offset rising costs by reducing spending on our products, including by switching to lower-cost alternatives. In addition, concerns about the financial resources of pet owners could cause veterinarians to alter their treatment recommendations in favor of lower-cost alternatives to our products, which could result in a decrease in sales of our pet health products, especially in developed countries where there are higher rates of pet ownership. Rising costs or reduced income for our customers could have a material adverse effect on our business, financial condition and results of operations.

We also rely on third parties to source many of our raw materials and to manufacture products that we distribute. Principal materials used in our manufacturing operations for key brands are typically available from more than one source; however, in certain instances we obtain raw or intermediate materials from a single source. We generally seek to develop an appropriate inventory strategy to fill market demand until an alternative source of supply can be implemented, in the event a supplier becomes unable to provide the required materials or product. However, various developments have led, and may in the future lead, to interruption or shortages in supply (for example, with cattle vaccines in 2023) until we establish new sources, implement alternative processes, bring new manufacturing facilities online or pause or discontinue product sales in one or more markets. Additionally, we have and may continue to experience cost increases for certain raw materials or other components required to manufacture our products due to increased shipping costs and other inflationary pressures. This may have a material adverse impact on our financial results if we cannot pass on such increases to our customers. Further, the unavailability or delivery delays of raw materials has affected and could continue to affect our ability to ship the related products timely, more severely impacting high-volume or high-margin products.

Significant portions of our operations are conducted in foreign jurisdictions, including jurisdictions presenting a high risk of bribery and corruption, and are subject to the economic, political, legal and business environments of the countries in which we do business.

Our international operations could be limited or disrupted by any of the following:

- volatility in the international financial markets;
- compliance with governmental controls;
- difficulties enforcing contractual and intellectual property rights;
- parallel trade in our products (importation of our products from EU countries where our products are sold at lower prices into EU countries where the products are sold at higher prices);
- compliance with a wide variety of laws and regulations, such as the U.S. Foreign Corrupt Practices Act (the FCPA) and similar non-U.S. laws and regulations;
- · compliance with foreign labor laws;
- compliance with local, regional and global restrictions on banking and commercial activities in emerging markets;
- burdens to comply with multiple and potentially conflicting foreign laws and regulations, including those relating to EHS requirements and those in emerging markets;
- changes in laws, regulations, government controls or enforcement practices with respect to our business and the businesses of our customers, including the imposition of limits on our profitability;
- political and social instability, including crime, civil disturbance, terrorist activities and armed conflicts such as the Russia-Ukraine conflict and the related government and other entity responses;
- trade restrictions and restrictions on direct investments by foreign entities, including restrictions administered
 by the Office of Foreign Assets Control of the U.S. Department of the Treasury and the EU, in relation to our
 products or the products of farmers and other customers;
- · government limitations on foreign ownership;
- government takeover or nationalization of business;
- changes in tax laws and tariffs;
- imposition of anti-dumping and countervailing duties or other trade-related sanctions;
- costs and difficulties and compliance risks in staffing, managing and monitoring international operations, including in the use of overseas third-party goods and service providers;
- corruption risk inherent in business arrangements and regulatory contacts with foreign government entities;
- · longer payment cycles and increased exposure to counterparty risk; and
- additional limitations on transferring personal information between countries or other restrictions on the processing of personal information.

In addition, international transactions may involve increased financial and legal risks due to differing legal systems and customs, as well as restrictions and sanctions that may be imposed on one or more jurisdictions. Compliance with these requirements may prohibit the import or export of certain products and technologies or may require us to obtain a license before importing or exporting certain products or technologies. A failure to comply with any of these laws, regulations or requirements could result in civil or criminal legal proceedings, monetary or non-monetary penalties, or both, disruptions to our business, limitations on our ability to import and export products and damage to our reputation. In addition, variations in the pricing of our products between jurisdictions may result in the unauthorized importation or unauthorized re-importation of our products between jurisdictions and may also result in the imposition of anti-dumping and countervailing duties or other trade-related sanctions. While the impact of these factors is difficult to predict, any of them could materially adversely affect our business, financial condition and results of operations. Further, changes in any of these laws, regulations or requirements, or the political environment in a particular country, may affect our ability to engage in business transactions in certain markets, including investment, procurement and repatriation of earnings.

Our results of operations may be adversely affected by foreign currency exchange rate fluctuations.

We operate on a global basis and are exposed to the risk that our earnings, cash flows and equity could be adversely impacted by fluctuations in foreign exchange rates. Because our results are reported in U.S. dollars, we are exposed to foreign currency exchange risk, as the functional currency financial statements of non-U.S. subsidiaries are translated to U.S. dollars for reporting purposes. We are primarily exposed to foreign exchange risk with respect to net assets denominated in the Euro, British pound, Swiss franc, Brazilian real, Australian dollar, Japanese yen, Canadian dollar and Chinese yuan. To the extent revenue and expense transactions are not denominated in the functional currency, we are also subject to the risk of transaction losses. Given the volatility of exchange rates and despite the mitigating impact of foreign currency forward or option derivative contracts we enter into to reduce the effect of fluctuating currency exchange rates, there is no guarantee we will be able to effectively manage currency transaction and/or translation risks, which could adversely affect our results of operations. See Part II, Item 7A. Quantitative and Qualitative Disclosure About Market Risk for further discussion around our exposure to potential changes in foreign currency exchange rates.

We have underfunded pension plan liabilities. We will require current and future operating cash flow to fund these shortfalls, reducing the cash available for other uses.

We have certain defined benefit pension plans, predominantly in Germany and Switzerland, that are either dedicated to our current or past employees or where the plan assets and liabilities related to our current or past employees were legally required to transfer to us at the time of our separation from Lilly (see Note 17. Retirement Benefits to the consolidated financial statements for additional discussion around our defined benefit plans). The funded status and net periodic pension cost for these plans is materially affected by the discount rate used to measure pension obligations, the longevity and actuarial profile of our workforce, the level of plan assets available to fund those obligations and the actual and expected long-term rate of return on plan assets. Significant changes in investment performance or a change in the portfolio mix of invested assets can result in corresponding increases and decreases in the valuation of plan assets or in a change in the expected rate of return on plan assets. As of December 31, 2023, for pension plans with projected benefit obligations in excess of plan assets, the projected benefit obligation was \$343 million with plan assets of \$168 million. Any changes in the discount rate could result in a significant increase or decrease in the valuation of pension obligations, affecting the reported funded status of our pension plans as well as the net periodic pension cost in the following years. Similarly, changes in the expected or actual return on plan assets can result in significant changes in the net periodic pension cost in the following years. In the event we need to make additional cash contributions to these plans, this will divert resources from our operations and may have a material adverse effect on our business, financial condition and results of operations.

We do not anticipate paying dividends on our common stock in the foreseeable future.

We do not anticipate paying any dividends in the foreseeable future on our common stock. We intend to retain all future earnings for the operation and expansion of our business and the repayment of outstanding debt. Certain of our credit facilities contain restrictive covenants that impose significant operating and financial restrictions on us, including restrictions on our ability to pay dividends or to make other restricted payments. As a result, capital appreciation, if any, of our common stock may be our shareholders' major source of gain for the foreseeable future. While we may change this policy at some point in the future, we cannot assure you we will make such a change.

We could be negatively impacted by being a target of shareholder activism, causing us to incur significant expense and hinder or disrupt the execution of our business strategy.

While we value constructive input from our investors and regularly engage in dialogue with our shareholders regarding our business strategy and performance, shareholder activism, which takes many forms and arises in a variety of situations, has been increasingly prevalent among publicly traded companies. If we become the subject of certain forms of shareholder activism, such as proxy contests or hostile bids, the attention of our management and our Board of Directors may be diverted from executing our strategy. Such shareholder activism could give rise to perceived uncertainties as to our future strategy, adversely affect our relationships with business partners and make it more difficult to attract and retain qualified personnel. Responding to unwanted stockholder activism could also result in substantial costs, including significant legal fees and other expenses. Our stock price could be subject to significant fluctuation or otherwise be adversely affected by the events, risks and uncertainties of any shareholder activism.

Applicable laws and regulations, provisions of our Amended and Restated Articles of Incorporation and our Amended and Restated Bylaws may discourage takeover attempts and business combinations that shareholders might consider in their best interests.

Applicable laws, provisions of our Amended and Restated Articles of Incorporation and our Amended and Restated Bylaws may delay, deter, prevent or render more difficult a takeover attempt that our shareholders might consider in their best interests. For example, they may prevent our shareholders from receiving the benefit from any premium to the market price of our common stock offered by a bidder in a takeover context. Even in the absence of a takeover attempt, the existence of these provisions may adversely affect the prevailing market price of our common stock if they are viewed as discouraging takeover attempts in the future.

Our Amended and Restated Articles of Incorporation and our Amended and Restated Bylaws contain provisions intended to encourage prospective acquirers to negotiate with our Board of Directors rather than to attempt a hostile takeover, which could deter coercive takeover practices and inadequate takeover bids. These provisions provide for:

- a Board of Directors divided into three classes with staggered terms;
- advance notice requirements regarding how our shareholders may present proposals or nominate directors for election at shareholder meetings;
- the right of our Board of Directors to issue one or more series of preferred stock with such powers, rights and preferences as the board of directors shall determine;
- only the Board of Directors to fill newly created directorships or vacancies on our Board of Directors;
- limitations on the ability of shareholders to call special meetings of shareholders and require that all shareholder action be taken at a meeting rather than by written consent; and
- the exclusive right of our Board of Directors to amend our Amended and Restated Bylaws.

These limitations may adversely affect the prevailing market price and market for our common stock if they are viewed as limiting the liquidity of our stock or discouraging takeover attempts in the future.

We have recently announced plans to seek shareholder approval at our 2024 annual meeting of shareholders to amend our corporate governing documents to begin a process to declassify the Board of Directors, provide shareholders the right to amend our bylaws, enable shareholders to call special meetings under certain circumstances and modify the voting standard for uncontested director elections from a plurality standard to a majority of votes cast. However, there can be no assurance whether shareholder approval of these amendments will be obtained.

We may incur additional tax expense or become subject to additional tax exposure.

We are subject to income taxes in the U.S. and numerous other jurisdictions. Our future results of operations could be adversely affected by changes in the effective tax rate as a result of a change in the mix of earnings between U.S. and non-U.S. jurisdictions or among jurisdictions with differing statutory tax rates, changes in our overall profitability, changes in tax laws or treaties or in their application or interpretation, changes in tax rates, changes in GAAP, changes in the valuation of deferred tax assets and liabilities, the results of audits and examinations of previously filed tax returns and continuing assessments of our tax exposures. In connection with the Base Erosion and Profit Shifting (BEPS) Integrated Framework provided by the Organization for Economic Cooperation and Development (OECD), the OECD has introduced a framework to implement a global minimum corporate tax of 15%, referred to as Pillar Two or the minimum tax directive. Many aspects of the minimum tax directive will be effective beginning in 2024, with certain remaining impacts to be effective beginning in 2025. While it is uncertain whether the U.S. will enact legislation to adopt the minimum tax directive, certain countries in which we operate have adopted legislation, and other countries are in the process of introducing legislation to implement the minimum tax directive. Our analysis is ongoing as the OECD continues to release additional guidance and countries implement legislation. To the extent additional changes take place in the countries in which we operate, it is possible these legislative changes and efforts may increase uncertainty and have an adverse impact on our effective tax rates.

We are also subject to the examination of our tax returns and other tax matters by the 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. If our effective tax rates were to increase, particularly in the U.S. or other material foreign jurisdictions, or if the ultimate determination of our taxes owed is for an amount in excess of amounts previously accrued, our operating results, cash flows and financial condition could be adversely affected.

Legal and Regulatory Compliance Risks

Our business is subject to substantial regulation.

As a global company, we are subject to various state, federal and international laws and regulations, including regulations relating to the development, quality assurance, manufacturing, importation, distribution, marketing and sale of our products. In addition, our manufacturing facilities, including the manufacturing facilities operated by our CMOs, are subject to periodic inspections by regulatory agencies. An inspection may report conditions or practices that indicate possible violations of regulatory requirements. Our failure, or the failure of third parties we rely on, including CMOs, to comply with applicable regulatory requirements, allegations of such non-compliance or the discovery of previously unknown problems with a product or manufacturer could result in, among other things, inspection observation notices, warning letters or similar regulatory correspondence, fines, a partial or total shutdown of production in one or more of our facilities while an alleged violation is remediated, withdrawals or suspensions of current products from the market and civil or criminal prosecution, as well as decreased sales as a result of negative publicity and product liability claims. Any one of these consequences could materially adversely affect our business, financial condition and results of operations.

In addition, we will not be able to market new products unless and until we have obtained all required regulatory approvals or equivalent notices in each jurisdiction where we plan to market those products. Even after a product reaches market, we may be subject to re-review and may lose our approvals. For example, pending claims have been asserted in a lawsuit against the FDA's approval of *Experior*, a product launched in 2021. Our failure to obtain approvals, delays in the approval process or our failure to maintain approvals in any jurisdiction, may prevent us from selling products in that jurisdiction until approval or re-approval is obtained, if ever.

In the EU, the Veterinary Medicinal Products Regulation updated the rules related to the authorization and use of veterinary medicines effective January 28, 2022. The updated rules limit the use of antibiotics, tighten importation rules and impose stricter pharmacovigilance standards. This regulation must still be implemented at the member state level and as such, additional requirements may be adopted by individual member states, which would have the effect of increasing the compliance requirements for our business in the EU, with resulting costs.

If the acceptance and/or adoption of our farm animal sustainability initiatives do not continue, our future results may be materially impacted.

We have made significant progress in recent years in gaining acceptance of farm animal sustainability products. However, the degree of acceptance for these products is uncertain, and one or more markets may resist the adoption of new products for the sole purpose of sustainability. As a result, there can be no assurance we will be able to expand the use of our sustainability products in these or other markets.

Increased regulation or decreased governmental financial support relating to the raising, processing or consumption of farm animals could reduce demand for our farm animal products.

Companies in the farm animal sector are subject to extensive and increasingly stringent regulations. If farm animal producers are adversely affected by new regulations or changes to existing regulations, they may reduce herd or flock sizes or become less profitable and, as a result, they may reduce their use of our products, which may materially adversely affect our business, financial condition and results of operations. Also, many farm animal producers benefit from governmental subsidies, and if such subsidies were to be reduced or eliminated, these companies may become less profitable and, as a result, may reduce their use of our farm animal products. More stringent regulation of the farm animal sector, including regarding the use of farm animal products, could have a material adverse effect on our business, financial condition and results of operations.

Modification of foreign trade policy may harm our farm animal product customers.

Changes in laws, agreements and policies governing foreign trade in the territories and countries where our customers do business could negatively impact such customers' businesses and adversely affect our results of operations. A number of our customers rely on duty reduction benefits provided by free trade agreements, such as the U.S.-Mexico-Canada-Agreement. However, trade partnerships and treaties can be modified by domestic and foreign governments, which could result in new or increased tariffs. Additionally, countries are becoming increasingly protectionist, both to protect local industries as well as to ensure domestic supply chain continuity for key products, such as medicines. Finally, as global security decreases, more countries will use sanctions and export controls as a method to deal with such insecurity, which could result in decreased markets for our products.

We may incur substantial costs and receive adverse outcomes in litigation, regulatory investigations and other legal matters.

Litigation matters and regulatory investigations, regardless of their merits or ultimate outcomes, are costly, divert management's attention and may materially adversely affect our reputation and demand for our products. We cannot predict with certainty the eventual outcome of pending or future legal matters. An adverse outcome of litigation or legal matters could result in us being responsible for significant damages. Our business, financial condition and results of operations could be materially adversely affected by unfavorable results in pending or future litigation, regulatory investigations and other legal matters and the expense of defending against them. These matters may include, among other things, allegations of violation of U.S. and foreign competition law, labor laws, securities laws and regulations, consumer protection laws and environmental laws and regulations, as well as claims or litigation relating to product liability, intellectual property, securities, breach of contract and tort. For example, shareholder class action lawsuits filed against us in 2020 allege, in part, that we and certain of our executives made materially false and/or misleading statements and/or failed to disclose certain facts about our supply chain, inventory, revenue, projections and our relationships with third party distributors and revenue attributable to those distributors. We are vigorously defending against the claims made in these lawsuits; however, the ultimate resolution cannot be predicted, and the claims raised in these lawsuits may result in further legal matters or actions against us, including, but not limited to, government enforcement actions or additional private litigation.

Also, on July 1, 2021, we received a subpoena from the SEC relating to our channel inventory and sales practices prior to mid-2020. We have cooperated in providing documents and information to the SEC and will continue to do so. We have engaged in discussions with the SEC about a possible resolution or settlement of potential disclosure claims. While we have not reached an agreement on a resolution or settlement of the potential disclosure claims, based on the ongoing discussions with the SEC, we have accrued a liability of \$12.5 million as of December 31, 2023. It remains uncertain whether an agreement will be reached and the terms of any such agreement. Management continues to believe its actions were appropriate.

In addition, changes in the interpretations of laws and regulations to which we are subject, or in legal standards in one or more of the jurisdictions in which we operate, could increase our exposure to liability. For example, in the U.S., attempts have been made to allow damages for emotional distress and pain and suffering in connection with the loss of, or injury to, a pet. If such attempts were successful, our exposure with respect to product liability claims could increase materially.

The actual or purported intellectual property rights of third parties may negatively affect our business.

A third party may sue us, or our distributors or licensors, or otherwise make a claim alleging infringement or other violation of such third-party's patents, trademarks, trade dress, copyrights, trade secrets, domain names or other intellectual property rights. If our distributors, licensors or we do not prevail in this type of litigation, we may be required to:

- · pay monetary damages;
- obtain a license in order to continue manufacturing or marketing the affected products, which may not be available on commercially reasonable terms, or at all; and/or
- stop activities, including any commercial activities, relating to the affected products, which could include a recall of the affected products and/or a cessation of sales in the future.

The costs of defending an intellectual property claim could be substantial and could materially adversely affect our business, financial condition and results of operations, even if we successfully defend such claim. Moreover, even if we believe that we do not infringe a validly existing third-party patent, we may choose to license such patent, which would result in associated costs and obligations. We may also incur costs in connection with an obligation to indemnify a distributor, licensor or other third party.

The intellectual property positions of animal health medicines and vaccines businesses frequently involve complex legal and factual questions, and an issued patent does not guarantee us the right to practice the patented technology or develop, manufacture or commercialize the patented product. For example, while we generally enter into proprietary information agreements with our employees and third parties, which assign intellectual property rights to us, these agreements may not be honored or may not effectively assign intellectual property rights to us under the local laws of some countries or jurisdictions. We cannot be certain that a competitor or other third party does not have,

or will not obtain rights to, intellectual property that may prevent us from manufacturing, developing or marketing certain of our products, regardless of whether we believe such intellectual property rights are valid and enforceable or we believe we would otherwise be able to develop a more commercially successful product, which may materially adversely affect our business, financial condition and results of operations.

If our intellectual property rights are challenged or circumvented, competitors may be able to take advantage of our R&D efforts or harm the value of our brands.

Our long-term success depends on our ability to market innovative and competitive products. We rely and expect to continue to rely on a combination of intellectual property, including patent, trademark, trade dress, copyright, trade secret and domain name protection, as well as confidentiality and license agreements with our employees and others, to protect our intellectual property and proprietary rights. If we fail to obtain and maintain adequate intellectual property protection, we may not be able to prevent third parties from using our proprietary technologies or from marketing products that are very similar or identical to ours.

Our currently pending or future patent applications may not result in issued patents, or may not be approved on a timely basis, if at all. Similarly, any term extensions we seek may not be approved on a timely basis, if at all. In addition, our issued patents, or any patents that may be issued in the future, may not contain claims sufficiently broad to protect us against third parties with similar technologies or products or provide us with any competitive advantage, including exclusivity in a particular product area.

The validity and scope of our patent claims also may vary between countries, as individual countries have their own patent laws. For example, some countries only permit the issuance of patents covering a novel chemical compound itself, and its first use, and thus further methods of use for the same compound may not be patentable. The validity, enforceability, scope and effective term of patents can be highly uncertain and often involve complex legal and factual questions and proceedings that vary based on the local law of the relevant jurisdiction. Our ability to enforce our patents also depends on the laws of individual countries and each country's practice with respect to enforcement of intellectual property rights. Patent protection must be obtained on a jurisdiction-by-jurisdiction basis, and we only pursue patent protection in countries where we think it makes commercial sense for the given product. In addition, if we are unable to maintain our existing license agreements or other agreements pursuant to which third parties grant us rights to intellectual property, including because such agreements terminate, our business, financial condition and results of operations could be materially adversely affected.

Patent law reform in the U.S. and other countries may also weaken our ability to enforce our patent rights or make such enforcement financially unattractive. The America Invents Act permits enhanced third-party actions for challenging patents and implements a first-to-invent system. These reforms could result in increased costs to protect our intellectual property or limit our ability to obtain and maintain patent protection for our products in these jurisdictions. Additionally, certain foreign governments have indicated that compulsory licenses to patents may be granted in the case of national emergencies, which could diminish or eliminate sales and profits from those regions and materially adversely affect our financial condition and results of operations.

Our trademarks and brands may provide us with a competitive advantage in the market as they may be known or trusted by consumers. In order to maintain the value of such brands, we must be able to enforce and defend our trademarks. We have pursued, and will continue to pursue, the registration of trademarks and service marks in the U.S. and internationally; however, enforcing rights against those who knowingly or unknowingly dilute or infringe our brands can be difficult. Effective trademark, service mark, trade dress or related protections may not be available in every country in which our products and services are available. Enforcement is especially difficult in first-to-file countries where "trademark squatters" can prevent us from obtaining adequate protections for our brands. There can be no assurance that the steps we have taken and will take to protect our proprietary rights in our brands and trademarks will be adequate or that third parties will not infringe, dilute or misappropriate our brands, trademarks, trade dress or other similar proprietary rights.

Many of our products are based on or incorporate proprietary information. We actively seek to protect our proprietary information, including our trade secrets and proprietary know-how, by generally requiring our employees, consultants, other advisors and other third parties to execute proprietary information and confidentiality agreements upon the commencement of their employment, engagement or other relationship. Despite these efforts and precautions, we may be unable to prevent a third party from copying or otherwise obtaining and using our trade secrets or our other intellectual property without authorization, and legal remedies may not adequately compensate us for the damages

caused by such unauthorized use. Further, others may independently and lawfully develop substantially similar or identical products that circumvent our intellectual property by means of alternative designs or processes or otherwise.

The illegal distribution and sale by third parties of counterfeit or illegally compounded versions of our products or of stolen, diverted or relabeled products could have a negative impact on our reputation and business.

Third parties may illegally distribute and sell counterfeit or illegally compounded versions of our products that do not meet the exacting standards of our development, manufacturing and distribution processes. Counterfeit or illegally compounded medicines pose a significant risk to animal health and safety because of the conditions under which they are manufactured and the lack of regulation of their contents. Counterfeit or illegally compounded products are frequently unsafe or ineffective and can be potentially life-threatening to animals. Our reputation and business could suffer harm as a result of counterfeit or illegally compounded products which are alleged to be equivalent and/or which are sold under our brand name(s). In addition, products stolen or unlawfully diverted from inventory, warehouses, plants or while in transit; products which are not properly stored or which have an expired shelf life; and/or products which have been repackaged or relabeled and sold through unauthorized channels, could adversely impact animal health and safety, our reputation and our business. In recent years we have expanded our business more into direct to retailer and e-commerce channels, which may increase the risk of counterfeiting of our products. Public loss of confidence in the integrity of vaccines and/or pharmaceutical products as a result of counterfeiting, illegal compounding or theft could have a material adverse effect on our business, financial condition and results of operations.

The misuse or off-label use of our products may harm our reputation or result in financial or other damages.

Our products have been approved for use under specific circumstances for the treatment of certain diseases and conditions in specific species. There may be increased risk of product liability claims if veterinarians, farm animal producers, pet owners or others attempt to use our products off-label, including the use of our products in species (including humans) for which they have not been approved. Furthermore, the use of our products for indications other than those for which our products have been approved may not be effective, which could harm our reputation and lead to an increased risk of litigation. If we are deemed by a governmental or regulatory agency to have engaged in the promotion of any of our products for off-label use, such agency could request that we modify our training or promotional materials and practices, and we could be subject to significant fines and penalties. The imposition of these sanctions could also affect our reputation and position within the industry. Any of these events could materially adversely affect our business, financial condition and results of operations.

Unanticipated safety, quality or efficacy concerns or identified concerns associated with our products may harm our reputation and have an adverse impact on our performance.

Unanticipated safety, quality or efficacy concerns arise from time to time with respect to animal health products, whether or not scientifically or clinically supported, potentially leading to product recalls, withdrawals or suspended or declining sales, as well as product liability and other claims. Regulatory actions based on these types of safety, quality or efficacy concerns could impact all, or a significant portion, of a product's sales.

For example, lawsuits seeking actual damages, injunctive relief and/or restitution for allegedly deceptive marketing have been filed against us arising out of the use of *Seresto*, a non-prescription flea and tick collar for cats and dogs, based on media reports alleging that the collar has caused injury and death to pets. Since that time, on July 13, 2023, the EPA announced the completion of its comprehensive, multi-year review of the *Seresto* flea and tick collar and confirmed the continued registration of the collar. However, if any similar claims with respect to our products are resolved adversely to us, or if a regulatory agency determines that a recall or cancellation of registrations of any of our products is necessary, such action could cause harm to our reputation, reduce our product sales, result in monetary penalties and other costly remedies against us, and could therefore have a material adverse effect on our business, financial condition and results of operations.

In addition, we depend on positive perceptions of the safety, quality and efficacy of our products, and animal health products in general, by food producers, veterinarians and pet owners. Any concern as to the safety, quality or efficacy of our products, whether actual or perceived, may harm our reputation. These concerns, including those relating to *Seresto*, and the related harm to our reputation could materially adversely affect our business, financial condition and results of operations, regardless of whether such reports are accurate.

Our insurance policies may be insufficient to protect against all potential hazards or litigation claims.

We rely on a combination of insurance and self-insurance, and changes in predictions, assumptions and interpretations could affect our operations. Insurance policies include limits and may be insufficient to protect against all potential hazards and risks or litigation claims. Our product liability insurance policy may not fully cover our potential liabilities. In addition, we may determine that we should increase our coverage, and this insurance may be prohibitively expensive to us or our collaborators or licensees and may not fully cover our potential liabilities.

Breaches of our information technology systems or improper disclosure of confidential company or personal data, or a failure to comply with privacy laws, regulations and our contractual obligations concerning data privacy or the security of certain information, could have a material adverse effect on our reputation and operations.

We rely on information technology systems to process, transmit and store electronic information in our day-to-day operations, including customer, employee and company data. The secure processing, maintenance and transmission of this information is critical to our operations. In addition, the legal environment surrounding information security, storage, use, processing, transmission, maintenance, disclosure and privacy is demanding with the frequent imposition of new and changing regulatory requirements.

We store, process, and transmit certain information with third parties, including the use of cloud technologies. Our information systems and those of our third-party vendors are subjected to computer viruses or other malicious codes, unauthorized access attempts, phishing and other cyber-attacks and are also vulnerable to an increasing threat of continually evolving cybersecurity risks and external hazards, as well as improper or inadvertent staff behavior. Any potential cyber breach could result in the unauthorized access, public disclosure, loss or theft of confidential data, or unauthorized access to, disruption of or interference with our operations that rely on information systems. Such breach can also have negative consequences, such as increased costs for security measures or remediation costs, and diversion of management attention (see Item 1C. Cybersecurity for further discussion of our risk management, strategy and governance policies and procedures related to cybersecurity).

We are increasingly dependent on our information technology systems as many of our office workers who work partially or primarily remotely, rely on third-party applications to perform their job duties and are processing information through our network via their home networks, which may be less secure. As such, our ability to effectively manage our business depends on the security, reliability and adequacy of our technology systems and data and the ability of our employees to follow our cybersecurity policies and protocols.

Any actual or perceived access, disclosure or other loss of information or any significant breakdown, intrusion, interruption, cyber-attack or corruption of customer, employee or company data, or our failure to comply with federal, state, local and foreign privacy laws or contractual obligations with customers, vendors, payment processors and other third parties, could result in legal claims or proceedings, liability under laws or contracts that protect the privacy of personal information, regulatory penalties, disruption of our operations and damage to our reputation, all of which could materially adversely affect our business, financial condition and results of operations. While we will continue to implement additional protective measures to reduce the risk of and detect cyber-incidents, cyber-attacks are becoming more sophisticated and frequent, and the techniques used in such attacks change rapidly. Our protective measures may not protect us against attacks and such attacks could have a significant impact on our business and reputation. The costs imposed on us as a result of a cyber-attack or network disruption could be significant. Among others, such costs could include increased expenditures on cybersecurity measures, litigation, regulatory investigations, fines and sanctions, lost revenues from business interruption, damage to our reputation and public perception and significant remediation costs. As a result, a cyber-attack or network disruption could have a material adverse effect on our business, financial condition and results of operations.

We are subject to complex EHS laws and regulations.

We are subject to various federal, state, local and foreign EHS laws and regulations. These laws and regulations govern matters such as the emission and discharge of hazardous materials into the ground, air or water; the generation, use, storage, handling, treatment, packaging, transportation, exposure to and disposal of hazardous and biological materials, including recordkeeping, reporting and registration requirements; and the health and safety of our employees. Due to our operations, these laws and regulations also require us to obtain, and comply with, permits, registrations or other authorizations issued by governmental authorities. These authorities can modify or revoke our permits, registrations or other authorizations and can enforce compliance through fines and injunctions.

Given the nature of our business, we have incurred, are currently incurring and may in the future incur liabilities for the investigation and remediation of contaminated land under the U.S. Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, or under other federal, state, local and foreign environmental cleanup laws, with respect to our current or former sites, adjacent or nearby third-party sites or offsite disposal locations. We could be subject to liability for the investigation and remediation of legacy environmental contamination caused by historical industrial activity at sites we own or on which we operate. The costs associated with future cleanup activities that we may be required to conduct or finance could be material. Additionally, we may become liable to third parties for damages, including for personal injury, property damage and natural resource damages, resulting from the disposal or release of hazardous materials into the environment. Such liability could materially adversely affect our business, financial condition and results of operations.

Furthermore, regulatory agencies are showing increasing concern over the impact of animal health products and farm animal operations on the environment. This increased regulatory scrutiny has in the past and may in the future necessitate that additional time and resources be spent to address these concerns in both new and existing products. Additionally, there has been an increased focus from our shareholders, as well as regulatory authorities both within the U.S. and internationally, on ESG practices and disclosures. If we fail or are perceived to fail, in any number of ESG matters, such as environmental stewardship, IDEA, good corporate governance, workplace conduct and support for local communities, or to effectively respond to changes in, or new, legal, regulatory or reporting requirements concerning climate change or other sustainability concerns, we may be subject to regulatory fines and penalties, and our reputation may suffer.

Our failure to comply with the EHS laws and regulations to which we are subject, including any permits issued thereunder, may result in environmental remediation costs, loss of permits, fines, penalties or other adverse governmental or private actions, including regulatory or judicial orders enjoining or curtailing operations or requiring corrective measures, installation of pollution control equipment or remedial measures. We could also be held liable for any and all consequences arising out of human exposure to hazardous materials, environmental damage or significant environmental, health and safety issues that might arise at a manufacturing or R&D facility. Environmental laws and regulations are complex, change frequently, have tended to become more stringent and stringently enforced over time and may be subject to new interpretation. It is possible that our costs of complying with current and future EHS laws, and our liabilities arising from past or future releases of, or exposure to, hazardous materials could materially adversely affect our business, financial condition and results of operations.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 1C. CYBERSECURITY

Our business relies on information technology (IT) systems to process, transmit and store electronic information, including customer, employee and company data. The secure processing, maintenance and transmission of this information, including information housed both within an internal IT system or with a third-party and cloud-based environments, is critical to our operations. Each of the systems utilized in our business operations is subject to continually evolving cybersecurity risks and threats that present a risk to the continuity of our business operations, potential financial losses and damage to our reputation, including a loss of public trust. For more information on potential risks related to cybersecurity threats and incidents, please see "Item 1A. Risk Factors – Breaches of our information technology systems or improper disclosure of confidential company or personal data, or a failure to comply with privacy laws, regulations and our contractual obligations concerning data privacy or the security of certain information, could have a material adverse effect on our reputation and operations."

Risk Management, Strategy and Governance

Given the importance of the integrity and security of the information and data utilized in our day-to-day operations, our processes for assessing, identifying and managing material risks from cybersecurity threats is incorporated into our overall enterprise risk management framework. We evaluate cybersecurity risks on an ongoing basis, and both our executive management and Board of Directors have an overall responsibility for assessing and managing risks from cybersecurity threats. We have established an information security team which is structured into three areas, each with its own teams and leaders who report directly to our Chief Information Security Officer (CISO): 1) Governance, Risk and Compliance; 2) Architecture; and 3) Operations (Detect and Respond). Our information security team is responsible for the design and execution of our cybersecurity risk management and helps executive management and our Board of Directors stay informed about and monitor the prevention, detection, mitigation and remediation of cybersecurity risks and incidents through various means, including but not limited to, briefings with internal security team members, threat intelligence obtained from public and private sources and alerts and reports produced by security tools deployed within our IT environment. Our current CISO has over 16 years of experience in various roles involving information technology governance and compliance, including cybersecurity, engineering and enterprise architecture, while our Chief Information Officer (CIO) has over 25 years of IT and cybersecurity experience. Our information security team includes professionals with relevant industry, educational and cybersecurity experience.

Governance, Risk and Compliance: Our approach to cybersecurity governance, risk and compliance is based on overarching guidelines, standards and best practices developed by the U.S. National Institute of Standards and Technology (NIST), a department of the U.S. Department of Commerce. Our information security governance oversees the process of coordinating the cybersecurity team(s) responsible for the mitigating of business risks posed by IT-related resources. Our governance framework of authority and accountability ensures prioritized initiatives have the required structure, sponsorship and funding to appropriately address the foreseen risks. Risk management includes an assessment of the risks posed to us by an IT solution, including cloud hosted and/or other third-party environments and systems. Our processes also address cybersecurity risks associated with our use of third-party service providers, including those in our supply chain or who have access to our client or employee data on our systems. In addition, cybersecurity considerations affect the selection and oversight of third-party service providers. We perform diligence on third parties, particularly those that have access to our systems, data or facilities that house such systems or data, and continually monitor cybersecurity threat risks identified through such diligence.

Our risk management process assesses both the probable frequency and probable magnitude of future loss based on a variety of potential risks and cyber events. The information security team also periodically engages third-party vendors to assist with our cyber threat detection and response actions, as well as to ensure our processes related to information security and defense against cybersecurity threats are appropriately designed and implemented to best prevent, detect and/or respond to a cyber threat or event.

<u>Architecture</u>: Our information security architecture is focused on designing IT-related solutions that are foundationally secure. Our information security architecture assumes that internal and external threats always exist, and that all networks are inherently hostile. Accordingly, all connections accessing business assets must first be authenticated and authorized. Where viable, IT services are individually secured and monitored at the source, following the principle of least privilege.

Operations (Detect and Respond): In the event of a cybersecurity incident, the Elanco Information Security Incident Response Plan (ISIRP) defines the roles, responsibilities, procedures and reporting processes required to respond effectively to cybersecurity incidents. Responses to information security incidents are led by two teams: 1) the Security Operations Center (SOC) team, which conducts the initial technical triage and analysis, and 2) a cross-functional team of leaders from the IT, Legal, Human Resources and Finance functions (the Cyber Lead team), which is engaged by the CISO on an as needed basis, based on incident severity. The Cyber Lead team is tasked with determining the severity of a cybersecurity incident and bringing together the proper resources to lead the corporate-wide response to such incidents, including engaging the Company's Disclosure Committee, in the event an incident may rise to a level deemed material to us. In the event an incident is escalated by the Cyber Lead team, the Disclosure Committee, led by our Chief Financial Officer and General Counsel, would evaluate all estimable quantitative and qualitative factors, to determine if a Current Report on Form 8-K would be required under Item 1.05, "Material Cybersecurity Incidents".

Management's Responsibilities

Management is responsible for executing the Cybersecurity Risk Management, Strategy and Governance policies outlined above. This is done, in part, by both establishing systems, processes and controls to minimize the risk of a high severity cybersecurity incident as much as possible, as well as ensuring there is a formal process designed to identify, investigate and appropriately respond to potential cybersecurity incidents. As noted, we have established our ISIRP as a response tool in the event of a cybersecurity incident. The ISIRP documents the actionable steps the SOC team, information security leadership and cross-functional stakeholders and partners take when a cybersecurity incident is identified. The ISIRP covers the preparation, detection and analysis, containment, eradication, recovery and post-incident activities required to effectively respond to an incident.

Once a cybersecurity incident has been identified, the SOC team performs an initial investigation to determine if the incident is deemed high or low severity, based upon the business and operational impacts. Any incident deemed high severity would result in notification by the CISO to the Cyber Lead team to determine the appropriate actions to be taken. This determination would be made by the Cyber Lead team based on both qualitative and quantitative factors regarding the extent and magnitude of the incident. If the incident is then escalated to the Disclosure Committee and determined to be material, a disclosure via a Current Report on Form 8-K would be made within four business days of the incident being identified as such. Through December 31, 2023, there have been no cybersecurity incidents deemed to have had a material impact on our results of operations or financial condition. Our Board of Directors would also be notified of any high severity incidents that are determined to be material, concurrently with the notification to the Disclosure Committee, and would be kept apprised of actions taken in response to such incidents.

Our information security team is also responsible for cybersecurity awareness and education across the company, including our Board of Directors. Awareness empowers users, including our employees and contractors, to be mindful of cybersecurity in day-to-day situations. Our cybersecurity education practices help ensure specific users have the appropriate security skills and competencies to help prevent and/or detect and respond to a cyber threat. Formal training is delivered and measured throughout our organization on a routine, ongoing basis, and dedicated training is delivered to all new employees and contractors through our onboarding process. Targeted and company-wide communications, as well as simulated phishing campaigns and tabletop exercises are also routinely executed to promote ongoing awareness, preparation and education about cyber threats.

Board of Directors' Responsibilities

Our Board of Directors actively oversees our cybersecurity management processes, including appropriate risk mitigation strategies, systems, processes and controls. Our CISO meets with the Audit Committee of the Board of Directors and separately with the full Board of Directors at least twice annually to discuss the status of policies and procedures related to information security. Discussions with the Audit Committee and the full Board of Directors focus on any notable incidents and incident responses, updates on known or perceived cyber threats and the information security team's recent actions taken in response to such incidents and threats. In addition, our Board of Directors and the Audit Committee also receive updates from the CISO and/or our CIO on an ad-hoc or as-requested basis. Any incidents or changes to our process of identifying and responding to potential cybersecurity incidents would be included within these materials. According to our ISIRP, our Board of Directors would also be notified of any high severity incidents deemed material, simultaneously with the notification to the Disclosure Committee, and would be kept apprised of actions taken in response to such incidents.

ITEM 2. PROPERTIES

The address of our global headquarters is currently 2500 Innovation Way, Greenfield, IN 46140. We plan to relocate our global headquarters to a new office building in Indianapolis, Indiana, with occupancy expected in 2025.

Our global manufacturing network is comprised of 18 manufacturing sites. Our largest manufacturing site is located in Clinton, Indiana. Our global manufacturing network is also supplemented by approximately 140 CMOs.

We have R&D operations co-located with certain of our manufacturing sites to facilitate the efficient transfer of production processes from our laboratories to manufacturing. In addition, we maintain R&D operations at non-manufacturing locations in the U.S., U.K., Germany, Australia, Brazil, China, India and Switzerland. Our R&D headquarters is currently located in Greenfield, Indiana and will relocate to Indianapolis, Indiana when we relocate our global headquarters, expected in 2025.

We own or lease various additional properties for other business purposes, including office space, warehouses and logistics centers. We believe our existing properties, as supplemented by CMOs, are adequate for our current requirements and our operations in the near future.

ITEM 3. LEGAL PROCEEDINGS

Information pertaining to certain legal proceedings is provided in "Item 8. Financial Statements and Supplementary Data — Note 16: Commitments and Contingencies" and is incorporated by reference herein.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

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

Market Information

On September 20, 2018, our common stock began trading on the New York Stock Exchange under the symbol "ELAN." On January 30, 2020, our tangible equity units (TEUs) began trading on the New York Stock Exchange under the symbol "ELAT." The TEUs were delisted from trading when they converted to shares of our common stock as scheduled on February 1, 2023.

Holders

There were 210 holders of record of our common stock as of February 21, 2024. This does not include the number of shareholders who hold shares of our common stock through banks, brokers or other financial institutions.

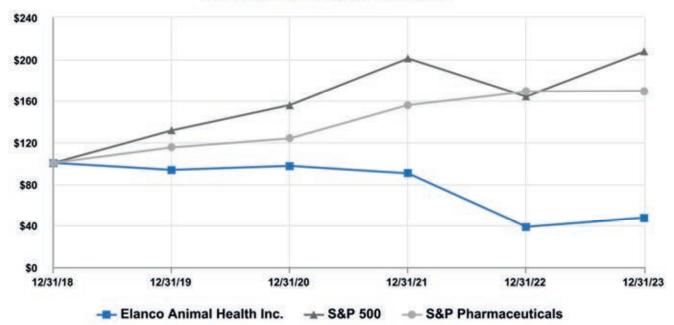
Dividend Policy

We do not anticipate paying dividends on our common stock in the foreseeable future; however, we may change our dividend policy at any time.

Performance Graph

The following graph compares the return on Elanco's common stock with that of the S&P 500 Stock Index and the S&P 500 Pharmaceuticals Index over the five-year period ended on December 31, 2023. The graph assumes that \$100 was invested on December 31, 2018, in Elanco common stock, the S&P 500 Index and the S&P 500 Pharmaceuticals Index. The graph measures total shareholder return, which takes into account both stock price and dividends. It assumes that dividends paid by a company are reinvested in that company's stock.

Comparison of Cumulative Total Return



	December 31, 2018	December 31, 2019	December 31, 2020	December 31, 2021	December 31, 2022	December 31, 2023
Elanco Animal Health Inc.	\$ 100.00	\$ 93.40	\$ 97.27	\$ 90.01	\$ 38.76	\$ 47.26
S&P 500 Index	100.00	131.47	155.65	200.29	163.98	207.04
S&P 500 Pharmaceuticals Index	100.00	115.09	123.75	155.62	168.77	169.33

ITEM 6. (RESERVED)

Not applicable.

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

Introduction

Management's discussion and analysis of financial condition and results of operations (MD&A) is intended to assist the reader in understanding and assessing significant changes and trends related to our financial position and results of operations. This discussion and analysis should be read in conjunction with the consolidated financial statements and accompanying footnotes in Item 8 of Part II of this Form 10-K. Certain statements in this Item 7 of Part II of this Form 10-K constitute forward-looking statements. Various risks and uncertainties, including those discussed in "Forward-Looking Statements" and Item 1A. "Risk Factors," may cause our actual results, financial position and cash generated from operations to differ materially from these forward-looking statements.

Business Overview

Elanco is a global leader in animal health, dedicated to innovating and delivering products and services to prevent and treat disease in farm animals and pets. Our diverse, durable product portfolio is sold in more than 90 countries and serves animals across many species, primarily: dogs and cats (collectively, pet health) and cattle, poultry, swine, sheep and aqua (collectively, farm animal). With a heritage dating back to 1954, we consistently innovate to improve the health of animals and to benefit our customers while fostering an inclusive, cause-driven culture for our employees. We operate our business in a single segment, directed at advancing the well-being of animals, people and the planet, enabling us to realize our vision of Food and Companionship Enriching Life.

Our diverse product portfolio of approximately 200 brands helps make us a trusted partner to pet owners, veterinarians and farm animal producers. Our products are generally sold worldwide to third-party distributors and independent retailers, and directly to farm animal producers and veterinarians. In recent years, we have expanded our omnichannel presence in both the veterinary clinic and in retail markets, including e-commerce.

Product Development and Regulatory Update

A key element of our targeted value creation strategy is to drive revenue growth through portfolio development and product innovation. We continue to pursue the development of new chemical and biological molecules, as well as additional registrations and indications for current products. Our future growth and success depend on both our pipeline of new products, including new products we develop internally, develop with partners or that we are able to obtain through licenses or acquisitions, and the life cycle management of our existing products. We believe we are an industry leader in animal health R&D, with a track record of successful product innovation, business development and commercialization. For example, in 2023 we received conditional approval from the USDA and launched our canine parvovirus monoclonal antibody treatment in the U.S. This product is the first and only approved therapeutic solution to treat canine parvovirus, one of the most contagious and deadly viruses to dogs, if not treated.

Seresto: On July 13, 2023, the EPA announced its completion of a comprehensive, multi-year review, with support from the FDA, of the Seresto flea and tick collar and confirmed the continued registration of the collar. As part of the EPA's scientific review process, the agency analyzed incident data including third-party assessments and compared data to other EPA-registered pet products. Based on comprehensive data from the study, the EPA concluded that Seresto continues to meet all the EPA's standards for registration under FIFRA, which ensures that products do not pose an unreasonable risk of harm. We believe the EPA's conclusions align with those of authorities worldwide, with Seresto being approved for use in more than 80 countries and supported by veterinary professionals around the globe. The robust scientific evidence continues to support Seresto's safe use.

Other Key Trends and Factors Affecting Our Results of Operations

Acquisition and Integration Activity: In 2023 we acquired certain U.S. marketed products, pipeline products, inventory and an assembled workforce from NutriQuest, LLC (NutriQuest) and certain assets including inventory and distribution rights for certain marketed products from NutriQuest Nutricao Animal Ltda (NutriQuest Brazil). Additionally, as previously disclosed, in April 2023 we successfully completed the integration of the Bayer Animal Health business into our ERP system. We incurred costs totaling \$93 million in 2023 related to integration activities, including the build

out of processes and systems to support our global organization. We anticipate some additional costs through early 2024 as we finalize these integration activities.

Macroeconomic Factors: Our operations are exposed to and are impacted by various global macroeconomic factors. We face continuing market and operating challenges across the globe due to, among other factors, the Russia-Ukraine conflict, conditions related to the COVID-19 pandemic, supply chain disruption, higher interest rates, foreign currency exchange rate volatility and inflationary pressures. Continued evolution of these conditions has led to economic slowdowns in certain countries and/or regions and volatility in consumer behavior. We anticipate global macroeconomic pressures to continue in 2024.

Russia-Ukraine Conflict: As a global animal health leader, we have an obligation to support the health of animals and people. At the center of that work is ensuring access and availability of food and avoiding the spread of disease. At this time, we are limiting our business in Russia to only the essential products that support these needs, while complying with all imposed sanctions. We do not currently manufacture products in Russia, but we continue to support the health of animals and people in the country. We have entered into an agreement pursuant to which we will supply raw material inventories to an entity in Russia that will manufacture its own products, which we will then distribute, because of new laws requiring products sold in Russia to be produced there as well. We do not conduct business with the Russian government. During 2023, revenue from Russian and Ukrainian customers represented approximately 1% of our consolidated revenue. Assets held in Russia as of December 31, 2023, represented less than 1% of our consolidated assets.

Seasonality: While many of our products are sold consistently throughout the year, we do experience seasonality in our pet health business due to increased demand for certain parasiticide product offerings in the first half of the year. For example, based upon historical results, approximately 75% and 60% of total annual revenue contributed by our higher-margin parasiticide products *Seresto* and *Advantage Family*, respectively, typically occurs during the first half of the year, which is reflective of the flea and tick season in the Northern Hemisphere.

Goodwill impairment: Given the sharp increase in long-term treasury rates in the third quarter of 2023, we assessed our long-lived assets for impairment, concluding that qualitative impairment indicators (i.e., a triggering event) existed as of September 30, 2023, for certain indefinite-lived assets, including goodwill. Accordingly, we performed an interim quantitative goodwill impairment test. Significant management judgment was required in estimating our reporting unit's fair value and in the creation of forecasts of future operating results that were used in the discounted cash flow method of the income approach valuation. These included, but were not limited to, estimates and assumptions regarding our future cash flows, revenue growth and other profitability measures such as gross margin and EBITDA margin, and the determination of an appropriate discount rate. We made these significant judgments based on our historical experience, relevant market size, historical pricing and expected industry trends.

Due principally to the sharp increase in long-term treasury rates, which led to an increased discount rate assumption relative to prior assessments, our quantitative test resulted in a \$1,042 million pre-tax impairment charge. While we believe the estimates and assumptions underlying our goodwill impairment test were reasonable in view of all available information, and while no further impairment charges were recorded during the fourth quarter of 2023, future changes in our discount rate assumption, whether driven by increases in long-term treasury rates or other factors, or future changes in other significant assumptions or the use of alternative estimates and assumptions, could have a significant impact on our reporting unit's estimated fair value, exposing us to further goodwill impairment losses. For additional information regarding this goodwill impairment, see Note 11. Goodwill and Intangibles to the consolidated financial statements.

Subsequent Events

Announced sale of aqua business: On February 5, 2024, we entered into an agreement to sell our aqua business to a subsidiary of Merck Animal Health for approximately \$1.3 billion in cash, payable at closing, which we currently anticipate to occur around mid-year 2024. Our aqua business includes products across both warm-water and coldwater species and generated \$175 million in revenue during each of the years ended December 31, 2023 and 2022. Upon closing of this sale, we intend to use the after-tax cash proceeds to accelerate our debt paydown efforts, creating balance sheet flexibility and lower future interest expense, which will allow us to prioritize our investments in larger markets with greater long-term earnings potential. The closing of the agreement is subject to customary closing conditions, including the receipt of applicable antitrust approvals. If the agreement is terminated due to failure to obtain required antitrust approvals, subject to certain conditions, Merck Animal Health will be required to pay us a termination

fee of \$55 million in cash. See Note 19. Subsequent Events to the consolidated financial statements for further information.

Approved restructuring plan: In February 2024 our Board of Directors authorized a restructuring plan (the restructuring plan) to improve operational efficiencies and better align our organizational structure with current business needs, top strategic priorities and key growth opportunities. Specifically, the restructuring plan is intended to reallocate resources by shifting international resources from farm animal to pet health as we plan for the global launches of certain potential blockbuster products currently under regulatory review. Further, the restructuring plan is expected to result in changes in how we operate in and sell into the Argentina market, among others, which we anticipate will reduce our foreign currency exposure.

The restructuring plan will result in the elimination of approximately 420 personnel across our global organization. Expected pre-tax charges associated with the restructuring plan total \$50 to \$55 million in 2024, including \$40 to \$45 million of cash-based severance costs, the majority of which will be paid in 2024. The restructuring plan is expected to result in annualized net savings of \$30 to \$35 million. See Note 19. Subsequent Events to the consolidated financial statements for further information.

Results of Operations

The following discussion and analysis of the consolidated statements of operations should be read along with the consolidated financial statements and the notes thereto included in *Item 8. Financial Statements and Supplementary Data*. For results of operations discussions related to years ended December 31, 2022 and 2021, refer to Item 7 of Part II in our <u>Annual Report on Form 10-K for the year ended December 31, 2022</u>, filed with the SEC on March 1, 2023. Our results of operations for the periods presented below may not be comparable with prior periods or with our results of operations in the future due to many factors, including but not limited to the factors identified in "Key Trends and Factors Affecting Our Results of Operations" above.

		Year Ended December 31,						
(Dollars in millions)		2023		2023 2022		2022	% Change	
Revenue	\$	\$ 4,417		\$ 4,417		4,411	—%	
Costs, expenses and other:								
Cost of sales		1,931		1,913	1%			
% of revenue		44%		43%				
Research and development		327		321	2%			
% of revenue		7 %		7%				
Marketing, selling and administrative		1,285		1,265	2%			
% of revenue		29 %		29%				
Amortization of intangible assets		548		528	4%			
% of revenue		12 %		12%				
Asset impairment, restructuring and other special charges		127		183	(31)%			
Goodwill impairment		1,042		_	NM			
Interest expense, net of capitalized interest		277		241	15%			
Other expense, net		75		32	134%			
Loss before income taxes		(1,195)		(72)	NM			
% of revenue		(27)%		(2)%				
Income tax expense		36		6	NM			
Net loss	\$	(1,231)	\$	(78)	NM			

Certain amounts and percentages may reflect rounding adjustments.

NM - Not meaningful

Revenue

As a global company, our products are sold in more than 90 countries, and as a result significant portions of our revenue and expenses are recorded in currencies other than the U.S. dollar. As a result, our revenue is influenced by changes in foreign currency exchange rates. For the years ended December 31, 2023 and 2022, approximately 51% of our revenue was denominated in foreign currencies. Foreign currency movements decreased revenue by 1% and 4% for the years ended December 31, 2023 and 2022, respectively, compared to the prior years.

Further, increases or decreases in inventory levels in our distribution channels can positively or negatively impact our revenue results, leading to periodic variations in revenue. This can be a result of various factors, such as end customer demand, new customer contracts, heightened and generic competition, the need for certain inventory levels, our ability to renew distribution contracts with expected terms, our ability to implement commercial strategies, regulatory restrictions, unexpected customer behavior, proactive measures taken by us in response to shifting market dynamics, payment terms we extend, which are subject to internal policies, blackout shipping periods due to system downtime, implementations and integrations and procedures and environmental factors beyond our control.

On a global basis, our revenue by product category for the years ended December 31 is summarized as follows:

	Rev	renue	% of Total	Revenue	Inc	rease (Decrea	se)
(Dollars in millions)	2023	2022	2023	2022	\$ Change	% Change	CC ⁽¹⁾
Pet Health	\$ 2,104	\$ 2,138	48 %	48 %	\$ (34)	(2)%	(1)%
Farm Animal	2,271	2,219	51 %	50 %	52	2%	4%
Subtotal	4,375	4,357	99 %	99 %	18	—%	2%
Contract Manufacturing (2)	42	54	1 %	1 %	(12)	(22)%	(21)%
Total	\$ 4,417	\$ 4,411	100 %	100 %	\$ 6	—%	1%

Note: Numbers may not add due to rounding

- (1) Constant Currency (CC), a non-GAAP measure, is defined as revenue growth excluding the impact of foreign exchange rates. The calculation assumes the same foreign currency exchange rates that were in effect for the comparable prior year were used in translation of the current period results. We believe this metric provides a useful comparison to previous periods.
- (2) Represents revenue from arrangements in which we manufacture products on behalf of a third-party.

On a global basis, the effect of price, foreign currency exchange rates and volumes on changes in revenue for the year ended December 31, 2023, as compared to the prior year, was as follows:

(Dollars in millions)	Re	evenue	Price	FX Rate	Volume	Total	CC
Pet Health	\$	2,104	4%	(1)%	(5)%	(2)%	(1)%
Farm Animal		2,271	4%	(2)%	—%	2%	4%
Subtotal		4,375	4%	(1)%	(2)%	—%	2%
Contract Manufacturing		42	—%	(1)%	(21)%	(22)%	(21)%
Total	\$	4,417	4%	(1)%	(3)%	—%	1%

Note: Numbers may not add due to rounding

Pet health revenue decreased \$34 million, or 2%, driven by a decrease in volume and an unfavorable impact from foreign exchange rates, partially offset by an increase in price. On a constant currency basis, the decrease of 1% was primarily attributable to declines in demand for retail parasiticide products in Spain and continued competitive pressure on certain products in the U.S. veterinary channel. These factors were partially offset by increased pricing, higher demand for over-the-counter products in the U.S. and increased revenue from new products.

Farm animal revenue increased \$52 million, or 2%, driven by an increase in price, which was partially offset by an unfavorable impact from foreign exchange rates. On a constant currency basis, the increase of 4% was primarily attributable to pricing increases, as volumes were flat year over year. Revenue from new products, led by *Experior*, revenue from our acquisitions of NutriQuest and NutriQuest Brazil and strength in poultry globally were offset by reduced sales of cattle implants due to U.S. regulatory changes, a less favorable environment for sheep due to weather conditions and generic competition.

Cost of Sales

	 Year Ended December 31,						
(Dollars in millions)	2023		2022	% Change			
Cost of sales	\$ 1,931	\$	1,913	1 %			
% of revenue	44 %		43 %				

Cost of sales increased \$18 million in 2023 as compared to 2022, and cost of sales as a percentage of revenue increased from 43% to 44% year-over-year, reflecting the impact of inflation and planned reduced throughput at certain manufacturing sites in support of efforts to reduce inventory balances on-hand and improve cash conversion.

Research and Development

	Year Ended December 31,						
(Dollars in millions)		2023		2022	% Change		
Research and development	\$	327	\$	321	2 %		
% of revenue		7 %	D	7 %			

R&D expenses increased \$6 million, or 2%, in 2023 compared to 2022, primarily driven by higher employee-related expenses and project costs.

Marketing, Selling and Administrative

	Ye	Year Ended December 31,						
(Dollars in millions)	2023		2022	% Change				
Marketing, selling and administrative	\$ 1,285	\$	1,265	2 %				
% of revenue	29	%	29 %					

Marketing, selling and administrative expenses increased \$20 million, or 2%, in 2023 compared to 2022, primarily driven by increases in marketing and promotional spend relating to our U.S. Pet Health business and employee-related expenses.

Amortization of Intangible Assets

	Year Ended December 31,						
(Dollars in millions)		2023		2022	% Change		
Amortization of intangible assets	\$	548	\$	528	4 %		

Amortization of intangible assets increased \$20 million in 2023 compared to 2022, due to the addition of amortization of intangible assets recorded from our acquisitions of certain assets of NutriQuest and NutriQuest Brazil in 2023, as well as the impact of foreign currency exchange rates.

Asset Impairment, Restructuring and Other Special Charges

	Year Ended December 31,						
(Dollars in millions)	2	2023		2022	% Change		
Asset impairment, restructuring and other special charges	\$	127	\$	183	(31)%		

Asset impairment, restructuring and other special charges decreased \$56 million in 2023 compared to 2022, primarily due to lower impairment charges and costs associated with the implementation of new systems, programs and processes resulting from the integration of Bayer Animal Health. For additional information regarding our asset impairment, restructuring and other special charges, see Note 5. Asset Impairment, Restructuring and Other Special Charges to the consolidated financial statements.

Goodwill Impairment

	 Year Ended December 31,						
(Dollars in millions)	2023		2022	% Change			
Goodwill impairment	\$ \$ 1,042		_	NM			

As discussed above, due principally to the sharp increase in long-term treasury rates in the third quarter of 2023, which we considered a triggering event, we performed a quantitative goodwill impairment test, which resulted in a \$1,042 million pre-tax impairment charge. For additional information, see Note 11. Goodwill and Intangibles to the consolidated financial statements.

Interest Expense, Net of Capitalized Interest

		Year	r 31,	
(Dollars in millions)	2	2023	2022	% Change
Interest expense, net of capitalized interest	\$	277	\$ 241	15 %

Interest expense, net of capitalized interest increased \$36 million in 2023 compared to 2022, primarily due to higher interest rates on our outstanding variable-rate debt and rate increases on our Senior Notes driven by credit downgrades. Interest expense, net of capitalized interest in 2022 included \$20 million of debt extinguishment charges, which did not recur in 2023.

Other Expense, Net

	Year Ended December 31,							
(Dollars in millions)		023		2022	% Change			
Other expense, net	\$	75	\$	32	134 %			

Other expense, net increased \$43 million in 2023, as compared to 2022, due primarily to settlement provisions recorded in 2023 of \$15 million related to the *Seresto* class action lawsuits and \$12.5 million for a possible resolution or settlement with the SEC related to potential disclosure claims (see Note 16. Commitments and Contingencies to the consolidated financial statements for further information). Foreign currency exchange losses were also higher in 2023, as we incurred losses of \$50 million, compared to foreign currency exchange losses of \$38 million in 2022. Foreign currency losses in 2023 included \$40 million of transaction losses, of which \$25 million related to our affiliate in Argentina, and devaluation losses of \$10 million related to the hyperinflationary environments in Turkey and Argentina.

Income Tax Expense

	 Year Ended December 31,					
(Dollars in millions)	2023	2022	% Change			
Income tax expense	36	6	NM			
Effective tax rate	(3)%	(8)%				

Income tax expense was \$36 million in 2023 compared to \$6 million in 2022, and the effective tax rate was (3)% in 2023, compared to (8)% in 2022. The negative effective tax rate in 2023 differed from the statutory income tax rate primarily due to the recognition of the aforementioned goodwill impairment charge that was non-deductible for income tax purposes in most of the impacted jurisdictions and an increase in our valuation allowance during the year, primarily attributable to the likelihood of not realizing the benefit of U.S. federal and state deferred tax assets due to pre-tax losses.

Income tax expense for the year ended December 31, 2022, included a \$17 million income tax benefit reclassified from accumulated other comprehensive loss due to the termination of interest rate swaps and a \$16 million Brazil income tax refund claim resulting from a Brazil Supreme Court decision rendered in 2022 that determined certain Brazil state value-added tax (VAT) incentives were not subject to federal tax. For additional information, see Note 15. Income Taxes to the consolidated financial statements.

Liquidity and Capital Resources

Our primary sources of liquidity are cash on hand, cash flows from operations and funds available under our credit facilities. As a significant portion of our business is conducted internationally, we hold a significant portion of cash outside the U.S. We monitor and adjust the amount of foreign cash based on projected cash flow requirements. Our ability to use foreign cash to fund cash flow requirements in the U.S. may be impacted by local regulations and, to a lesser extent, the income taxes associated with transferring cash to the U.S. We intend to indefinitely reinvest substantially all foreign earnings for continued use in our foreign operations. As our business evolves, we may change that strategy, particularly to the extent we identify tax efficient reinvestment alternatives for our foreign earnings or change our cash management strategy.

We believe our primary sources of liquidity are sufficient to fund our short-term and long-term existing and planned capital requirements, which include working capital obligations, funding existing marketed and pipeline products, capital expenditures, business development in our targeted areas, short-term and long-term debt obligations, such as principal and interest payments, as well as interest rate swaps, operating lease payments, purchase obligations and costs associated with business integrations. As of December 31, 2023, we had cash and cash equivalents of \$352 million and unused borrowing capacity on our Revolving Credit Facility of approximately \$550 million, of which an incremental \$50 million was drawn in February 2024. In addition, we have the ability to access capital markets to obtain debt financing for longer-term funding, if required. Further, we believe we have sufficient cash flow and liquidity to remain in compliance with our debt covenants.

Our ability to meet future funding requirements may be impacted by macroeconomic, business and financial volatility. As market conditions change, we will continue to monitor our liquidity position. However, a challenging economic environment or an economic downturn may impact our liquidity or ability to obtain future financing. See "Item 1A. Risk Factors - We have substantial indebtedness."

Cash Flows

The following table provides a summary of cash flows from operating, investing and financing activities for the periods presented:

(Dollars in millions)	Year Ended December 31,					
Net cash provided by (used for):	- 2	2023 2022			\$ Change	
Operating activities	\$	271	\$	452	\$	(181)
Investing activities		(169)		(179)		10
Financing activities		(83)		(549)		466
Effect of exchange rate changes on cash and cash equivalents		(12)		(17)		5
Net increase (decrease) in cash and cash equivalents	\$	7	\$	(293)	\$	300

Operating Activities

Cash provided by operating activities decreased \$181 million to \$271 million for the year ended December 31, 2023, compared to \$452 million for the year ended December 31, 2022. The decrease in cash from operating activities primarily related to a decrease of \$150 million of proceeds from interest rate swap settlements year-over-year. Additionally, a larger net loss in 2023 (excluding non-cash goodwill and other impairment charges) was partially offset by year-over-year changes in working capital.

Investing Activities

Cash used for investing activities decreased \$10 million to \$169 million for the year ended December 31, 2023, compared to \$179 million for the year ended December 31, 2022. The decrease in cash used for investing activities was primarily driven by a decrease of \$31 million in cash paid for property and equipment and software, which was partially offset by cash paid for the acquisitions of certain assets of NutriQuest and NutriQuest Brazil, totaling \$19 million, during the year ended December 31, 2023.

Financing Activities

Cash used for financing activities was \$83 million for the year ended December 31, 2023, compared to \$549 million for the year ended December 31, 2022. In 2023, cash used to repay long-term borrowings totaled \$402 million and included the repayment in full of our 4.272% Senior Notes due 2023. These long-term debt repayments were partially offset by \$200 million of net borrowings on our Revolving Credit Facility (\$350 million in borrowings, net of \$150 million

in repayments) and \$125 million of net borrowings on our new Securitization Facility (\$250 million in borrowings, net of \$125 million in repayments). Cash used for financing activities during 2022 primarily reflected the tender offer to partially settle the 4.272% Senior Notes due 2023, as well as net repayments on our Revolving Credit Facility and repayment of indebtedness outstanding under our Term Loan B credit facility, partially offset by proceeds from our incremental term facilities issued in 2022. See Note 8. Debt to the consolidated financial statements for further information related to our debt related borrowing and repayment activity.

Capital Expenditures

Capital expenditures, which we define as cash paid for property and equipment and software, were \$140 million during 2023, a decrease of \$31 million compared to 2022. We anticipate capital expenditures in 2024 to be approximately \$180 million to \$200 million.

Description of Indebtedness

For a complete description of our debt and available credit facilities as of December 31, 2023, see Note 8. Debt to the consolidated financial statements.

Contractual Obligations

Our contractual obligations and commitments as of December 31, 2023, are primarily comprised of long-term debt obligations, operating leases and purchase obligations. Our long-term debt obligations are comprised of our expected principal and interest obligations. Purchase obligations consist of open purchase orders as of December 31, 2023, and contractual payment obligations with significant vendors which are noncancelable and not contingent. These obligations are primarily short-term in nature. See Note 13. Leases to the consolidated financial statements for further discussion regarding the contractual obligations related to our new corporate headquarters in Indianapolis, Indiana.

Critical Accounting Policies and Estimates

The preparation of financial statements in accordance with GAAP requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses. These estimates and underlying assumptions can impact all elements of our consolidated financial statements. Certain of our accounting policies are considered critical because these policies are the most important to the fair presentation of our financial statements, including the disclosures thereto, and may require significant, difficult or complex judgments, probabilities and assumptions that we believe to be reasonable, but that can be inherently uncertain. If our estimates and assumptions are not representative of actual outcomes, our results could be materially impacted. We regularly evaluate our estimates and assumptions and adjust them when facts and circumstances indicate the need for change. Such changes generally would be reflected in our consolidated financial statements in the period they are determined. We apply estimation methodologies consistently from year to year. The following is a summary of accounting policies that we consider critical to the consolidated financial statements.

Revenue Recognition

Our gross product revenue is subject to deductions that are generally estimated and recorded in the same period the revenue is recognized and primarily represent revenue incentives (rebates and discounts). For estimates related to our revenue incentives, we use our historical experience with similar incentives programs and current sales data and estimates of inventory levels at our channel distributors to evaluate the impact of such programs on revenue and continually monitor the impact of this experience and adjust as necessary.

Although the amounts recorded for revenue deductions are dependent on estimates and assumptions, historically our adjustments to actual results have not been material. The sensitivity of our estimates can vary by program, type of customer and geographic location. Amounts recorded for revenue deductions can result from a complex series of judgments about future events and uncertainties and can rely on estimates and assumptions. If any of our ratios, factors, assessments, experiences or judgments are not indicative or accurate predictors of our future experience, our results could be materially affected.

See Note 2. Summary of Significant Accounting Policies and Note 3. Revenue to the consolidated financial statements for further discussion regarding our revenue recognition policy and quantitative information regarding our rebate programs, respectively.

Acquisitions and Fair Value

We account for the assets acquired and liabilities assumed in an acquisition based on their respective fair values as of the acquisition date. The excess of the purchase price over the fair value of the acquired net assets, where applicable, is recorded as goodwill.

The judgments made in determining estimated fair values assigned to assets acquired and liabilities assumed in a business combination, as well as estimated asset lives, can materially affect our consolidated results of operations. The fair values of intangible assets are determined using information available at the acquisition date based on expectations and assumptions that are deemed reasonable by management. These fair value estimates require significant judgment with respect to future revenues and EBIT margins, use of working capital, the selection of appropriate discount rates, product mix, income tax rates and other assumptions and estimates. Such estimates and assumptions are determined based upon our business plans and when applicable, market participants' views of us and other similar companies. For significant acquisitions, we normally engage an independent valuation specialist to assist in valuing significant assets and liabilities.

Impairment of Goodwill and Other Indefinite-Lived Assets

Goodwill and other indefinite-lived intangible assets are not amortized but are reviewed at least annually for impairment during the fourth quarter, or more frequently if there is a significant change in events or circumstances that indicate the fair value of our single reporting unit or other indefinite-lived asset(s) is more likely than not less than its carrying amount (i.e., a "triggering event"). When required, a comparison of fair value to the carrying amount of our asset(s) is performed to determine the amount of impairment, if any. We begin by assessing qualitative factors to determine whether it is more likely than not that the fair value of our single reporting unit or other indefinite-lived asset(s) is less than its carrying value. Based on that qualitative assessment, if we conclude it is more likely than not that the fair value is less than its carrying value, we conduct a quantitative impairment test, which involves comparing the estimated fair value of our single reporting unit or indefinite-lived asset(s) to its carrying value. For goodwill impairment tests, we estimate the fair value of our single reporting unit using an income approach. If the carrying value of the reporting unit exceeds its estimated fair value, we recognize an impairment loss for the difference. We also use an income approach when estimating the fair value of our other indefinite-lived intangible assets, which primarily represent IPR&D acquired from prior business combinations.

Given the sharp increase in long-term treasury rates in the third quarter of 2023, we assessed our long-lived assets for impairment, concluding that a triggering event existed as of September 30, 2023, for certain indefinite-lived assets, including goodwill. Accordingly, we performed interim quantitative impairment tests of our goodwill and other indefinitelived assets, which resulted in a \$1,042 million pre-tax goodwill impairment charge. Significant management judgment was required in estimating our reporting unit's fair value and in the creation of forecasts of future operating results that were used in the discounted cash flow method of the income approach valuation. These included, but were not limited to, estimates and assumptions regarding our future cash flows, revenue growth and other profitability measures such as gross margin and EBITDA margin; and the determination of an appropriate discount rate. We made these significant judgments based on our historical experience, relevant market size, historical pricing and expected industry trends. While we believe the estimates and assumptions underlying our goodwill impairment test were reasonable in view of all available information, these assumptions are subject to change in future periods because of, among other things, additional information, financial information based on further historical experience, changes in competition, our investment decisions, volatility in foreign currency exchange rates, results of research and development and changes in macroeconomic conditions, including rising long-term treasury rates and inflation. Future changes in our discount rate assumption, whether driven by increases in long-term treasury rates or other factors, or future changes in any of these other significant assumptions or the use of alternative estimates and assumptions, could have a significant impact on our reporting unit's estimated fair value and may expose us to further goodwill impairment losses. For additional information regarding this goodwill impairment, see Note 11. Goodwill and Intangibles to the consolidated financial statements.

Further, during the years ended December 31, 2023, 2022 and 2021, we recorded asset impairments related to our other indefinite-lived intangibles of \$6 million, \$59 million and \$55 million, respectively. For more information related to our indefinite-lived asset impairment charges, see Note 5. Asset Impairment, Restructuring and Other Special Charges to the consolidated financial statements.

Deferred Tax Asset Valuation Allowances

We maintain valuation allowances unless it is more likely than not that all of the deferred tax asset will be realized. Changes in valuation allowances are typically included in our tax provision in the period of change. In determining whether a valuation allowance is warranted, we evaluate factors such as prior earnings history, expected future earnings, carryback and carryforward periods of tax attributes, amount and availability of taxable temporary differences and tax strategies that could potentially enhance the likelihood of realization of a deferred tax asset. The realizability assessments made at a given balance sheet date are subject to change in the future, particularly if earnings of a subsidiary are significantly higher or lower than expected, or if we take operational or tax planning actions that could impact the future taxable earnings of a subsidiary. A change in these assumptions may result in an increase or decrease in the realizability of our existing deferred tax assets, and therefore a change in the valuation allowance, in future periods. In making such judgments, significant weight is given to evidence that can be objectively verified.

As of December 31, 2023 and 2022, we had valuation allowances of \$363 million and \$228 million, respectively. In recent years we have incurred pre-tax losses in the U.S. primarily as a result of impairments and transaction, restructuring, integration and other costs. As a result, we have concluded that it is "more likely than not" that a portion of the U.S. deferred assets will not be utilized, and have recorded valuation allowances of \$289 million and \$181 million, respectively, against these deferred tax assets. Under current tax laws, the valuation allowance will not limit our ability to utilize U.S. deferred tax assets provided we can generate sufficient future taxable income in the U.S. We anticipate we will continue to record a valuation allowance against the losses until such time as we are able to determine it is "more likely than not" that the deferred tax asset will be realized.

Recently Issued Accounting Pronouncements

For discussion of our new accounting standards, see "Item 8. Financial Statements and Supplementary Data — Note 2. Summary of Significant Accounting Policies."

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Foreign Exchange Risk

We operate on a global basis and are exposed to the risk that our earnings, cash flows and equity could be adversely impacted by fluctuations in foreign exchange rates. We are exposed to foreign currency exchange risk as the functional currency financial statements of non-U.S. subsidiaries are translated to U.S. dollars. We are also subject to foreign currency transaction gains and losses to the extent revenue and expense transactions are not denominated in the functional currency of a subsidiary. We are primarily exposed to foreign exchange risk with respect to net assets denominated in the Euro, British pound, Swiss franc, Brazilian real, Australian dollar, Japanese yen, Canadian dollar and Chinese yuan. Throughout the year ended December 31, 2023, we incurred foreign currency losses of \$50 million, of which \$40 million related to transaction losses due to the effect of exchange rate changes on transactions denominated in currencies other than a subsidiary's functional currency, and \$10 million related to our application of hyperinflationary accounting for our subsidiaries in Argentina and Turkey.

Of the \$40 million of foreign currency transaction losses, \$25 million related to our subsidiary in Argentina. While we have recently announced plans to restructure how we operate in and sell into the Argentina market, which we expect to significantly reduce our exposure to such foreign currency transaction losses (see Note 19. Subsequent Events to the consolidated financial statements for further information), our global operations continue to expose us to the risk of foreign currency transaction gains and losses.

We identify hyperinflationary markets as those markets whose cumulative inflation rate over a three-year period exceeds 100%. We have applied hyperinflationary accounting for our Argentina and Turkey subsidiaries since 2018 and 2022, respectively, and as a result, have changed their functional currencies to the U.S. dollar. During the year ended December 31, 2023, revenue in Argentina and Turkey each represented less than 1% of our consolidated revenue, and assets held in Argentina and Turkey at December 31, 2023, each represented less than 1% of our consolidated assets. While we anticipate our above noted plans to restructure how we operate in and sell into the Argentina market to mitigate the future impact of hyperinflationary accounting for this affiliate, we may in the future incur further currency devaluations, which could have a material adverse impact on our results of operations.

We may enter into foreign currency forward or option derivative contracts to reduce the effect of fluctuating currency exchange rates in future periods. Gains and losses on these derivative contracts are recorded within other expense, net, and offset, in part, the impact of currency fluctuations on the underlying foreign currency denominated assets and liabilities. A hypothetical 10 percent adverse change in exchange rates applied to the fair values of our outstanding foreign currency derivative contracts as of December 31, 2023, would result in an additional unrealized loss of approximately \$20 million.

We also have a series of cross-currency fixed interest rate swaps to help mitigate the impact of currency fluctuations on our operations in Switzerland. Gains or losses related to these instruments due to spot rate fluctuations are recorded as cumulative translation adjustments (CTA) as a component of other comprehensive income (loss). Gains and losses will remain in accumulated other comprehensive income (loss) until either the sale or substantial liquidation of the hedged subsidiary. If the U.S. dollar were to weaken against the Swiss franc by 10%, the amount of unrealized loss recorded in CTA related to these cross-currency fixed interest rate swaps as of December 31, 2023, would increase by approximately \$130 million. This hypothetical unrealized loss would be expected to be offset by a corresponding foreign currency translation gain from our investment in our Swiss subsidiary.

Interest Risk

Effective April 1, 2023, we transitioned the reference rates used in our credit facilities so that, as a result, our variable-rate indebtedness is now exclusively indexed to Term SOFR. At December 31, 2023, we held interest rate swap agreements with a notional value of \$3,800 million that had the economic effect of modifying this amount of our variable-rate debt to fixed-rate. When including the variable-rate converted to fixed-rate through the use of interest rate swaps, as of December 31, 2023, approximately 78% of our long-term indebtedness bore interest at a fixed rate. We estimate that a hypothetical 1.0% increase in the applicable Term SOFR benchmark rates throughout 2023 would have resulted in an increase in our interest expense, net of capitalized interest, of approximately \$25 million.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Elanco Animal Health Incorporated Consolidated Statements of Operations

(in millions, except per-share data)

	Year Ended December 31,					
		2023	2022	2022		
Revenue	\$	4,417	\$ 4,411	\$	4,764	
Costs, expenses and other:						
Cost of sales		1,931	1,913		2,132	
Research and development		327	321		369	
Marketing, selling and administrative		1,285	1,265		1,403	
Amortization of intangible assets		548	528		556	
Asset impairment, restructuring and other special charges		127	183		634	
Goodwill impairment		1,042	_		_	
Interest expense, net of capitalized interest		277	241		236	
Other expense, net		75	32		5	
		5,612	4,483		5,335	
Loss before income taxes		(1,195)	(72)		(571)	
Income tax expense (benefit)		36	6		(88)	
Net loss	\$	(1,231)	\$ (78)	\$	(483)	
Loss per share:						
Basic	\$	(2.50)	\$ (0.16)	\$	(0.99)	
Diluted	\$	(2.50)	\$ (0.16)	\$	(0.99)	
Weighted-average shares outstanding:						
Basic		492.3	488.3		487.2	
Diluted		492.3	488.3		487.2	

Elanco Animal Health Incorporated Consolidated Statements of Comprehensive Loss

(in millions)

	Year Ended December 31,					
	2023			2022		2021
Net loss	\$	(1,231)	\$	(78)	\$	(483)
Other comprehensive income (loss):						
Cash flow hedges, net of taxes		(125)		157		86
Foreign currency translation, net of taxes		293		(419)		(613)
Defined benefit pension and retiree health benefit plans, net						
of taxes		(42)		79		15
Other comprehensive income (loss), net of taxes		126		(183)		(512)
Comprehensive loss	\$	(1,105)	\$	(261)	\$	(995)

Elanco Animal Health Incorporated Consolidated Balance Sheets

(in millions, except share data)

	December 31,		December 31,		
Assets					
Current Assets					
Cash and cash equivalents	\$	352	\$	345	
Accounts receivable, net		842		797	
Other receivables		168		205	
Inventories		1,735		1,538	
Prepaid expenses and other		310		394	
Total current assets		3,407		3,279	
Noncurrent Assets					
Goodwill		5,094		5,993	
Other intangibles, net		4,494		4,842	
Other noncurrent assets		341		378	
Property and equipment, net		1,026		999	
Total assets	\$	14,362	\$	15,491	
Liabilities and Equity					
Current Liabilities					
Accounts payable	\$	270	\$	390	
Employee compensation		157		146	
Sales rebates and discounts		367		324	
Current portion of long-term debt		38		388	
Other current liabilities		409		454	
Total current liabilities		1,241		1,702	
Noncurrent Liabilities					
Long-term debt		5,736		5,448	
Accrued retirement benefits		184		161	
Deferred taxes		567		662	
Other noncurrent liabilities		411		229	
Total liabilities		8,139		8,202	
Commitments and Contingencies					
Equity					
Common stock, 5,000,000,000 shares authorized, no par value; 492,845,216		_		_	
Additional paid-in capital		8,777		8,738	
Accumulated deficit		(2,288)		(1,057)	
Accumulated other comprehensive loss		(266)		(392)	
Total equity		6,223		7,289	
Total liabilities and equity	\$	14,362	\$	15,491	

Elanco Animal Health Incorporated Consolidated Statements of Equity

(in millions)

	Commo	n Stock	_			Accumulated	Accumulated Other Comprehensive Income (Loss)				
	Shares	Amount	P	ditional aid-in apital	Accumulated Deficit	Cash Flow Hedges	Foreign Currency Translation	Defined Benefit Plans	Total	Total Equity	
December 31, 2020	471.9	\$ —	\$	8,650	\$ (496)	\$ (61)	\$ 360	\$ 4	\$ 303	\$ 8,457	
Net loss	_	_		_	(483)	_	_	_	_	(483)	
Other comprehensive income (loss), net of taxes	_	_		_	_	86	(613)	15	(512)	(512)	
Stock-based compensation activity, net	1.2			46						46	
December 31, 2021	473.1	_		8,696	(979)	25	(253)	19	(209)	7,508	
Net loss	_	_		_	(78)	_	_	_	_	(78)	
Other comprehensive income (loss), net of taxes	_	_		_	_	157	(419)	79	(183)	(183)	
Stock-based compensation activity, net	1.1	_		42						42	
December 31, 2022	474.2	_		8,738	(1,057)	182	(672)	98	(392)	7,289	
Net loss	_	_		_	(1,231)	_	_	_	_	(1,231)	
Other comprehensive income (loss), net of taxes	_	_		_	_	(125)	293	(42)	126	126	
Stock-based compensation activity, net	1.4	_		39	_	_	_	_	_	39	
Conversion of tangible equity units (TEUs) into common stock	17.2									_	
December 31, 2023	492.8	\$ _	\$	8,777	\$ (2,288)	\$ 57	\$ (379)	\$ 56	\$ (266)	\$ 6,223	

Elanco Animal Health Incorporated Consolidated Statements of Cash Flows

(in millions)

	Year Ended December 31,				1,
		2023	2022		2021
Cash Flows from Operating Activities					
Net loss	\$	(1,231)	\$ (7	3)	\$ (483)
Adjustments to reconcile net loss to cash flows from operating activities:					
Depreciation and amortization		694	68.	2	716
Goodwill impairment		1,042	_	_	_
Deferred income taxes		(80)	(5	7)	(148)
Stock-based compensation expense		46	5	9	66
Asset impairment and write-down charges		32	8	1	345
Inventory fair value step-up amortization		2	_	_	64
Loss on extinguishment of debt		_	2)	_
Proceeds from interest rate swap settlements		57	20	7	_
Other non-cash operating activities, net		9	_	_	11
Other changes in operating assets and liabilities, net of acquisitions					
Receivables		(40)	1	4	(35)
Inventories		(160)	(26	9)	29
Other assets		(6)	(10	9)	25
Accounts payable and other liabilities		(94)	(9		(116)
Other changes in operating assets and liabilities		_	_	_	9
Net Cash Provided by Operating Activities		271	45.	2	483
Cash Flows from Investing Activities					
Purchases of property and equipment and software		(140)	(17	1)	(159)
Purchases of intangible assets		(14)	(1:	3)	(38)
Cash paid for acquisitions, net of cash acquired		(19)	_	_	(342)
Other investing activities, net		4		5	9
Net Cash Used for Investing Activities		(169)	(17	— — Э)	(530)
Cash Flows from Financing Activities					
Proceeds from Revolving Credit Facility		350	56	3	500
Repayments of Revolving Credit Facility		(150)	(81	3)	(250)
Proceeds from Securitization Facility		250	_	_	_
Repayments of Securitization Facility		(125)	_	_	_
Proceeds from issuance of long-term debt		` <u> </u>	42	5	500
Repayments of long-term borrowings		(402)	(67)	7)	(573)
Funding related to construction of corporate headquarters		_	(1:	5)	64
Other financing activities, net		(6)	(3:		(31)
Net Cash (Used for) Provided by Financing Activities		(83)	(54		210
Effect of exchange rate changes on cash and cash equivalents		(12)	(1	7)	(31)
Net increase (decrease) in cash and cash equivalents		7	(29		132
Cash and cash equivalents at January 1		345	63	3	506
Cash and cash equivalents at December 31	\$	352	\$ 34	5 \$	638

Elanco Animal Health Incorporated Notes to Consolidated Financial Statements

(Tables present dollars and shares in millions, except per-share and per-unit data)

Note 1. Background and Basis of Presentation

Elanco Animal Health Incorporated (collectively, Elanco, the Company, we, us, or our) is a global animal health company that innovates, develops, manufactures and markets products for pets and farm animals. Our diverse, durable portfolio of approximately 200 brands is sold in more than 90 countries and serves animals across many species, primarily: dogs and cats (collectively, pet health) and cattle, poultry, swine, sheep and aqua (collectively, farm animal). Our pet health products are generally sold worldwide to third-party distributors and retailers, as well as directly to veterinarians who typically then sell our products to pet owners. We primarily sell our farm animal products to third-party distributors and to a diverse set of farm animal producers. In recent years, we have expanded our omnichannel presence in both the veterinary clinic and in retail markets, including e-commerce.

Elanco was incorporated in Indiana on September 18, 2018, and prior to that was a business unit of Eli Lilly and Company (Lilly). We operate as a single operating segment. Consistent with our operational structure, our Chief Executive Officer (CEO), as the chief operating decision maker (CODM), makes resource allocation and business process decisions globally across our consolidated business. Strategic and resource allocation decisions are managed globally with global functional leaders responsible for determining significant costs/investments and with regional leaders responsible for overseeing the execution of the global strategy. Managing and allocating resources at the global corporate level enables our CEO to assess the overall level of resources available and how to best deploy these resources across functions, product types, regional commercial organizations and research and development projects in line with our overarching long-term corporate-wide strategic goals, rather than on a product or geographic basis. Consistent with this decision-making process, our CEO uses consolidated, single-segment financial information for purposes of evaluating performance, allocating resources, setting incentive compensation targets, as well as forecasting future period financial results.

We have prepared the accompanying consolidated financial statements in accordance with accounting principles generally accepted in the United States (GAAP). In our opinion, the financial statements reflect all adjustments (including those that are normal and recurring) that are necessary for fair presentation of the results of operations for the periods shown. All intercompany balances and transactions have been eliminated. In preparing financial statements in conformity with GAAP, we must make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue, expenses and related disclosures at the date of the financial statements and during the reporting period. Actual results could differ from those estimates. We issued our financial statements by filing with the Securities and Exchange Commission (the SEC) and have evaluated subsequent events up to the time of filing. Certain reclassifications of prior year information have been made to conform to the current year's presentation.

Note 2. Summary of Significant Accounting Policies

The following is a summary of significant accounting policies used in the preparation of the accompanying consolidated financial statements.

Estimates and Assumptions

The preparation of financial statements in accordance with GAAP requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses. These estimates and underlying assumptions can impact all elements of our consolidated financial statements. Our estimates are often based on several factors, including the facts and circumstances available at the time the estimates are made, historical experience, risk of loss, general economic conditions and trends and the assessment of the probable future outcome. Some of our estimates require significant, difficult or complex judgments, probabilities and assumptions that we believe to be reasonable but that can be inherently uncertain and unpredictable. If our estimates and assumptions are not representative of actual outcomes, our results could be materially impacted. We regularly evaluate our estimates and assumptions and adjust them when facts and circumstances indicate the need for change. Such changes generally would be reflected in our consolidated financial statements in the period they are determined. We apply estimation methodologies consistently from year to year.

Revenue

We recognize revenue primarily from product sales to customers. Revenue from sales of products is recognized at the point where the customer obtains control of the goods and we satisfy our performance obligation, which is generally once the goods have shipped and the customer has assumed title. For contract manufacturing organization (CMO) arrangements, we recognize revenue over time or at a point in time depending on our evaluation of when the customer obtains control of the promised goods or service.

Revenue reflects the total consideration to which we expect to be entitled (i.e., the transaction price), in exchange for products sold, after considering various types of variable consideration, such as rebates, sales allowances, product returns and discounts. Provisions for rebates and discounts, as well as returns, are established in the same period the related sales are recognized. Significant judgments must be made in determining the transaction price for sales of products related to anticipated rebates, discounts and returns. The following describe the most significant of these judgments:

Sales Rebates and Discounts

• Many of our products are sold and initially invoiced at contractual list prices. Contracts with customers often provide for various rebates and discounts that may differ in each contract. As a consequence, to determine the appropriate transaction price for our product sales, we must estimate any rebates or discounts that ultimately will be due to the customer under the terms of our contracts. The rebate and discount amounts are recorded as a deduction to revenue to arrive at our net product sales during the period in which revenue is recognized.

Significant judgment is involved in determining the rebate and discount amounts expected to be payable to a customer. In determining the appropriate accrual amount, we consider our historical experience with similar incentives programs and current sales data and estimates of inventory levels at our channel distributors to evaluate the impact of such programs on revenue. We continually monitor the impact of this experience and adjust our accrual amounts as necessary. Although we accrue a liability for rebates related to these programs at the time the sale is recorded, the rebate related to that sale is typically paid up to six months after the rebate or incentive period expires. Because of this, in any particular period rebate adjustments may incorporate revisions of accruals for several periods.

Sales Returns

We estimate a reserve for future product returns based on several factors, including local returns policies and
practices, historical returns as a percentage of revenue, an understanding of the reasons for past returns,
estimated shelf life by product and estimates of the amount of time between shipment and return. Reserves
for sales returns are estimated and recorded in the same period as the underlying revenue recognition as a
deduction to arrive at our net product sales and as a liability.

Payment terms differ by jurisdiction and customer, but typically range from 30 to 120 days from date of shipment in most of our major jurisdictions. Revenue for our product sales has not been adjusted for the effects of a financing component, as we expect the period between when we transfer control of the product and when we receive payment will be one year or less. Any exceptions are either not material or we collect interest for payments made after the due date. Shipping and handling activities are considered fulfillment activities and are not considered to be a separate performance obligation. We exclude from the measurement of the transaction price all taxes assessed by a governmental authority that are imposed on our sales of product and collected from a customer.

Allowance for Doubtful Accounts

We provide for an allowance for doubtful accounts, which represents our best estimate of expected lifetime credit losses inherent in our accounts and other receivables portfolios. Our estimates include a continuing credit evaluation of customers' financial condition, trade accounts and other receivables aging and historical loss experience, as well as reasonable and supportable forecasts of future economic conditions. As of December 31, 2023 and 2022, we had an allowance for doubtful accounts of \$18 million and \$13 million, respectively.

Inventories

Effective October 1, 2023, we changed our method of accounting for portions of our inventories from the weighted-average cost method to the first-in-first-out (FIFO) method. As of December 31, 2022, inventories accounted for using the weighted-average cost method were approximately 30% of total inventories. We believe the FIFO method is preferable because it is expected to more accurately match revenue with expenses and reflects the current value of inventories on the consolidated balance sheets. Additionally, it will conform the inventory valuation methodology used for the majority of our inventories and improve comparability with industry peers.

We concluded this change from the weighted-average cost method to the FIFO method does not have a material effect on the current or prior periods' financial statements, and therefore, we have not applied the change on a retrospective basis. The impact on the current period financial statements as a result of recording the cumulative effect of this accounting change during the year ended December 31, 2023, was not material.

Research and Development Expenses

Research and development (R&D) costs are expensed as incurred and relate to the effort associated with the discovery of new knowledge that will be useful in developing a new product or in significantly improving an existing product and the implementation of the research findings. R&D costs include, but are not limited to, compensation and benefits, facilities and overhead expense, clinical trial expense and fees paid to contract research organizations.

We may also enter into licensing arrangements with third parties to acquire the rights to in-process research and development (IPR&D). These arrangements typically do not meet the definition of a business combination. In such arrangements, prior to regulatory approval of a product, we record upfront and milestone payments to third parties as expense when the event requiring the upfront or milestone payment occurs.

Goodwill and Indefinite-lived Intangible Assets

Goodwill represents the excess of the consideration transferred for an acquired business over the assigned fair value of the net assets acquired. Goodwill is not amortized, but is reviewed at least annually for impairment during the fourth quarter, or more frequently if there is a significant change in events or circumstances that indicate the fair value of our single reporting unit is more likely than not less than its carrying amount (i.e., a triggering event). When required, a comparison of fair value to the carrying amount of our single reporting unit is performed to determine the amount of impairment, if any. We begin by assessing qualitative factors to determine whether it is more likely than not that the fair value of our single reporting unit is less than its carrying value. Based on that qualitative assessment, if we conclude it is more likely than not that the fair value of our single reporting unit is less than its carrying value, we conduct a quantitative goodwill impairment test, which involves comparing the estimated fair value of our single reporting unit to its carrying value, including goodwill. We estimate the fair value of our single reporting unit using an income approach, which is a valuation technique that provides an estimate of the fair value of an asset based on market participant expectations of the cash flows an asset would generate over its remaining useful life. If the carrying value of the reporting unit exceeds its estimated fair value, we recognize an impairment loss for the difference.

During the third quarter of 2023, there was a sharp increase in long-term treasury rates, and as a result we assessed our long-lived assets for impairment, concluding that a triggering event existed as of September 30, 2023, for certain indefinite-lived assets, including goodwill. Accordingly, we performed an interim quantitative goodwill impairment test, which resulted in a \$1,042 million pre-tax impairment charge. The fair value of our single reporting unit was determined using the income approach, based on a discounted cash flow model. Significant management judgment was required in estimating our reporting unit's fair value, including, but not limited to, estimates and assumptions regarding future cash flows, revenue growth and other profitability measures such as gross margin and EBITDA margin, and the determination of an appropriate discount rate. We made these judgments based on historical experience, relevant market size, historical pricing and expected industry trends. See Note 11. Goodwill and Intangibles for further information.

Similar to goodwill, indefinite-lived intangible assets, which primarily represent IPR&D acquired from prior business combinations and to a lesser extent, acquired trade names, are not amortized, but rather are reviewed annually for impairment during the fourth quarter, or more frequently in the event of a triggering event. We utilize the income method for determining the estimated fair value of indefinite-lived intangible assets upon acquiring them in a business combination and as needed for our evaluations of potential impairment. This method is a Level 3 fair value measurement in the fair value hierarchy (see Note 10. Fair Value for further information) and applies a probability weighting that considers the risk of development and commercialization to the estimated future net cash flows derived from projected revenues and estimated costs. These projections are based on factors such as relevant market size, patent protection, historical pricing of similar products and expected industry trends. The estimated future net cash flows are then discounted to the present value using an appropriate discount rate. Acquired IPR&D assets are treated as indefinite-lived intangible assets until completion or abandonment of the projects, at which time the assets are tested for impairment and, if not impaired, are transferred to marketed products (see below) and amortized over their estimated economic life.

Other Long-lived Assets

We have a substantial amount of long-lived assets on our consolidated balance sheets, related to both property and equipment and finite-lived intangible assets.

Property and equipment:

• Property and equipment assets are stated at cost less accumulated depreciation. Assets placed in service are recorded at cost and depreciated using the straight-line method over the estimated useful life of the asset (12 to 50 years for buildings and 3 to 25 years for equipment), except for leasehold improvements, which are depreciated over the shorter of their economic useful life, or their remaining lease term. Repair and maintenance costs that do not extend the useful life of the asset are expensed as incurred. Major replacements and significant improvements that either increase asset values or extend useful lives are capitalized. We assess the recoverability of the carrying value of the property and equipment asset or asset group that includes the property and equipment whenever events or changes in circumstances indicate the carrying amount of the asset may not be fully recoverable. When such indications of a potential impairment exist, we compare the projected undiscounted cash flows to be generated by the asset (or asset group) to its carrying value. If the carrying amount is found to be greater, an impairment charge is recorded equal to the excess of the asset's carrying value over its fair value. In such an event, we also re-evaluate the remaining useful lives of the assets (or asset group) and modify them, as appropriate.

Finite-lived intangible assets:

• Finite-lived intangible assets primarily relate to marketed products acquired or licensed from third parties and software. Marketed products consist of the amortized cost of the rights to assets acquired in business combinations and approved for marketing in a significant global jurisdiction. The cost basis of marketed products includes both the initial assigned IPR&D value, as well as any associated milestone payments subsequent to the marketed products receiving regulatory approval in a significant global jurisdiction. Software consists of certain costs incurred in connection with obtaining or developing internal-use software, including payroll and payroll-related costs for employees directly associated with the internal-use software projects and direct costs of external resources. Other finite-lived intangible assets consist primarily of the amortized cost of licensed platform technologies, manufacturing technologies and customer relationships. Intangible assets with finite lives are capitalized and amortized over their estimated economic lives, typically ranging from 3 to 20 years. We assess the recoverability of the carrying value of finite-lived intangible assets in the same manner as property and equipment, as described above.

Advertising Expenses

Costs associated with advertising, including costs for TV, radio and other electronic media and publications, are generally expensed when the related advertising occurs, and are included in marketing, selling and administrative expenses in the consolidated statements of operations. Advertising and promotion expenses for the years ended December 31, 2023, 2022 and 2021, approximated \$207 million, \$201 million and \$248 million, respectively.

Foreign Currency Translation

Operations in our subsidiaries outside the U.S. are recorded in the functional currency of each subsidiary, which is determined by a review of the environment where each subsidiary primarily generates and expends cash. The results of operations for our subsidiaries outside the U.S., where the U.S. dollar is not the functional currency, are translated from functional currencies into U.S. dollars using the weighted-average currency rate for the period. Assets and liabilities are translated using the period-end exchange rates. The U.S. dollar effects that arise from translating the net assets of these subsidiaries are recorded in other comprehensive income (loss).

Foreign currency transaction gains and losses are due to the effect of exchange rate changes on transactions denominated in currencies other than a subsidiary's functional currency and are recognized in other income (expense), net, in the consolidated statements of operations in the period incurred. Transaction losses of \$40 million and \$28 million, respectively, were recorded during the years ended December 31, 2023 and 2022.

We generally identify hyperinflationary markets as those markets whose cumulative inflation rate over a three-year period exceeds 100%. Translation adjustments resulting from the application of hyperinflationary accounting are also recognized in other income (expense), net, in the consolidated statements of operations in the period incurred.

Other Significant Accounting Policies

Our other significant accounting policies are described in the remaining appropriate notes to the consolidated financial statements.

Effect on the financial

Implementation of New Financial Accounting Pronouncements

The following table provides a brief description of an accounting standard adopted in the current year:

Standard	Description	Effective Date	statements or other significant matters
ASU 2020-04, Reference rate reform (Topic 848): Facilitation of the Effects of Reference Rate Reform on Financial Reporting; and related amendments	ASU 2020-04 provides optional expedients and exceptions for applying GAAP to contracts, hedging relationships and other transactions affected by reference rate reform if certain criteria are met. ASU 2021-01 clarifies the scope of Topic 848 so that derivatives affected by the discounting transition are explicitly eligible for certain optional expedients and exceptions. ASU 2022-06 extends the period of time entities can utilize the reference rate reform relief guidance under ASU 2020-04 from December 31, 2022 to December 31, 2024.	Adoption of the guidance is optional and effective as of March 12, 2020 through December 31, 2024. Adoption is permitted at any time during the period on a prospective basis.	Effective April 1, 2023, and in accordance with the provisions outlined in our underlying credit agreements, we have transitioned the reference rate used in our credit facilities from the London Interbank Offered Rate (LIBOR) to the Secured Overnight Financing Rate (Term SOFR). The change did not have a material impact on our consolidated financial statements.

The following table provides a brief description of accounting standards applicable to us that we have not yet adopted:

Standard	Description	Effective Date	Effect on the financial statements or other significant matters
ASU 2023-07, Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures	ASU 2023-07 is intended to improve disclosure requirements related to reportable segments, primarily through enhanced disclosures about significant segment expenses that are regularly provided to the CODM for purposes of assessing a segment's profit or loss and deciding how to allocate resources. This new standard applies to all public entities, including entities, like us, with a single reportable segment.	This new standard is effective for fiscal years beginning after December 31, 2023, and interim periods within fiscal years beginning after December 15, 2024, with early adoption permitted. Adoption requires retrospective application.	We are currently assessing the impact ASU 2023-07 will have on our consolidated financial statements, including our footnote disclosures.
ASU 2023-09, Income Taxes (Topic 740): Improvements to Income Tax Disclosures	ASU 2023-09 is intended to enhance the transparency and decision usefulness of income tax disclosures by enhancing information about how an entity's operations and related tax risks and its tax planning and operational opportunities affect its tax rate and prospects for future cash flows.	The guidance is effective for fiscal years beginning after December 31, 2024, with early adoption permitted. Adoption allows for prospective application, with retrospective application permitted.	We are currently assessing the impact ASU 2023-09 will have on our consolidated financial statements, including, but not limited to, our Income Taxes footnote disclosure.

Note 3. Revenue

The following table summarizes the activity in our global sales rebates and discounts liability for the years ended December 31:

	 2023	 2022
Beginning balance	\$ 324	\$ 319
Reduction of revenue	722	682
Payments	(683)	(662)
Foreign currency translation adjustments	4	(15)
Ending balance	\$ 367	\$ 324

Disaggregation of Revenue

The following table summarizes our revenue disaggregated by product category for the years ended December 31:

	2023	2022	2021
Pet Health	\$ 2,104	\$ 2,138	\$ 2,350
Farm Animal:			
Cattle	949	944	980
Poultry	765	716	744
Swine	382	384	464
Aqua	175	175	144
Total Farm Animal	2,271	2,219	2,332
Contract Manufacturing (1)	42	54	82
Revenue	\$ 4,417	\$ 4,411	\$ 4,764

⁽¹⁾ Represents revenue from arrangements in which we manufacture products on behalf of a third party.

The following table summarizes our revenue disaggregated by geographic area for the years ended December 31:

	2023		2023 2022		2021
United States	\$	1,983	\$	1,965	\$ 2,124
International		2,434		2,446	2,640
Revenue	\$	4,417	\$	4,411	\$ 4,764

We have a single customer that accounted for approximately 10%, 11% and 10% of revenue for the years ended December 31, 2023, 2022 and 2021, respectively. Product sales with this customer resulted in accounts receivable of \$78 million and \$73 million as of December 31, 2023 and 2022, respectively.

Adjustments to revenue recognized as a result of changes in estimates during the years ended December 31, 2023, 2022 and 2021, for product shipped in previous periods were not material. Actual global product returns were approximately 1% of net revenue in each of the years ended December 31, 2023, 2022 and 2021.

Note 4. Acquisitions, Divestitures and Other Arrangements

During 2023 we completed the acquisitions of certain U.S. marketed products, pipeline products, inventory and an assembled workforce from NutriQuest, LLC (NutriQuest) and certain assets including inventory and distribution rights for certain marketed products from NutriQuest Nutricao Animal Ltda (NutriQuest Brazil). In 2021 we completed the acquisition of Kindred Biosciences, Inc. (KindredBio). Each of these transactions was accounted for as a business combination under the acquisition method of accounting. The acquisition method requires, among other things, that assets acquired and liabilities assumed be recognized at their fair values as of the acquisition date. The determination of estimated fair value requires management to make significant estimates and assumptions. The excess of the purchase price over the fair value of the acquired net assets, where applicable, has been recorded as goodwill.

NutriQuest U.S. Acquisition

On January 3, 2023, we acquired NutriQuest for total purchase consideration of approximately \$59 million. NutriQuest is a provider of swine, poultry and cattle nutritional health products to animal producers. This acquisition has helped us expand our existing nutritional health offerings and further our efforts to explore innovative antibiotic alternatives. The composition of the purchase price was as follows:

Up-front cash consideration	\$ 16
Deferred cash consideration paid January 4, 2024	5
Fair value of contingent consideration	38
Total purchase consideration	\$ 59

Contingent consideration for this acquisition includes up to \$85 million of cash consideration payable if specific development, sales and geographic expansion milestones are achieved, as outlined in the asset purchase agreement. The initial fair value of this contingent consideration liability of \$38 million was estimated at the acquisition date using a Monte Carlo simulation model, which represented a Level 3 measurement under the fair value measurement hierarchy (see Note 10. Fair Value for further information).

The following table summarizes the fair value of assets acquired as of the acquisition date:

Inventories	\$ 3
Intangible assets:	
Marketed products	29
Acquired IPR&D	9
Other intangible assets	15
Total identifiable assets	56
Goodwill	3
Total consideration transferred	\$ 59

Other intangible assets consist of customer relationships and trade names. The acquired definite-lived intangible assets are being amortized over a weighted-average estimated useful life of approximately 12 years on a straight-line basis. The estimated fair values of identifiable intangible assets were determined using the income approach. Some of the significant assumptions inherent in the development of these valuations include the estimated net cash flows for each year for each asset or product (including revenues, cost of sales, R&D expenses, marketing, selling and administrative expenses and contributory asset charges), the appropriate discount rate necessary to measure the risk inherent in each future cash flow stream, the life cycle of each asset, the potential regulatory and commercial success risk and competitive trends impacting the asset and each cash flow stream, as well as other factors. The valuation of assets acquired and liabilities assumed was finalized during the fourth quarter of 2023. Revenue attributable to the NutriQuest acquisition for the year ended December 31, 2023, was approximately \$19 million.

NutriQuest Brazil Acquisition

On August 1, 2023, we acquired NutriQuest Brazil for total purchase consideration of \$19 million. The composition of the purchase price included cash paid on the closing date of approximately \$3 million, with additional consideration payable through 2026 valued at approximately \$16 million, a portion of which is contingent upon the continuation of certain terms and conditions set forth in the asset purchase agreement. The following table summarizes the preliminary amounts recognized for assets acquired as of the acquisition date:

Inventories	\$ 3
Definite-lived intangible assets	15
Total identifiable assets	18
Goodwill	1
Total consideration transferred	\$ 19

The acquired definite-lived intangible assets are being amortized over a weighted-average estimated useful life of approximately nine years on a straight-line basis. The estimated fair values of identifiable intangible assets were determined using the income approach. The purchase price allocation for this acquisition is preliminary as of December 31, 2023, and subject to change, including the valuation of the intangible assets. The final determination of these amounts will be completed as soon as possible but no later than one year from the acquisition date. Neither revenue nor income before taxes included within our consolidated statements of operations from NutriQuest Brazil were material for the year ended December 31, 2023.

KindredBio Acquisition

On August 27, 2021, we acquired KindredBio, a publicly traded biopharmaceutical company that developed innovative biologics focused on saving and improving the lives of pets, for aggregate cash purchase consideration of \$444 million. The acquisition of KindredBio continued our pet health expansion, particularly our presence in dermatology. Prior to this acquisition, in May 2021, we signed an agreement with KindredBio to acquire exclusive global rights to KIND-030, a monoclonal antibody that was being developed for the treatment and prevention of canine parvovirus, a treatment for which we received conditional approval and launched in 2023. We settled the \$29 million liability associated with acquiring these rights upon the closing of our acquisition of KindredBio in August 2021.

The following table summarizes the fair value of assets acquired and liabilities assumed as of the acquisition date:

Cash and cash equivalents	\$ 31
Other net working capital	13
Property and equipment	33
Intangible assets, primarily acquired IPR&D	333
Deferred income taxes, net	(30)
Total identifiable net assets	380
Goodwill	35
Settlement of liability related to previous license agreement	29
Total consideration transferred	\$ 444

The valuation of assets acquired and liabilities assumed was finalized during the third quarter of 2022. Property and equipment was mostly comprised of land, buildings, equipment and construction in progress. The estimated fair values of acquired IPR&D were determined using the income approach. Some of the significant assumptions inherent in the development of these valuations included the estimated net cash flows for each year for each IPR&D asset acquired, the appropriate discount rate necessary to measure the risk inherent in each future cash flow stream, the life cycle of each asset, the potential regulatory and commercial success risk and competitive trends impacting the asset and each cash flow stream, as well as other factors. The goodwill recognized from this acquisition was primarily attributable to KindredBio's assembled workforce and anticipated synergies. The majority of goodwill associated with this acquisition is not deductible for tax purposes. Revenue and loss from KindredBio included in the consolidated statements of operations since the date of acquisition were not material.

Divestitures

Microbiome R&D platform carve-out

In April 2022, we signed an agreement to transfer assets associated with our microbiome R&D platform to a newly created, independent biopharmaceutical company, BiomEdit, focused on developing solutions for animal and human health. As part of the agreement, we retained a non-voting, minority stake in the company. Assets transferred included intellectual property and laboratory equipment. The book values of those assets were not material. In addition, we entered into transitional services agreements with the company for certain services. During the year ended December 31, 2022, we recorded a gain on the disposal of approximately \$3 million.

Shawnee and Speke divestitures

During 2021, as part of our strategy to optimize our manufacturing footprint, we announced an agreement with TriRx Pharmaceuticals (TriRx) to sell our manufacturing sites in Shawnee, Kansas (Shawnee) and Speke, U.K. (Speke), including the planned transfer of approximately 600 employees. In connection with these arrangements, we also entered into long-term manufacturing and supply agreements, under which TriRx is to manufacture existing Elanco products at both sites subsequent to the closing of the transactions. In August 2021 and February 2022, we completed the sales of our Shawnee and Speke sites, respectively.

Based on the original terms of the sales agreements, we anticipated receiving cash consideration from TriRx over a three-year period, and during the year ended December 31, 2022, we received cash proceeds of \$13 million from TriRx related to the sales of Shawnee and Speke. In May 2023, we entered into amendments to the agreements (the amended agreement) which effectively restructured the payment schedule related to the remaining amount owed. As

of December 31, 2023, our remaining net receivable balance from TriRx related to the sales of Shawnee and Speke, and under the amended agreement, was \$69 million, of which \$66 million was received in February 2024, with the remaining \$3 million due in August 2024.

Further, upon closing the sale of the Speke site in 2022, we recorded a contract asset of \$55 million for the favorable supply agreement. During the fourth quarter of 2023, we determined that a forecasted decline in cash flows associated with the contract asset represented an indicator of impairment, which required us to perform a test for recoverability. In performing this assessment, we compared the expected undiscounted cash flows associated with the contract asset to its carrying value, determining that the asset was impaired as of December 31, 2023. Based on a comparison of the estimated fair value of the contract asset to its carrying value, we recorded a \$26 million impairment charge. The remaining net book value of \$14 million related to this contact asset as of December 31, 2023, was included in prepaid expenses and other and other noncurrent assets on our consolidated balance sheets. Our fair value assessment for the supply agreement was estimated, both upon the initial determination in 2022 and as part of our 2023 impairment assessment, using a combined income and market approach, which incorporated Level 3 inputs.

BexCaFe Arrangement

In June 2022, we signed a license agreement with BexCaFe, LLC (BexCaFe) for the development and commercialization of products related to Bexacat, an oral treatment intended to reduce glucose levels in diabetic cats. BexCaFe held the rights to the compound through a license agreement with similar terms and conditions. Since signing this license agreement, we have incurred, and will continue to incur, all development and regulatory costs associated with the products. We determined that BexCaFe represented a variable interest entity and that we are the primary beneficiary because the terms of the license give us the power to direct the activities that most significantly impact BexCaFe's economic performance. As a result, we consolidated BexCaFe, a development-stage company with no employees that did not meet the definition of a business, as of the date we signed the license agreement. Upon initial consolidation of BexCaFe, we measured an IPR&D asset at its fair value of \$59 million and recorded liabilities totaling \$59 million, which included contingent consideration of \$49 million based on the fair value of estimated future milestone payments and sales royalties owed under the license agreement. The initial fair value of the contingent payments was calculated based on an income approach, with payments adjusted for probability of success and discounted to a present value. There is no minimum payout due on the contingent consideration and the maximum payout related to sales royalties is unlimited. Since BexCaFe did not meet the definition of a business, no goodwill was recorded, and immediately after initial consolidation, we expensed the IPR&D asset because we concluded it did not have an alternative future use.

During the year ended December 31, 2023, we paid \$13 million to BexCaFe in connection with development/regulatory milestones achieved upon U.S. Food and Drug Administration (FDA) approval of the original new animal drug application for *Bexacat* in December 2022. We also paid \$10 million to BexCaFe under the terms of this agreement during the year ended December 31, 2022. Remaining contingent consideration liabilities of \$35 million were included in other current liabilities and other noncurrent liabilities on our consolidated balance sheet as of December 31, 2023.

Note 5. Asset Impairment, Restructuring and Other Special Charges

In recent years, we have incurred substantial costs associated with restructuring programs and cost-reduction initiatives designed to achieve a flexible and competitive cost structure. These restructuring activities have primarily included charges associated with facility rationalization and workforce reductions. In connection with recent acquisitions, including the acquisition of Bayer Animal Health, we have also incurred costs associated with executing transactions and integrating acquired operations. In addition, we have incurred costs to stand up our organization as an independent company. All operating functions can be impacted by these actions; therefore, non-cash impairment charges have also been incurred as a result of revised fair value projections and/or determinations to no longer utilize certain assets on an ongoing basis. Determinations of fair value can result from a complex series of judgments and rely on estimates and assumptions.

Components of asset impairment, restructuring and other special charges for the years ended December 31 were as follows:

	2023	2022	2021
Restructuring charges (credits) (1)	\$ —	\$ (7)	\$ 110
Acquisition related charges ⁽²⁾	93	105	162
Non-cash and other items:			
Asset impairment (3)	32	81	350
Other special charges (4)	2	4	12
Total expense	\$ 127	\$ 183	\$ 634

⁽¹⁾ Restructuring credits in 2022 related to adjustments resulting from the reversal of severance accruals associated with 2021 restructuring programs, resulting from final negotiations and certain restructured employees filling open positions. Restructuring charges in 2021 primarily represented employee termination costs for restructuring programs announced and initiated in January and November 2021. These costs were partially offset by the reversal of severance accruals associated with prior restructuring programs during the period.

The following table summarizes the activity in our reserves established in connection with restructuring activities:

Balance at December 31, 2021	\$ 126
Reserve adjustment	(9)
Cash paid	(79)
Foreign currency translation adjustments	 (2)
Balance at December 31, 2022	36
Cash paid	 (29)
Balance at December 31, 2023	\$ 7

These reserves were included in other current liabilities and other noncurrent liabilities on our consolidated balance sheets based on the timing of when the obligations were expected to be paid, which can vary due to certain country-specific negotiations and regulations.

Note 6. Inventories

We state all inventories at the lower of cost and net realizable value. We value a majority of our inventories using the FIFO method, although at December 31, 2023 and 2022, \$295 million and \$288 million, respectively, of our total inventories were valued using the last-in, first-out (LIFO) method. Inventories at December 31 consisted of the following:

⁽²⁾ Acquisition related charges primarily included transaction costs directly related to acquiring businesses, such as expenditures for banking, legal, accounting, consulting and other similar services, integration charges inclusive of system and process integration and product transfers, and independent company stand-up costs related to the implementation of new systems, programs and processes.

⁽³⁾ Asset impairments during 2023 included a \$26 million write-down of a contract asset related to a long-term manufacturing and supply agreement initially recorded upon the completion of the sale of our Speke site (see Note 4. Acquisitions, Divestitures and Other Arrangements for further discussion on this item) and a write-down of certain indefinite-lived intangible assets, principally due to increases in the relevant discount rates. Asset impairments during 2022 included a charge of \$59 million related to the write-off of an IPR&D asset with no alternative future use licensed from BexCaFe and a \$22 million charge related to the finalization of the write-down upon sale of the Speke site. Asset impairments in 2021 included write-downs of certain IPR&D and marketed products assets that were subject to product rationalization, as well as write-downs of assets ultimately sold related to the Shawnee and Speke sites. Also included in 2021 are charges recorded to write-down assets in connection with restructuring programs.

⁽⁴⁾ Other special charges in 2021 primarily represented \$10 million of litigation settlements.

	2023	2022
Finished products	\$ 857	\$ 783
Work in process	814	683
Raw materials and supplies	128	130
Total	1,799	1,596
Decrease to LIFO cost	(64)	(58)
Inventories	\$ 1,735	\$ 1,538

Note 7. Equity

Elanco had 5.0 billion ordinary shares authorized, with approximately 492.8 million issued and outstanding as of December 31, 2023. Elanco also had 1.0 billion preferred shares, no par value, authorized (with none issued or outstanding) as of December 31, 2023.

Tangible Equity Unit (TEU) Offering

In January 2020 we issued 11 million in TEUs at the stated amount of \$50 per unit. Total proceeds, net of issuance costs, were \$528 million. The gross proceeds and deferred finance costs from the issuance of the TEUs were allocated 86% to equity (prepaid stock purchase contracts) and 14% to debt (TEU amortizing notes) based on the relative fair value of the respective components of each TEU. The TEU prepaid stock purchase contracts were converted into shares of our common stock on February 1, 2023. Holders of our TEUs received 1.5625 shares of our common stock based on the maximum settlement rate for the applicable market value being below \$32.00. In total, we issued approximately 17 million shares to holders in connection with the settlement.

Note 8. Debt

Long-term debt as of December 31 consisted of the following:

	2023	2022
Incremental Term Facility due 2025	\$ 175	\$ 175
Incremental Term Facility due 2028	489	494
Incremental Term Facility due 2029	247	249
Term Loan B due 2027	3,838	3,881
Revolving Credit Facility (1)	200	_
Securitization Facility (2)	125	_
4.272% Senior Notes due 2023 (3)	_	344
4.900% Senior Notes due 2028 (4)	750	750
TEU Amortizing Notes due 2023 (5)	_	7
Unamortized debt issuance costs	(50)	(64)
	5,774	5,836
Less current portion of long-term debt	38	388
Total long-term debt	\$ 5,736	\$ 5,448

- (1) Our Revolving Credit Facility provides up to \$750 million in borrowing capacity (with incremental capacity if certain conditions are met), bears interest at Term SOFR plus 2.10% and matures in August 2025. In February 2024, we drew an additional \$50 million on our Revolving Credit Facility to fund working capital and other operational needs.
- (2) In August 2023 we entered into a new secured term facility that is secured and collateralized by our U.S. Net Eligible Receivables Balance (see below for further information). In January 2024, we drew an additional \$50 million on our Securitization Facility to fund working capital and other operational needs.
- (3) We redeemed the 4.272% Senior Notes due 2023 in full in August 2023 (see below for further information).
- (4) Subsequent to issuance in August 2018, the 4.900% Senior Notes due 2028 have been subject to interest rate increases related to credit rating agency downgrades. As of December 31, 2023, these notes bear interest at a rate of 6.650%.
- (5) The TEU Amortizing Notes due 2023 matured on February 1, 2023 (see Note 7. Equity for further information).

Future required principal payments on our outstanding indebtedness for each of the next five years and thereafter, as of December 31, 2023, were as follows:

2024	\$ 50
2025	425
2026	175
2027	3,718
2028	1,221
2029 and thereafter	 235
Total obligations and commitments	5,824
Unamortized debt issuance costs	 (50)
Total debt	\$ 5,774

As of December 31, 2023, approximately 78% of our long-term indebtedness bore interest at a fixed rate, including variable-rate converted to fixed-rate through the use of interest rate swaps (see Note 9. Financial Instruments for further information). Cash payments for interest during the years ended December 31 were as follows:

	2023		2022		2021	
Interest paid	\$	379	\$	266	\$	221

Term Loan B and Revolving Credit Facility

In connection with our acquisition of Bayer Animal Health in 2020, we entered into our Term Loan B facility, which bears interest at a floating rate of Term SOFR plus 175 basis points and is payable in quarterly installments through its maturity on August 1, 2027. Simultaneously, we entered into our Revolving Credit Facility, which provides us with a source of liquidity for certain operating activities and for additional flexibility to finance capital investments, business development activities, repayments of debt and other cash requirements. Our Term Loan B and Revolving Credit Facility are secured by a significant portion of our assets.

There are two financial maintenance covenants which are solely for the benefit of lenders under the Revolving Credit Facility. There are no financial maintenance covenants for the benefit of the Term Loan B facility, and the lenders under the Term Loan B facility have no enforcement rights with respect to the financial maintenance covenants for the Revolving Credit Facility. The first financial maintenance covenant for the Revolving Credit Facility requires us to maintain a net total leverage ratio level (which is not subject to step-downs) as of the end of each quarter. The required level of this covenant is based on closing date pro forma net leverage and pro forma adjusted earnings before interest, taxes, depreciation and amortization (EBITDA) not to exceed 7.71 to 1.00 of our pro forma adjusted EBITDA for the preceding four fiscal quarters. The second financial maintenance covenant for the Revolving Credit Facility requires us to maintain a ratio of pro forma adjusted EBITDA to cash interest expense of no less than 2.00 to 1.00, tested as of the end of each fiscal quarter. We were in compliance with all of our debt covenants as of December 31, 2023.

2023 Financings

On August 3, 2023, we entered into a new secured term facility (the Securitization Facility) that is secured and collateralized by our U.S. accounts receivable, subject to certain adjustments (defined as the Net Eligible Receivables Balance within the applicable agreement). The terms of the agreement result in an amount of our U.S. accounts receivable, equivalent to the outstanding balance of the Securitization Facility at any point in time, being pledged to the lender as collateral for the borrowings. Of the maximum borrowing capacity under the Securitization Facility of \$300 million, \$250 million was drawn on August 3, 2023, based on our borrowing capacity on that date. Our borrowing capacity under the Securitization Facility is subject to fluctuation monthly based on the level of our borrowing base as reported to the lender, which is correlated to our U.S. Net Eligible Receivables Balances. The Securitization Facility requires monthly interest payments over its three-year term at a variable rate based on Term SOFR plus 125 basis points. The full, outstanding balance of the Securitization Facility is due on July 31, 2026. We utilized the proceeds from the Securitization Facility, in addition to a \$100 million draw on our Revolving Credit Facility, to redeem in full the 4.272% Senior Notes due 2023 on August 7, 2023. Subsequent to our initial \$250 million draw on the Securitization Facility, \$125 million was repaid, resulting in a balance of \$125 million outstanding as of December 31, 2023. In January 2024, we drew an additional \$50 million on our Securitization Facility to fund working capital and other

operational needs. The Securitization Facility includes various covenants specific to the underlying composition of our U.S. accounts receivables portfolio, all of which we were in compliance with as of December 31, 2023.

2022 Financings

In April 2022, we entered into an incremental assumption agreement which provides for an incremental term facility with an aggregate principal amount of \$250 million maturing on April 19, 2029 (the Incremental Term Facility due 2029). The Incremental Term Facility due 2029 bears interest at Term SOFR, including a credit spread adjustment, plus 175 basis points and is payable in quarterly installments of principal and interest with a final balloon payment due at maturity. The terms of the Incremental Term Facility due 2029 are generally consistent with the terms of our Term Loan B and Revolving Credit Facility.

In June 2022, we entered into an incremental assumption agreement which provides for an incremental term facility with an aggregate principal amount of \$175 million maturing on June 30, 2025 (the Incremental Term Facility due 2025). The Incremental Term Facility due 2025 bears interest at Term SOFR, including a credit spread adjustment, plus 175 basis points and is payable in full at maturity. The terms of the Incremental Term Facility due 2025 are generally consistent with the terms of our Term Loan B and Revolving Credit Facility.

2021 Financing

In August 2021, we entered into an incremental assumption agreement which provides for an incremental term facility with an aggregate principal amount of \$500 million maturing on August 12, 2028 (the Incremental Term Facility due 2028). The incremental term facility bears interest at Term SOFR plus 175 basis points and is payable in quarterly installments of principal and interest with a final balloon payment due at maturity. The terms of the Incremental Term Facility due 2028 are generally consistent with the terms of our Term Loan B and Revolving Credit Facility.

Senior Notes

In August 2018, we issued \$750 million of 4.272% Senior Notes due August 28, 2023 and \$750 million of 4.900% Senior Notes due August 28, 2028. The interest rate payable on each series of Senior Notes has been subject to adjustment in the event of credit rating agency downgrades, which last occurred in April 2023. The indenture that governs the Senior Notes contains covenants that limit our ability to incur liens or engage in sale-leaseback transactions. The indenture also contains restrictions on our ability to consolidate, merge or sell substantially all of our assets, in addition to other customary terms. We were in compliance with all such covenants under the indenture governing the Senior Notes as of December 31, 2023.

In April 2022, we completed a tender offer and retired \$406 million in aggregate principal amount of our 4.272% Senior Notes due August 28, 2023, resulting in a debt extinguishment loss of approximately \$17 million, which was recognized in interest expense, net of capitalized interest in the consolidated statements of operations. As discussed above, on August 7, 2023, we utilized the proceeds from the Securitization Facility, in addition to a \$100 million draw on our Revolving Credit Facility, to redeem in full the remaining outstanding 4.272% Senior Notes due 2023. This early redemption satisfied all obligations and commitments related to the 4.272% Senior Notes due 2023.

Note 9. Financial Instruments

To manage our exposure to market risks, such as changes in foreign currency exchange rates and interest rates, we have entered into various derivative transactions. We formally assess, designate and document, as a hedge of an underlying exposure, each qualifying derivative instrument that will be accounted for as an accounting hedge at inception. We also assess at least quarterly thereafter whether the financial instruments used in the hedging transaction are effective at offsetting changes in either the fair values or cash flows of the underlying exposures. Derivative cash flows are principally classified in the operating activities section of the consolidated statements of cash flows, consistent with the underlying hedged item. Further, we do not offset derivative assets and liabilities on the consolidated balance sheets. Our outstanding positions are discussed below.

Derivatives Not Designated as Hedges

We may enter into foreign exchange forward or option contracts to reduce the effect of fluctuating currency exchange rates. Foreign currency derivatives used for hedging are put in place using the same or like currencies and duration as the underlying exposures and are recorded at fair value with the gain or loss recognized in other expense, net in the consolidated statements of operations. Forward contracts generally have maturities not exceeding 12 months. As of December 31, 2023 and 2022, we had outstanding foreign exchange contracts with aggregate notional amounts of \$891 million and \$784 million, respectively.

The amount of net gains (losses) on derivative instruments not designated as hedging instruments, recorded in other expense, net for the years ended December 31, were as follows:

	2023		2022	2021
Foreign exchange forward contracts (1)	\$	7	\$ (12)	\$ (35)

⁽¹⁾ These amounts were substantially offset in other expense, net by the effect of changing exchange rates on the underlying foreign currency exposures.

Derivatives Designated as Hedges - Net investment hedges

In September 2023 we entered into a series of cross-currency fixed interest rate swaps to help mitigate the impact of currency fluctuations on our operations in Switzerland with a combined 1,000 million CHF notional amount with tenors in 2026 and 2027. These instruments were determined to be, and were designated as, effective economic hedges of net investments in our CHF denominated net assets. The fair values of these instruments were estimated based on quoted market values of similar hedges and are classified as Level 2 in the fair value hierarchy (see Note 10. Fair Value for further information). Gains or losses related to these instruments due to spot rate fluctuations are recorded as cumulative translation adjustments as a component of other comprehensive income (loss). Gains and losses will remain in accumulated other comprehensive income (loss) until either the sale or substantial liquidation of the hedged subsidiary. The amount of losses on net investment hedges, net of tax, recorded in other comprehensive income (loss), for the year ended December 31, was as follows:

	 2023
Cross-currency fixed interest rate swaps	\$ (72)

For the year ended December 31, 2023, these instruments also generated \$9 million of interest income, which is included as a contra interest expense, net of capitalized interest in our consolidated statements of operations.

Derivatives Designated as Hedges - Interest rate swaps

To manage our exposure to variable interest rate risk, we utilize interest rate swap contracts to effectively convert our variable-rate debt into fixed-rate debt. We recognize any differences between the variable interest rate payments and the fixed interest rate settlements with the swap counterparties as an adjustment to interest expense, net of capitalized interest over the life of the swaps. We have designated our interest rate swaps as cash flow hedges and record them at fair value on the consolidated balance sheets. Changes in the fair value of the hedges are recognized in other comprehensive income (loss) and reclassified into earnings through interest expense, net of capitalized interest at the time earnings are affected by the hedged transaction. Fair value is estimated based on quoted market values of similar hedges and is classified as Level 2 in the fair value hierarchy.

We had outstanding forward-starting interest rate swaps with aggregate notional amounts of \$3,800 million and \$3,050 million as of December 31, 2023 and December 31, 2022, respectively. In March 2023, we entered into new interest rate swap agreements with a combined notional amount of \$1,000 million, which prior to the interest rate swap restructuring in September 2023 discussed below, were set to become effective on October 1, 2023, following the maturity of certain swaps with the same combined notional amount. Additionally, on May 1, 2023, we entered into new interest rate swap agreements with a combined notional amount of \$750 million, which became effective on June 1, 2023, and mature in August 2028. As of December 31, 2023, our outstanding forward-starting interest rate swap instruments had maturities ranging between 2026 and 2028.

The amounts of gains on interest rate swap contracts, net of tax, recorded in accumulated other comprehensive loss, for the years ended December 31, were as follows:

	2023		2022	2021		
Forward-starting interest rate swaps	\$	_	\$ 209	\$	58	

The amounts of gains (losses) reclassified from accumulated other comprehensive loss and recognized into earnings through interest expense, net of capitalized interest for the years ended December 31, were as follows:

	2	2023	2022			2021		
Forward-starting interest rate swaps	\$	125	\$	35	\$	(28)		

Over the next 12 months, we expect to reclassify a gain of \$90 million from accumulated other comprehensive loss into interest expense, net of capitalized interest related to our interest rate swaps.

In April and September 2022, we took advantage of market opportunities to restructure our interest rate swap portfolio by unwinding the previously existing swaps and simultaneously entering into new agreements with the same notional amounts and covering the same tenors. As a result, we received cash settlements of \$207 million during 2022, in aggregate. In September 2023, we took further advantage of market opportunities to restructure \$3,050 million of our interest rate swap portfolio by unwinding existing swaps, including the \$1,000 million of aforementioned swaps that had not yet taken effect, and simultaneously entering into new agreements with the same notional amounts and tenors extending through 2026. As a result, we received cash settlements of \$57 million in the aggregate. Cash proceeds from these interest rate swap settlements were included in net cash from operating activities in the consolidated statements of cash flows for the years ended December 31, 2023 and 2022, and will continue to be reclassified to interest expense, net of capitalized interest over the remaining period of the swaps' original tenors. Additionally, as a result of the April 2022 interest rate swap settlement, we reclassified \$17 million of a stranded tax benefit from accumulated other comprehensive loss to income tax expense, based on our policy to reclassify income tax effects from accumulated other comprehensive loss using the portfolio approach.

As of December 31, 2023, when factoring in the \$3,800 million of variable rate debt converted to fixed-rate through the use of interest rate swaps (excluding the expected future reclassifications to interest expense, net of capitalized interest related to past interest rate swap settlements), the weighted-average effective interest rate on our outstanding indebtedness was 6.40%.

Note 10. Fair Value

Fair value is defined as the exchange price that would be received to sell an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. Fair value measurements are based on a framework that utilizes the inputs market participants use to determine the fair value of an asset or liability and establishes a fair value hierarchy to prioritize those inputs. Level 1 fair value measurements are based on quoted prices in active markets for identical assets or liabilities. We determine our Level 2 fair value measurements based on a market approach using quoted market values or significant other observable inputs for identical or comparable assets or liabilities. Our Level 3 fair value measurements, which include the value of contingent consideration as of December 31, 2023, are based on unobservable inputs based on little or no market activity.

The following table summarizes the fair value information at December 31, 2023 and 2022, for assets and liabilities measured at fair value on a recurring basis in the respective balance sheet line items, as well as long-term debt, for which fair value is disclosed on a recurring basis:

		Fair Value			
	Carrying	Quoted Prices in Active Markets for Identical	Significant Other Observable Inputs	Significant Unobservable Inputs	Fair
Financial statement line item	Amount	Assets (Level 1)	(Level 2)	(Level 3)	Value
December 31, 2023					

Recurring fair value measurements

Prepaid expenses and other - derivative instruments	\$	65	\$ _	\$ 65	\$ _	\$	65
Other current liabilities - derivative instruments		(63)	_	(63)	_		(63)
Other current liabilities - contingent consideration		(9)	_	_	(9)		(9)
Other noncurrent liabilities - derivative instruments		(132)	_	(132)	_		(132)
Other noncurrent liabilities - contingent consideration		(31)	_	_	(31)		(31)
Financial instruments not carried at fair value							
Long-term debt, including current portion	(5	,824)	_	(5,825)	_	(5	,825)
December 31, 2022							
Recurring fair value measurements							
Prepaid expenses and other - derivative instruments	\$	90	\$ _	\$ 90	\$ _	\$	90
Other noncurrent assets - derivative instruments		10	_	10	_		10
Other noncurrent assets - investments with readily determinable fair value		7	7	_	_		7
Other current liabilities - derivative instruments		(64)	_	(64)	_		(64)
Financial instruments not carried at fair value							

Cash and cash equivalents include cash on hand and all highly liquid investments with original maturities at the time of purchase of three months or less. The carrying values of cash and cash equivalents, accounts and other receivables, accounts payable, employee compensation and other current liabilities are a reasonable estimate of their fair values due to the short-term nature of these assets and liabilities. We also had investments without readily determinable fair values and equity method investments, which were classified as other noncurrent assets on the consolidated balance sheets totaling \$26 million and \$27 million as of December 31, 2023 and 2022, respectively. These investments are not recorded at fair value on a recurring basis, and as such, are not included in the fair value table above.

Of the total value of the contingent consideration liabilities at December 31, 2023, \$34 million related to our acquisition of NutriQuest during the first quarter of 2023 (see Note 4. Acquisitions, Divestitures and Other Arrangements for further information). We may pay up to \$85 million in cash consideration related to this acquisition, which is contingent upon the achievement of specific development, sales and geographic expansion milestones, as outlined in the asset purchase agreement. The fair values of these liabilities at December 31, 2023, were estimated using the Monte Carlo simulation model, consisting of Level 3 inputs not observable in the market, including estimates relating to revenue forecasts, discount rates and volatility.

Note 11. Goodwill and Intangibles

Goodwill

The following table summarizes the changes in the carrying amount of goodwill:

December 31, 2021	\$ 6,172
Additions related to the KindredBio acquisition	3
Goodwill associated with Speke divestiture	(3)
Foreign currency translation adjustments	(179)
December 31, 2022	5,993
Additions related to acquisitions	4
Impairment charge	(1,042)
Foreign currency translation adjustments	139
December 31, 2023	\$ 5,094

As disclosed previously, there was a sharp increase in long-term treasury rates during the third quarter of 2023, and as a result, we assessed our long-lived assets for impairment, concluding that a triggering event existed as of September 30, 2023, for certain indefinite-lived assets, including goodwill. Accordingly, we performed an interim quantitative goodwill impairment test, which resulted in a \$1,042 million pre-tax impairment charge. The fair value of our single reporting unit was determined using the income approach, based on a discounted cash flow model. Significant management judgment was required in estimating our reporting unit's fair value, including, but not limited to, estimates and assumptions regarding future cash flows, revenue growth and other profitability measures such as gross margin and EBITDA margin; and the determination of an appropriate discount rate. We made these judgments based on historical experience, relevant market size, historical pricing and expected industry trends. We reevaluated our long-lived assets for impairment at December 31, 2023, and concluded no impairment indicators existed with respect to our indefinite-lived assets, including goodwill.

While we believe our estimates and assumptions underlying our interim quantitative goodwill impairment test were reasonable in view of all available information, and while no further impairment charges were recorded during the fourth quarter of 2023, future changes in our discount rate, whether driven by increases in long-term treasury rates or other factors, or future changes in other significant assumptions or the use of alternative estimates and assumptions, could have a significant impact on the estimated fair value of our reporting unit, exposing us to further goodwill impairment losses. No impairments to the carrying value of goodwill were recorded during the years ended December 2022 and 2021.

Other Intangible Assets

The gross amount of intangible assets and related accumulated amortization, as of December 31, were as follows:

			2023		2022																																																						
Description	A	Carrying Amount, Gross	ccumulated mortization		Carrying mount, Net	Carrying Amount, Gross		Amount,		Amount,		Amount,		Amount,		Amount,		Amount,		Amount,		Amount,		Amount,		Amount,		Amount,		Amount,		Amount,		Amount,		Amount,		Amount,		Amount,		Amount,		Amount,		Amount,		Amount,		Accumulated Amortization						nount, Accumulated			arrying ount, Net
Finite-lived intangible assets:																																																											
Marketed products	\$	6,947	\$ (2,982)	\$	3,965	\$	6,561	\$	(2,275)	\$	4,286																																																
Software		257	(111)		146		310		(135)		175																																																
Other		71	(35)		36		47		(31)		16																																																
Total finite-lived intangible assets		7,275	(3,128)		4,147		6,918		(2,441)		4,477																																																
Indefinite-lived intangible assets:																																																											
Acquired IPR&D		339	_		339		359		_		359																																																
Trade names		8	_		8		6				6																																																
Total intangible assets:	\$	7,622	\$ (3,128)	\$	4,494	\$	7,283	\$	(2,441)	\$	4,842																																																

Intangible assets with finite lives are capitalized and amortized over their estimated economic lives. As of December 31, 2023, the remaining weighted-average amortization periods for finite-lived intangible assets were as follows:

	Weighted-Average Life (Years)
Marketed products	8
Software	6
Other	6

The estimated amortization expense for each of the next five years associated with our finite-lived intangible assets, as of December 31, 2023, is as follows:

	2	2024		2024		2025		2026		2027		2028
Estimated amortization expense	\$	552	\$	537	\$	529	\$	494	\$	491		

For the years ended December 31, 2023, 2022 and 2021, amortization expense related to software was \$54 million, \$65 million and \$52 million, respectively.

As discussed in Note 2. Summary of Significant Accounting Policies, acquired IPR&D is not amortized, but rather is reviewed for impairment at least annually, or more frequently in the event of a triggering event. Acquired IPR&D assets are treated as indefinite-lived assets until completion or abandonment of the projects, at which time they are tested for impairment and, if not impaired, are transferred to marketed products and amortized over their estimated economic life. Amortization expense that will be incurred related to assets currently classified as acquired IPR&D upon their future transfer to marketed products, is not included in the future amortization expense table presented above, as we are not able to predict with certainty the period in which such related amortization will begin.

Impairment charges related to acquired IPR&D included within asset impairment, restructuring and other special charges within our consolidated statements of operations for the years ended December 31, were as follows:

	∠(023	2022	2021
Acquired IPR&D impairment	\$	6	\$ 59	\$ 55

In addition, we incurred an \$11 million impairment charge related to marketed products during the year ended December 31, 2021. This impairment related to a write-off of marketed products due to product rationalization. See Note 5. Asset Impairment, Restructuring and Other Special Charges, for further discussion of impairment charges related to acquired IPR&D during the years ended December 31, 2023, 2022 and 2021.

Note 12. Property and Equipment

At December 31, property and equipment consisted of the following:

	2023	2022		
Land	\$ 40	\$	40	
Buildings	630		578	
Equipment	985		941	
Construction in progress	186		163	
	1,841		1,722	
Less accumulated depreciation	(815)		(723)	
Property and equipment, net	\$ 1,026	\$	999	

Property and equipment, less accumulated depreciation, by geographic area as of December 31, was as follows:

	2023		202	22
United States	\$	555	\$	554
Germany		245		224
France		59		52
Other foreign countries		167	_	169
Property and equipment, net	\$	1,026	\$	999

Depreciation expense related to property and equipment for the years ended December 31, was as follows:

	 2023	2022	2021
Depreciation expense	\$ 92	\$ 89	\$ 108

Note 13. Leases

We have operating leases for corporate offices, research and development facilities, vehicles and equipment with lease terms generally ranging from one to 15 years, some of which have options to extend or terminate the leases. We determine if an arrangement is a lease at inception, and if so, whether it represents an operating or finance lease. Right-of-use (ROU) assets relating to our operating leases are included in noncurrent assets, while lease liabilities relating to operating leases are included in other current liabilities and other noncurrent liabilities within the consolidated balance sheets. As of December 31, 2023 and 2022, finance leases were not material.

ROU assets represent our right to use an underlying asset for the lease term, while lease liabilities represent our obligation to make lease payments arising from the lease. ROU assets and lease liabilities are recognized at the lease commencement date based on the present value of lease payments over the lease term. As most of our leases do not provide an implicit rate, we use our incremental borrowing rate based on the information available at lease commencement date in determining the present value of lease payments. We use the implicit rate if it is readily determinable. Our lease terms may include options to extend or terminate the lease, and when it is reasonably certain we will exercise that option, these extensions are included in the lease term used to calculate the ROU assets and operating lease liabilities. We do not include leases with a lease term of 12 months or less within the determination of our ROU assets or lease liabilities.

Operating lease expense is recognized on a straight-line basis over the lease term. Variable lease payments, which represent lease payments that vary due to changes in facts or circumstances occurring after the commencement date, are expensed in the period in which the obligation for these payments is incurred.

The impact of operating leases to the consolidated financial statements for the years ended December 31, was as follows:

		2023	2022	 2021
Lease cost				
Operating lease cost	\$	42	\$ 45	\$ 43
Short-term lease cost		1	1	1
Variable lease cost		4	5	 4
Total lease cost	\$	47	\$ 51	\$ 48
Other information				
Operating cash outflows from operating leases	\$	35	\$ 33	\$ 40
ROU assets obtained in exchange for new operating lease liabilities		28	32	36
Weighted-average remaining lease term - operating leases		7 years	7 years	7 years
Weighted-average discount rate - operating leases		4.8 %	4.0 %	3.8 %
Supplemental balance sheet information related to our operating leas	es is	as follows:		

Supplemental balance sheet information related to our operating leases is as follows:

Asset/Liability Balance Sheet Classification		mber 31, 2023	December 31 2022		
Right-of-use assets	Other noncurrent assets	\$ 140	\$	141	
Current operating lease liabilities	Other current liabilities	32		31	
Non-current operating lease liabilities	Other noncurrent liabilities	110		111	

As of December 31, 2023, the annual minimum lease payments for our operating lease liabilities for the next five years and thereafter were as follows:

2024	\$ 39
2025	30
2026	25
2027	16
2028	10
2029 and thereafter	 44
Total lease payments	164
Less imputed interest	(22)
Total operating lease liabilities	\$ 142

Lease contracts that have been executed but have not yet commenced are excluded from the tables above. As of December 31, 2023, we have a lease commitment that has not yet commenced for our new corporate headquarters in Indianapolis, Indiana. Total minimum lease payments are estimated to be approximately \$378 million over a term of 25 years, excluding extensions. Final lease payments may vary depending on the actual cost of certain construction activities. Lease commencement is expected in 2025.

Note 14. Stock-Based Compensation

The Amended and Restated 2018 Elanco Stock Plan (Plan) provides long-term incentives to attract, motivate and retain employees and non-employee directors. The types of stock-based awards available include, but are not limited to, restricted stock units (RSUs), performance-based awards (PAs) and stock options. Our practices and policies specify that stock-based compensation awards are approved by the Compensation and Human Capital Committee of the Board of Directors (the Compensation Committee). In May 2023, our shareholders approved an increase in the total number of shares authorized for stock-based compensation by 20 million, raising the total number of shares authorized for stock-based compensation awards under the plan to 40 million. As of December 31, 2023, the aggregate number of remaining shares available for future grant was 26.6 million.

Stock-Based Compensation Expense

We measure compensation expense for stock-based awards based on grant date fair value and the estimated number of awards that are expected to vest. For purposes of measuring stock-based compensation expense, we consider whether an adjustment to the observable market price is necessary to reflect material nonpublic information that is known to us at the time the award is granted. Adjustments during the years ended December 31, 2023, 2022 and 2021, were not material. Forfeitures are estimated based on historical experience at the time of grant and are revised in subsequent periods if actual forfeitures differ from those estimates.

Components of stock-based compensation expense and related tax benefit for the years ended December 31 were as follows:

	20	023	2022	2021
Total stock-based compensation expense (1)	\$	46	\$ 59	\$ 66

⁽¹⁾ A majority of our stock-based compensation expense relates to RSUs and PAs. The associated tax benefit from stock-based compensation expense was offset by a valuation allowance.

Restricted Stock Units

RSUs are granted to certain employees and are settled in shares of our common stock. RSUs are accounted for at fair value based upon the closing stock price on the date of grant. The corresponding expense is amortized over the vesting period, which is typically three years. The number of shares ultimately issued for the RSU program remains constant with the exception of forfeitures.

RSUs granted to employees for the years ended December 31 were as follows:

(Units in millions)	 2023	2022	2021
Granted units	3.2	1.3	1.1
Weighted-average grant date fair value	\$ 11.15	\$ 28.17	\$ 33.57

...

Changes in the nonvested portion of RSUs for 2023 are summarized below:

(Shares in millions)	Shares	Weighted-Average Grant Date Fair Value
Nonvested units at January 1, 2023	2.0	\$ 29.40
Granted	3.2	11.15
Vested	(1.0)	29.40
Forfeited	(0.3)	23.22
Nonvested units at December 31, 2023	3.9	15.49

The fair market value of RSUs vesting in 2023, 2022 and 2021 was \$12 million, \$29 million and \$30 million, respectively. As of December 31, 2023, the total remaining unrecognized stock-based compensation expense related to nonvested RSUs was \$20 million, which is expected to be amortized over a weighted-average remaining requisite service period of 16 months.

Performance-Based Awards

PAs, which are granted to eligible officers and management, represent the right to receive a share of our common stock and are subject to forfeiture until restrictions lapse (including continued employment through the end of the vesting period and achievement of certain pre-established metrics). Payouts can vary depending on achievement. PAs are accounted for at fair value based upon the closing stock price on the date of grant and fully vest at the end of the measurement period. Stock-based compensation expense for PAs is recognized only if it is deemed probable that the performance condition will be achieved.

PA activity during the year ended December 31, 2023, is summarized below:

(Shares in millions)	Shares	Weighted-Average Grant Date Fair Value
Nonvested awards at January 1, 2023	0.5	\$ 28.94
Granted	1.6	11.25
Vested	(0.7)	32.58
Forfeited	(0.1)	15.64
Nonvested awards at December 31, 2023	1.3	11.25

The fair market value of PAs vesting in 2023, 2022 and 2021 was \$8 million, \$23 million and \$22 million, respectively. As of December 31, 2023, the total remaining unrecognized stock-based compensation expense related to nonvested PAs was \$9 million, which is expected to be amortized over a weighted-average remaining requisite service period of 12 months.

Stock Options

Stock options represent the right to purchase shares of our common stock within a specified period of time at a specified price. Stock options were granted in 2023 and 2022 to our officers and management at exercise prices equal to the fair market value of our stock at the date of the grant. Options fully vest three years from the grant date and have a term of 10 years. No stock options were granted in 2021.

We account for our employee stock options under the fair value method of accounting using a Black-Scholes-Merton valuation model to measure stock option expense at the grant date, and the corresponding expense is generally amortized on a straight-line basis over the vesting term. The weighted-average fair value of stock options granted during the years ended December 31, 2023 and 2022 using the Black-Scholes-Merton valuation model was estimated to be \$4.93 and \$10.89, respectively. The Black-Scholes-Merton model incorporates a number of valuation assumptions, which are noted in the following table, shown at their weighted-average values for the years ended December 31:

	2023	2022
Expected dividend yield (1)	— %	— %
Risk-free interest rate (2)	4.08 %	1.59 %
Expected stock price volatility (3)	38.2 %	36.5 %
Expected term (4) (years)	6	6

⁽¹⁾ We have never declared nor paid any dividends on our common stock, and we do not anticipate paying dividends on our common stock for the foreseeable future.

Stock option activity during the year ended December 31, 2023, is summarized below:

(Shares in millions)	Shares of Common Stock Attributable to Options		Weighted- Average xercise Price of Options	Weighted- Average Remaining Contractual Term (Years)	Intr	aggregate rinsic Value n millions)
Outstanding at January 1, 2023	0.8	\$	30.11			
Granted	1.1		11.26			
Exercised	_		_			
Forfeited or expired	(0.3)		18.40			
Outstanding at December 31, 2023	1.6	\$	17.92	8.4	\$	4
Exercisable at December 31, 2023	0.3		30.86	6.2		_

⁽²⁾ Determined using the term-matched, zero-coupon risk-free rate from the Treasury Constant Maturity yield curve, continuously compounded.

⁽³⁾ Determined using a leverage-adjusted historical volatility of peer companies.

⁽⁴⁾ Determined using SEC safe harbor approach, based on a 3-year cliff vesting schedule and 10-year contractual term.

As of December 31, 2023, there was approximately \$3 million of unrecognized stock-based compensation expense related to nonvested stock options, which is expected to amortize over an expected remaining weighted-average period of 17 months.

Note 15. Income Taxes

Our income tax provision for the years ended December 31, 2023, 2022 and 2021, includes income tax costs and benefits such as valuation allowances, uncertain tax positions, audit settlements and other items. We were included in Lilly's U.S. tax examinations by the Internal Revenue Service (IRS) through the full separation date of March 11, 2019. Pursuant to the tax matters agreement we executed with Lilly in connection with the IPO, the potential liabilities or potential refunds attributable to pre-IPO periods in which Elanco was included in a Lilly consolidated or combined tax return remain with Lilly. The U.S. examination by the IRS of tax years 2016 to 2018 began in 2019 and is ongoing. Final resolution of certain matters is dependent upon several factors, including the potential for formal administrative proceedings.

Deferred taxes are recognized for the future tax effects of temporary differences between financial and income tax reporting based on enacted tax laws and rates. The tax benefit from an uncertain tax position is recognized only 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 a position are measured based on the largest benefit that has a greater than 50% likelihood of being realized upon ultimate resolution. Deferred taxes are not provided on substantially all of the unremitted earnings of subsidiaries outside of the U.S., except where required, because it is expected that these earnings will be reinvested indefinitely. For the amount deemed indefinitely reinvested, it is not practicable to determine the amount of the related deferred income tax liability due to the complexities in the tax laws and assumptions required to be made. Deferred taxes, including U.S. or foreign withholding taxes, would be provided when we no longer consider our subsidiary earnings to be permanently invested, such as in situations where our subsidiaries plan to make future dividend distributions.

We treat taxes due on future Global Intangible Low-Taxed Income (GILTI) inclusions in U.S. taxable income as a current period expense when incurred. Certain countries in which we have operations have adopted legislation influenced by the Organization for Economic Co-operation and Development (OECD) Pillar Two rules, including a minimum tax rate of 15%. It is uncertain whether the U.S. will enact legislation to adopt the Pillar Two framework. We are continuing to evaluate additional guidance released by the OECD, along with the pending legislative adoption by additional individual countries.

The composition of loss before income tax expense (benefit) for the years ended December 31, was as follows:

	2	2023	 2022	2021
Federal	\$	(669)	\$ (350)	\$ (341)
Foreign		(526)	 278	(230)
Loss before income taxes	\$	(1,195)	\$ (72)	\$ (571)

The composition of income tax expense (benefit) for the years ended December 31, was as follows:

	2023	2022	2021
Current:			
Federal	\$ (8)	\$ 11	\$ _
Foreign	122	51	59
State	 2	1	1
Total current tax expense	116	63	60
Deferred:			
Federal	(3)	(20)	(11)
Foreign	(66)	(36)	(136)
State	(11)	(1)	(1)
Total deferred tax benefit	 (80)	(57)	(148)
Income tax expense (benefit)	\$ 36	\$ 6	\$ (88)

Significant components of our deferred tax assets and liabilities as of December 31 were as follows:

	2023	2022
Deferred tax assets:		
Compensation and benefits	\$ 37	\$ 32
Accruals and reserves	55	54
Tax credit carryovers	57	53
Tax loss carryovers	314	329
Business interest deduction limitation	196	120
Inventories	24	30
Restructuring and other reserves	7	13
R&D capitalized assets	68	42
Operating lease liabilities	52	34
Deferred loss on derivatives designated as hedges	5	_
Other assets		13
Total gross deferred tax assets	815	720
Valuation allowances	(363)	(228)
Total deferred tax assets	452	492
Deferred tax liabilities:		
Right-of-use assets	(50)	(34)
Intangibles	(837)	(920)
Property and equipment	(74)	(70)
Deferred gain on derivatives designated as hedges	_	(42)
Other liabilities	(5)	(6)
Total deferred tax liabilities	(966)	(1,072)
Deferred tax liabilities - net	\$ (514)	\$ (580)

The deferred tax assets and related valuation allowance amounts for net operating losses and tax credits shown above have been adjusted for differences between financial reporting and tax return filings.

At December 31, 2023, we had tax credit carryovers of \$57 million available to reduce future income taxes. This amount was comprised of foreign, U.S. federal and state credits. The foreign credits totaled \$8 million and if unused, will begin to expire in 2026. The U.S. federal credits totaled \$33 million and if unused, will begin to expire in 2029. The state credits totaled \$16 million and if unused, will begin to expire in 2027. The U.S. federal credits were subject to a partial valuation allowance and the state credits were subject to a full valuation allowance.

At December 31, 2023, we had net operating loss carryovers for foreign, U.S. federal and state income tax purposes of \$314 million. Of this total, \$120 million will expire between 2024 and 2036, and \$195 million of the carryovers had an indefinite carryforward period. Net operating losses and other carryovers for foreign, U.S. federal and state income tax purposes were subject to full and partial valuation allowances.

Movements in the valuation allowance for the years ended December 31, are summarized as follows:

	2023		2022
January 1	\$ (2	28) \$	(182)
Increase	(1	41)	(49)
Release		6	3
December 31	\$ (3	63) \$	(228)

The increase in the valuation allowance during 2023 was primarily attributable to the likelihood of not realizing the benefit of U.S. federal and state deferred tax assets because of U.S. pre-tax losses. The total net increase in the valuation allowance recorded in income tax expense (benefit) in the consolidated statements of operations was \$93 million, \$80 million and \$76 million in 2023, 2022 and 2021, respectively, with the remaining change in balance primarily recorded through accumulated other comprehensive loss.

Cash payments of income taxes during the years ended December 31, were as follows:

	2023		2022	 2021
Cash payments of income taxes	\$	95	\$ 93	\$ 151

Income taxes receivable of \$149 million and \$180 million, respectively, were included in prepaid expenses and other on our consolidated balance sheets as of December 31 2023 and 2022.

The following is a reconciliation of the income tax expense (benefit) applying the U.S. federal statutory rate to income before income taxes to reported income tax expense:

	2023	2022	2021
Income tax benefit at the U.S. federal statutory tax rate	\$ (251)	\$ (15)	\$ (120)
Add (deduct):			
Taxation of international operations	3	(43)	(16)
State taxes	(12)	(11)	(8)
Income tax credits	(10)	(13)	(14)
Non-deductible employee compensation	15	7	4
Goodwill and other asset impairments	164	_	_
Other permanent adjustments	19	(2)	(8)
Change in uncertain tax positions	15	3	(2)
Change in valuation allowance	93	80	76
Income tax expense (benefit)	\$ 36	\$ 6	\$ (88)

Goodwill impairment (see Note 11. Goodwill and Intangibles for further information) was not deductible for income tax purposes in most of the impacted jurisdictions. Taxation of international operations for the year ended December 31, 2022, included a \$16 million benefit related to an income tax refund claim in Brazil resulting from a Brazil Supreme Court decision that determined certain Brazil state value-added tax (VAT) incentives were not subject to federal tax.

A reconciliation of the beginning and ending amount of gross unrecognized tax benefits for the years ended December 31, was as follows:

	2	023	2022	2021
Beginning balance at January 1	\$	16	\$ 6	\$ 3
Additions based on tax positions related to the current year		2	3	_
Changes for tax positions of prior years		13	_	(1)
Additions related to acquisitions		_	7	4
Ending balance at December 31	\$	31	\$ 16	\$ 6

The total amount of unrecognized tax benefits that, if recognized, would affect tax expense was \$31 million and \$16 million at December 31, 2023 and 2022, respectively. We recognize both accrued interest and penalties related to unrecognized tax benefits in income tax expense (benefit). Interest and penalties related to income tax matters were not material for the years ended December 31, 2023, 2022 and 2021.

Note 16. Commitments and Contingencies

Legal Matters

We are party to various legal actions that arise in the normal course of business. The most significant matters are described below. Under GAAP, loss contingency provisions are recorded when we deem it probable that we will incur a loss and we are able to formulate a reasonable estimate of that loss.

Seresto Class Action Lawsuits and EPA Safety Review

Claims seeking actual damages, injunctive relief and/or restitution for allegedly deceptive marketing have been made against Elanco Animal Health Inc. and Bayer HealthCare LLC, along with other Elanco and Bayer entities, arising out of the use of *SerestoTM*, a non-prescription flea and tick collar for cats and dogs. During 2021, putative class action lawsuits were filed in federal courts in the U.S. alleging that the *Seresto* collars contain pesticides that can cause serious injury and death to cats and/or dogs wearing the product. In August 2021, the lawsuits were consolidated by the Judicial Panel on Multidistrict Litigation, and the cases were transferred to the Northern District of Illinois. In June 2023, the parties agreed on the monetary terms of a potential settlement of the consolidated class action lawsuits, and as a result, a charge of \$15 million was recorded. As of December 31, 2023, the parties had agreed on the non-monetary terms of a potential settlement, in addition to the monetary terms agreed to in June 2023. In January 2024, the court preliminarily approved the settlement. The court set a hearing to consider final approval of the settlement in December 2024. If at that time all conditions of the settlement are met, and the settlement is approved, we anticipate the settlement amount will be payable in the the first or second quarter of 2025. As such, the \$15 million provision was included within other noncurrent liabilities on our consolidated balance sheet as of December 31, 2023.

Also, in January 2023, a lawsuit seeking damages for alleged negligence, breach of statutory regulations, breach of statutory duties and deceptive marketing was filed in Israel against Elanco and other parties, arising out of the use of Seresto and ForestoTM flea and tick collars for cats and dogs that are marketed and sold in Europe and in Israel. We intend to defend our position vigorously, and as of the date of this filing, we are unable to estimate the probability of loss or range of loss, if any.

Seresto is a pesticide registered with the U.S. Environmental Protection Agency (EPA). In April 2021, a non-profit organization submitted a petition to the EPA requesting that the agency take action to cancel Seresto's pesticide registration and suspend the registration pending cancellation. In response to the EPA's request for comments from the public on the petition, we submitted a comment to the EPA supporting the safety profile of Seresto and engaged in discussions with the EPA. On July 13, 2023, the EPA announced their completion of a comprehensive, multi-year review, with support from the FDA, of the Seresto flea and tick collar and confirmed the continued registration of the collar, denying the citizen's petition. As part of the EPA's scientific review process, the agency analyzed incident data including third-party assessments and compared data to other EPA registered pet products. Based on comprehensive data from the review, the EPA concluded that Seresto continues to meet all the EPA's standards for registration under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), which ensures that products do not pose unreasonable risk of harm.

Additional Legal Matters

For the litigation matters discussed below we either believe loss is not probable or are unable to estimate the possible loss or range of loss, if any. The process of resolving these matters is inherently uncertain and may develop over an extended period of time; therefore, at this time, the ultimate resolutions cannot be predicted. As of December 31, 2023 and 2022, we had no material liabilities established related to the litigation matters discussed below.

On May 20, 2020, a shareholder class action lawsuit captioned Hunter v. Elanco Animal Health Inc., et al. was filed in the United States District Court for the Southern District of Indiana (Court) against Elanco and certain executives. On September 3, 2020, the Court appointed a lead plaintiff, and on November 9, 2020, the lead plaintiff filed an amended complaint adding additional claims against Elanco, certain executives and other individuals. The lawsuit alleged, in part, that Elanco and certain of its executives made materially false and/or misleading statements and/or failed to disclose certain facts about Elanco's supply chain, inventory, revenue and projections. The lawsuit sought unspecified monetary damages and purports to represent purchasers of Elanco securities between September 30, 2018 and May 6, 2020, and purchasers of Elanco common stock issued in connection with Elanco's acquisition of Aratana. On January 13, 2021, we filed a motion to dismiss, and on August 17, 2022, the Court issued an order granting our motion to dismiss the case without prejudice. On October 14, 2022, the plaintiffs filed a motion for leave to amend the complaint. On December 7, 2022, we filed an opposition to the plaintiffs' motion, and on September 27, 2023, the Court denied the plaintiffs' motion for leave, issuing final judgment in favor of Elanco. On October 25, 2023, the plaintiffs filed a notice of appeal to the United States Court of Appeals for the Seventh Circuit. We continue to believe the claims made in the case are meritless, and we intend to continue to vigorously defend our position.

On October 16, 2020, a shareholder class action lawsuit captioned *Saffron Capital Corporation v. Elanco Animal Health Inc.*, et al. was filed in the Marion Superior Court of Indiana against Elanco, certain executives and other individuals and entities. On December 23, 2020, the plaintiffs filed an amended complaint adding an additional plaintiff. The lawsuit alleges, in part, that Elanco and certain of its executives made materially false and/or misleading statements and/or failed to disclose certain facts about Elanco's relationships with third party distributors and revenue attributable to those distributors within the registration statement on Form S-3 dated January 21, 2020 and accompanying prospectus filed in connection with Elanco's public offering which closed on or about January 27, 2020. The lawsuit seeks unspecified monetary damages and purports to represent purchasers of Elanco common stock or TEUs issued in connection with the public offering. From February 2021 to August 2022, this case was stayed in deference to *Hunter v. Elanco Animal Health Inc.* On October 24, 2022, we filed a motion to dismiss. On December 23, 2022, the plaintiffs filed their opposition to the motion to dismiss. Prior to the ruling on the motion to dismiss, on June 8, 2023, the plaintiffs filed a motion for leave to file a second amended complaint, which is now the operative complaint. We filed a motion to dismiss the complaint on August 7, 2023, to which the plaintiff filed their opposition on October 13, 2023. We continue to believe the claims made in the case are meritless, and we intend to vigorously defend our position.

In the third quarter of 2019, Tevra Brands, LLC (Tevra) filed a complaint in the U.S. District Court of the Northern District of California, alleging that Bayer Animal Health (acquired by us in August 2020) had been involved in unlawful, exclusive dealing and tying of its flea and tick products *Advantage*, *Advantix* and *Seresto* and maintained a monopoly in the market. The complaint was amended in March 2020 and then dismissed in September 2020 with leave to amend. A second amended complaint was filed in March 2021 and realleges claims of unlawful exclusive dealing related to *Advantage* and *Advantix* and monopoly maintenance. A motion to dismiss the second amended complaint was denied in January 2022. Tevra's demands include both actual and treble damages. The trial is scheduled for July 2024. We intend to defend our position vigorously.

Regulatory Matters

On July 1, 2021, we received a subpoena from the SEC relating to our channel inventory and sales practices prior to mid-2020. We have cooperated in providing documents and information to the SEC and will continue to do so. We have engaged in discussions with the SEC about a possible resolution or settlement of potential disclosure claims. While we have not reached an agreement on a resolution or settlement of the potential disclosure claims, based on the ongoing discussions with the SEC, we believe a loss contingency is both probable and estimable. Accordingly, we have accrued a liability of \$12.5 million as of December 31, 2023, which was reflected within other expense, net, in the consolidated statements of operations and within other current liabilities in the consolidated balance sheets. It

remains uncertain whether an agreement will be reached and the terms of any such agreement. Management continues to believe its actions were appropriate.

Other Commitments

As of December 31, 2023, we had a lease commitment that has not yet commenced for our new corporate headquarters in Indianapolis, Indiana. See Note 13. Leases for further information regarding this lease commitment.

The land for our new corporate headquarters is located in a Tax Increment Finance District, and the project is, in part, funded through Tax Incremental Financing (TIF) through an incentive agreement between us and the City of Indianapolis. The agreement provides for an estimated total incentive of \$64 million to be funded by the City of Indianapolis in connection with the future tax increment revenue generated from the developed property. In December 2021, as part of a funding and development agreement entered into between us and the developer, we made a commitment to use the expected TIF proceeds towards the cost of developing and constructing the headquarters. In exchange, the developer reimbursed us up to the \$64 million commitment in 2021. During 2022, we refunded approximately \$15 million of the TIF proceeds to the developer. As a result, it is our expectation that our future lease payments will be reduced. The remaining accrued incentive was included in other noncurrent liabilities on our consolidated balance sheets and will be amortized over the lease term beginning on the commencement date and offset future rent expense.

Note 17. Retirement Benefits

Pension Plans

We sponsor various defined benefit pension plans, which cover certain employees worldwide. Our plans in Switzerland and Germany represent approximately 92% of our global benefit obligation. We use a measurement date of December 31 to develop the change in benefit obligation, change in plan assets, funded status and amounts recorded on the consolidated balance sheets at December 31 for our defined benefit pension plans, which were as follows:

Change in benefit obligation:	 2023	2022
Benefit obligation at beginning of year	\$ 324	\$ 462
Service cost	9	14
Interest cost	11	4
Actuarial loss (gain)	17	(123)
Benefits paid	(14)	(12)
Foreign currency exchange rate changes and other adjustments	 19	(21)
Benefit obligation at end of year	366	324
Change in plan assets:		
Fair value of plan assets at beginning of year	175	207
Actual return on plan assets	8	(26)
Employer contribution	11	12
Benefits paid	(14)	(12)
Foreign currency exchange rate changes and other adjustments	 12	(6)
Fair value of plan assets at end of year	 192	 175
Funded status	(174)	(148)
Unrecognized net actuarial gain	(63)	(82)
Unrecognized prior service cost	 (28)	(30)
Net amount recognized	\$ (265)	\$ (260)

Amounts recognized in the consolidated balance sheet as of December 31, consisted of:

Other noncurrent assets	\$ 1	\$ 2
Other current liabilities	(1)	_
Accrued retirement benefits	(174)	(150)
Accumulated other comprehensive loss before income taxes	(91)	(112)
Net amount recognized	\$ (265)	\$ (260)

The unrecognized net actuarial gain and unrecognized prior service cost for these pension plans have not yet been recognized in net periodic pension expense and were included in accumulated other comprehensive loss at December 31, 2023. We do not expect any plan assets to be returned to us in 2024.

The following represents our weighted-average assumptions related to these pension plans as of and for the years ended December 31:

(Percentages)	2023	2022	2021
Discount rate for benefit obligation	2.8 %	3.4 %	1.1 %
Discount rate for net benefit costs	3.4	1.1	0.6
Rate of compensation increase for benefit obligation	2.9	3.0	2.7
Rate of compensation increase for net benefit costs	3.0	2.7	3.1
Expected return on plan assets for net benefit costs	4.4	3.1	2.9

The assumptions above were used both to estimate our pension benefit obligations at year-end, as well as in the determination of applicable pension benefit costs for the years presented. These assumptions are reviewed on at least an annual basis and are revised based on a yearly evaluation of long-term trends and market conditions that may impact the cost of providing retirement benefits. The weighted-average discount rates for our defined benefit plans are set by benchmarking against investment grade corporate bonds where available, including, when there is sufficient data, a yield curve approach. For countries that lack a sufficient corporate bond market, a government bond index is used to establish the discount rate. In evaluating the expected rate of return, we consider many factors, with a primary analysis of current and projected market conditions, asset returns and asset allocations and the views of leading financial advisers and economists. We may also review our historical assumptions compared with actual results, as well as the assumptions and trend rates utilized by similar plans, where applicable.

Future benefit payments as of December 31, 2023, which reflect expected future service, as appropriate, are expected to be as follows:

	2(024	2025 2026 2027 2028		2025 2026 2		2028	2029-2033			
Benefit payments	\$	14	\$ 15	\$	15	\$	16	\$	16	\$	93

We also expect to contribute \$10 million to our pension plans in 2024.

Amounts relating to pension plans with projected benefit obligations in excess of plan assets were as follows at December 31:

	2023		2022	2
Projected benefit obligation	\$	343	\$	301
Fair value of plan assets		168		150

Amounts relating to defined benefit pension plans with accumulated benefit obligations in excess of plan assets were as follows at December 31:

	202	3	2022
Accumulated benefit obligation	\$	332 \$	289
Fair value of plan assets		168	146

The total accumulated benefit obligation for our defined benefit pension plans was \$354 million and \$314 million at December 31, 2023 and 2022, respectively.

Net pension expense (benefit) related to our defined benefit pension plans for the years ended December 31, included the following components:

	2023	2022	2021
Service cost	\$ 9	\$ 14	\$ 18
Interest cost	11	4	2
Expected return on plan assets	(8)	(6)	(6)
Amortization of prior service cost	(5)	(5)	(6)
Amortization of net actuarial (gain) loss	(3)	1	2
Net curtailments and settlements			(29)
Net pension expense (benefit)	\$ 4	\$ 8	\$ (19)

The components of net periodic benefit expense, other than service cost and net curtailments and settlements, were included in other expense, net in the consolidated statements of operations. Net curtailments and settlements related to the remeasurement of our pension benefit obligation as a result of workforce reductions in connection with past restructuring programs. See Note 5. Asset Impairment, Restructuring and Other Special Charges for further information.

The following represents the pre-tax amounts recognized for defined benefit plans in other comprehensive income (loss) for the years ended December 31, 2023:

	2023	3	202	22	202	:1
Actuarial (loss) gain arising during period	\$	(17)	\$	92	\$	29
Amortization of prior service cost, including settlements, in net loss		(5)		(5)		(36)
Amortization of net actuarial (gain) loss, including curtailments, in net loss		(3)		1		22
Foreign currency exchange rate changes and other		5		2		_
Total other comprehensive (loss) income during period	\$	(20)	\$	90	\$	15

We recognized \$3 million and \$11 million of income tax expense in other comprehensive income (loss), respectively, related to our defined benefit plans during the years ended December 31, 2023 and 2022. Amounts recognized in 2021 were not material.

Benefit Plan Investments

Our benefit plan investment policies are set with specific consideration of return and risk requirements in relationship to the respective liabilities. Our plan assets related to our pension plans in Switzerland and Germany represent approximately 87% of our total plan assets for all pension plans. Given the long-term nature of our liabilities, our plans have the flexibility to manage an above-average degree of risk in the asset portfolios. At the investment-policy level, there are no specifically prohibited investments; however, individual investment manager mandates, restrictions and limitations are contractually set to align with our investment objectives, ensure risk control and limit concentrations.

We manage our portfolio to minimize concentration of risk by allocating funds within asset categories. In addition, within a category we use different managers with various management objectives to eliminate any significant concentration of risk. The investment strategy for the legacy Elanco plans is to diversify our plan assets with a designated percentage invested in fixed-income securities, equity securities, real estate and other alternative investments. The acquired Bayer Animal Health plans are managed separately, and underlying investments are classified in the same categories.

Each category is diversified and comprised of the following:

- Fixed-income securities Swiss bonds, global aggregates, global aggregate corporates, global government bonds, emerging market local currencies and emerging markets hard currencies.
- Equity securities Swiss equities, global equities, low volatility equities (to reduce risk) and emerging market equities.
- Real estate Swiss real estate and global real estate funds.

Other alternative investments – cash, cash equivalents and investments in senior secured loans.

We determine the fair value of the investments based on a market approach using quoted market values, significant other observable inputs for identical or comparable assets or liabilities.

Real estate is mostly comprised of public holdings. Real estate investments in registered investment companies that trade on an exchange are classified as Level 1 on the fair value hierarchy. Other real estate investments are marked to fair value using models that are supported by observable market-based data (Level 2).

The fair values of pension plan assets as of December 31, 2023, by asset category were as follows:

			Fair Value Measurements Using						
Asset Class	Total	Acti	oted Prices in ive Markets for entical Assets (Level 1)		Significant Observable Inputs (Level 2)	Unobs In	ificant servable puts vel 3)	Valu	tments ed at N ⁽¹⁾
Public equity securities	\$ 58	\$	55	\$	_	\$	_	\$	3
Fixed income:									
Developed markets	72		71		_		_		1
Emerging markets	12		12		_		_		_
Real estate	18		11		7		_		_
Other	32		28		4		_		_
Total	\$ 192	\$	177	\$	11	\$	_	\$	4

⁽¹⁾ Certain investments measured at fair value using the Net Asset Value (NAV) per share, or its equivalent, as a practical expedient have not been classified in the fair value hierarchy.

No material transfers between Level 1, Level 2, or Level 3 occurred during the year ended December 31, 2023.

The fair values of pension plan assets as of December 31, 2022, by asset category were as follows:

			Fair Value Measurements Using					
Asset Class	Total	Active Iden	ed Prices in e Markets for tical Assets Level 1)		Significant Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)		nvestments Valued at NAV ⁽¹⁾
Public equity securities	\$ 49	\$	47	\$	_	\$ —	\$	2
Fixed income:								
Developed markets	64		63		_	_		1
Emerging markets	9		9		_	_		_
Real estate	23		17		6	_		_
Other	 30		25		5			_
Total	\$ 175	\$	161	\$	11	\$ —	\$	3

⁽¹⁾ Certain investments measured at fair value using NAV per share, or its equivalent, as a practical expedient have not been classified in the fair value hierarchy.

No material transfers between Level 1, Level 2, or Level 3 occurred during the year ended December 31, 2022.

Defined Contribution Plans

Elanco has defined contribution savings plans that include certain employees worldwide. Our contributions to these plans are based on our employee contributions and the level of our match. Expenses under the plans totaled \$40 million, \$34 million and \$39 million for the years ended December 31, 2023, 2022 and 2021, respectively.

Multiemployer Plans

Through the acquisition of Bayer Animal Health, we acquired participation in certain multiemployer arrangements with Bayer-Pensionskasse VVaG, Leverkusen (Germany) (Bayer-Pensionskasse) and Rheinishche Pensionskasse VVaG, Leverkusen (Germany) (Rheinishche Pensionskasse). These plans provide basic pension benefits to the majority of our employees in Germany. Up to a certain salary level, the benefit obligations are covered by our contributions and

the contributions from employees to the plan. The Company-specific plan information for Bayer-Pensionskasse and Rheinische-Pensionskasse is not publicly available, and the plans are not subject to a collective-bargaining agreement. The plans provide fixed, monthly retirement payments on the basis of the credits earned by the participating employees. To the extent Bayer-Pensionskasse or Rheinische-Pensionskasse are underfunded, our future contributions to the plan(s) may increase and may be used to fund retirement benefits for employees related to other employers, although as of December 31, 2022 and 2021, both plans' total assets exceeded the total actuarial present value of accumulated plan benefits. Our plan contributions to these plans are expensed as incurred and were not material in any of the years ended December 31, 2023, 2022 and 2021, nor did they exceed 5% of the total contributions to the plans.

Contributing to these types of plans creates risk that differs from providing benefits under our sponsored plans, in that if another participating employer ceases to contribute to a multiemployer plan, additional unfunded obligations may need to be funded over time by remaining participating employers.

Note 18. Earnings Per Share

We compute basic earnings (loss) per share by dividing net income (loss) available to common shareholders by the actual weighted-average number of common shares outstanding for the reporting period. Elanco has variable common stock equivalents relating to certain equity awards in stock-based compensation arrangements. We also had variable common stock equivalents related to the TEU prepaid stock purchase contracts through their settlement date of February 1, 2023 (see Note 7. Equity for further discussion). Diluted earnings per share reflects the potential dilution that could occur if holders of the unvested equity awards converted their holdings into common stock and that could have occurred if holders of unsettled TEUs had converted their holdings into common stock prior to the February 1, 2023, settlement date. The weighted-average number of potentially dilutive shares outstanding was calculated using the treasury stock method. Potential common shares that would have had the effect of increasing diluted earnings per share (or reducing loss per share) were considered to be anti-dilutive and as such, these shares were not included in the calculation of diluted loss per share.

Basic and diluted weighted-average shares outstanding were as follows:

	2023	2022	2021
Determination of shares:			
Weighted-average common shares outstanding (1)	492.3	488.3	487.2
Assumed conversion of dilutive common stock equivalents (2)	<u> </u>	<u> </u>	_
Diluted weighted-average shares outstanding	492.3	488.3	487.2

- (1) The TEU prepaid stock purchase contracts were convertible into a minimum of 14.3 million shares or a maximum of 17.2 million shares. The minimum 14.3 million shares were included in the calculation of basic weighted-average shares from January 22, 2020 to February 1, 2023. The 17.2 million shares that were ultimately issued were included in the calculation of basic weighted-average shares subsequent to the settlement date of February 1, 2023.
- (2) For the years ended December 31, 2023, 2022 and 2021, approximately 2.9 million, 3.3 million, and 3.2 million, respectively, of potential common shares were excluded from the calculation of diluted earnings per share because their effect was anti-dilutive.

Note 19. Subsequent Events

Announced sale of aqua business: In February 2024, we entered into an asset purchase agreement (the agreement) to sell our aqua business to Intervet International B.V., a Dutch subsidiary of Merck Animal Health for approximately \$1.3 billion in cash, payable at closing. This divestiture is expected to include inventories, real property and equipment, including our manufacturing sites in Canada and Vietnam, and certain intellectual property, technology and other intangible assets, including marketed brands, as well as approximately 280 commercial and manufacturing employees. The agreement contains certain representations, warranties and covenants that are customary for transactions of this nature, including covenants by us relating to the operation of the aqua business prior to the closing of the agreement, as well as certain non-compete restrictions. The closing of the agreement is subject to customary closing conditions, including the receipt of applicable regulatory and antitrust approvals, and is currently anticipated to occur around mid-year 2024. If the agreement is terminated due to failure to obtain the applicable required approvals, subject to certain conditions, Merck Animal Health will be required to pay us a termination fee of \$55 million in cash.

Our aqua business includes products across both warm-water and cold-water species and generated \$175 million in revenue during the year ended December 31, 2023. The aqua business assets being sold met the criteria to be classified as held for sale in February 2024, when all the required criteria for held for sale classification, as outlined within GAAP, were met. We have determined that this future divestiture does not qualify for reporting as a discontinued operation, as it does not represent a strategic shift that has or will have a major effect on our operations and/or financial results.

Approved restructuring plan: In February 2024 our Board of Directors authorized a restructuring plan (the restructuring plan) to improve operational efficiencies and better align our organizational structure with current business needs, top strategic priorities and key growth opportunities. Specifically, the restructuring plan is intended to reallocate resources by shifting international resources from farm animal to pet health as we plan for the global launches of certain potential blockbuster products currently under regulatory review. Further, the restructuring plan is expected to result in changes in how we operate in and sell into the Argentina market, among others, which we anticipate will reduce our foreign currency exposure.

The restructuring plan will result in the elimination of approximately 420 personnel across our global organization. Expected pre-tax charges associated with the restructuring plan total \$50 to \$55 million in 2024, including \$40 to \$45 million of cash-based severance costs, the majority of which will be paid in 2024.

Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of Elanco Animal Health Incorporated

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Elanco Animal Health Incorporated (the Company) as of December 31, 2023 and 2022, the related consolidated statements of operations, comprehensive loss, equity and cash flows for each of the three years in the period ended December 31, 2023, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 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 U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2023, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework), and our report dated February 26, 2024, expressed an unqualified opinion thereon.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current period audit of the financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Description of the matter

How we addressed the matter in our audit

Sales rebates and discounts

At December 31, 2023, the Company's sales rebates and discounts liability totaled \$367 million. As explained in Note 2 and 3 to the consolidated financial statements, the Company estimates a sales rebates and discounts liability for customers in the distribution chain under the terms of their contracts. The sales rebates and discounts are recorded as a deduction to revenue in the same period that the Company recognizes a sale to a customer.

Auditing the sales rebates and discounts liability is complex because of the level of subjectivity involved in management's assumptions used in the measurement process and the volume of rebate programs offered. For example, the estimate of the sales rebate and discount liability is based on historical experience with similar incentive programs, current sales data and estimates of inventory levels. We tested the Company's internal controls over the sales rebates and discounts liability process. This included testing controls over management's review of the significant inputs and assumptions in the estimation of sales rebates and discounts, including rebate rates by product category, sales in to and out of the distribution channel, and channel inventory levels.

To test the Company's sales rebates and discounts liability, our audit procedures included, among others, evaluating the inputs and assumptions discussed above and testing the completeness and accuracy of the underlying data used in management's determination of transaction price. For example, we inspected the underlying rebate programs for customers and compared the rebate percentages used in the Company's analyses with the program percentages. In addition, we confirmed product remaining in the distribution channel at period end with third parties. We assessed the historical accuracy of management's sales rebates and discounts estimates by comparing the prior period sales rebates and discounts liability to the amount of actual payments made in subsequent periods. We also performed independent calculations of the rebate accruals and a sensitivity analysis of certain significant assumptions to evaluate the change in the sales

Description of the matter

How we addressed the matter in our audit

Valuation of goodwill

At December 31, 2023, the Company's goodwill was \$5,094 million. As described in Note 2 and 11 to the consolidated financial statements, goodwill represents the excess of consideration transferred for an acquired business over the assigned fair value of the net assets acquired. Goodwill is tested for impairment at least annually or more frequently if events or changes in circumstances indicate that it is more likely than not that goodwill may be impaired. The Company performed a quantitative goodwill impairment test at September 30, 2023, which resulted in a \$1,042 million pre-tax impairment charge.

Auditing management's goodwill impairment test was complex and highly judgmental because the estimate underlying the determination of fair value of the reporting unit involves management's judgments on significant assumptions. In particular, management estimates fair value using the income approach which is sensitive to certain significant assumptions, such as future revenues, gross margins, the components of earnings before interest, taxes, depreciation and amortization (EBITDA) margin and the discount rate commensurate with the risks involved.

We tested the Company's internal controls over its assessment of the fair value of the reporting unit. This included testing controls over management's review of the significant assumptions used in the valuation model including future revenues, gross margins, the components of EBITDA margin and the discount rate.

To test the estimated fair value of the Company's reporting unit, our audit procedures included, among others, assessing the valuation methodology and testing the significant assumptions discussed herein. For example, we compared the significant assumptions in the prospective financial information used by management to current industry and economic trends and historical performance. We assessed the reasonableness of the future revenues, gross margins and the components of EBITDA margin by comparing the forecasts to historical results and analyst expectations. We performed sensitivity analyses of certain significant assumptions to evaluate the change in the fair value resulting from changes in the significant assumptions. We also involved our valuation specialists to assist in the evaluation of the fair value methodology and significant assumptions in the fair value estimate. In addition, we tested management's reconciliation of the fair value of the reporting unit to the market capitalization of the Company.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 2017.

Indianapolis, Indiana February 26, 2024

Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of Elanco Animal Health Incorporated

Opinion on Internal Control Over Financial Reporting

We have audited Elanco Animal Health Incorporated's internal control over financial reporting as of December 31, 2023, based on criteria established in Internal Control – Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, Elanco Animal Health Incorporated (the Company) maintained, in all material respects, effective internal control over financial reporting as of December 31, 2023, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2023 and 2022, the related consolidated statements of operations, comprehensive loss, equity and cash flows for each of the three years in the period ended December 31, 2023, and the related notes and our report dated February 26, 2024, expressed an unqualified opinion thereon.

Basis for Opinion

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

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

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

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

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

/s/ Ernst & Young LLP

Indianapolis, Indiana February 26, 2024

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

None.

ITEM 9A. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer (CEO) and Chief Financial Officer (CFO), has evaluated the effectiveness of our disclosure controls and procedures (as defined in Rule 13a-15(e) under the Securities Exchange Act of 1934, as amended (the Exchange Act)) as of the end of the period covered by this report. Based on the evaluation, our CEO and CFO have concluded that, as of the end of such period, our disclosure controls and procedures were effective in recording, processing, summarizing and reporting, on a timely basis, information required to be disclosed by us in the reports we file or submit under the Exchange Act, and that information is accumulated and communicated to the CEO and CFO, as appropriate, to allow timely discussions regarding required disclosure.

Management's Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Exchange Act Rule 13a-15(f)). Our management, with the participation of our CEO and CFO, has evaluated the effectiveness of our internal control over financial reporting based on the Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework).

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

Ernst & Young LLP, an independent registered public accounting firm, has audited the effectiveness of our internal controls over financial reporting as of December 31, 2023, as stated in their report, which is included herein.

Remediation of Material Weakness

As disclosed in Part II. Item 9A of our 2022 Form 10-K, we identified a material weakness as of December 31, 2022, related to the ineffective review of the annual income tax provision, including the valuation allowance related to deferred tax assets. During the year ended December 31, 2023, we developed and implemented a remediation plan to address this material weakness. Based on management's assessment of the effectiveness of our internal control over financial reporting as of and for the year ending December 31, 2023, our CEO and CFO concluded that, as of the end of the period covered by this report, we had effectively remediated this past material weakness and that our disclosure controls and procedures were effective as of the end of the period covered by this report.

Changes in Internal Control

There were no changes in our internal control over financial reporting (as defined in Exchange Act Rule 13a-15(f)), aside from our remediation of the aforementioned material weakness, that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting during the quarter ended December 31, 2023.

ITEM 9B. OTHER INFORMATION

During the three months 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(a) 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 on Directors, Executive Officers and Corporate Governance can be found in the Proxy Statement under "Proposal No. 1: Election of Directors," "Corporate Governance," and "Executive Officers." That information is incorporated in this report by reference.

ITEM 11. EXECUTIVE COMPENSATION

Information on director compensation, executive compensation, and compensation committee matters can be found in the Proxy Statement under "Non-Employee Director Compensation," "Corporate Governance – Board and Committee Information – Board Committees," "Compensation Discussion and Analysis," and "Executive Compensation Tables." That information is incorporated in this report by reference.

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

Security Ownership of Certain Beneficial Owners and Management

Information relating to ownership of the company's common stock by management and by persons known by the company to be the beneficial owners of more than five percent of the outstanding shares of common stock is found in the Proxy Statement under "Stock Ownership Information." That information is incorporated in this report by reference.

Securities Authorized for Issuance Under Equity Compensation Plans

Information about our compensation plans under which shares of our common stock have been authorized for issuance as of December 31, 2023, can be found in the Proxy Statement under "Equity Compensation Plan Information" and is incorporated in this report by reference.

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

Related Person Transactions

Information relating to related person transactions and the board's policies and procedures for approval of related person transactions can be found in the Proxy Statement under "Corporate Governance – Related Party Transactions." That information is incorporated in this report by reference.

Director Independence

Information relating to director independence can be found in the Proxy Statement under "Corporate Governance – Director Independence" and is incorporated in this report by reference.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

Information related to the fees and services of our principal independent accountants, Ernst & Young LLP, Auditor Firm ID: 42, can be found in the Proxy Statement under "Proposal No. 2: Ratification of Selection of Independent Auditor." That information is incorporated in this report by reference.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

1. Financial Statements

The following consolidated financial statements of the company and its subsidiaries are found at Item 8:

- Consolidated Statements of Operations—Years Ended December 31, 2023, 2022 and 2021
- Consolidated Statements of Comprehensive Loss—Years Ended December 31, 2023, 2022 and 2021
- Consolidated Balance Sheets—December 31, 2023 and 2022
- Consolidated Statements of Equity—Years Ended December 31, 2023, 2022 and 2021
- Consolidated Statements of Cash Flows—Years Ended December 31, 2023, 2022 and 2021
- Notes to Consolidated Financial Statements

2. Financial Statement Schedules

The consolidated financial statement schedules of the company and its subsidiaries have been omitted because they are not required, are inapplicable or are adequately explained in the financial statements.

Financial statements of interests of 50 percent or less, which are accounted for by the equity method, have been omitted because they do not, considered in the aggregate as a single subsidiary, constitute a significant subsidiary.

3. Exhibits

The following exhibits are either filed or furnished herewith (as applicable) or, if so indicated, incorporated by reference to the documents indicated in parentheses, which have previously been filed or furnished with the Securities and Exchange Commission.

Exhibit Number	
2.1	Share and Asset Purchase Agreement, dated as of August 20, 2019, between Bayer Aktiengesellschaft and Elanco Animal Health Incorporated (incorporated by reference to Exhibit 2.1 of the Current Report on Form 8-K filed with the SEC on August 20, 2019).
2.2	Amendment No. 1 to Share and Asset Purchase Agreement, dated as of October 15, 2019, between Bayer Aktiengesellschaft and Elanco Animal Health Incorporated (incorporated by reference to Exhibit 2.1 of the Current Report on Form 8-K filed with the SEC on October 17, 2019).
2.3	Amendment No. 2 to Share and Asset Purchase Agreement, dated as of January 17, 2020, between Bayer Aktiengesellschaft and Elanco Animal Health Incorporated (incorporated by reference to Exhibit 2.1 of the Current Report on Form 8-K filed with the SEC on January 17, 2020).
2.4	Amendment No. 3 to Share and Asset Purchase Agreement, dated as of June 15, 2020, between Bayer Aktiengesellschaft and Elanco Animal Health Incorporated (incorporated by reference to Exhibit 2.1 of the Current Report on Form 8-K filed with the SEC on June 18, 2020).
2.5	Amendment No. 4 to Share and Asset Purchase Agreement, dated as of July 30, 2020, between Bayer Aktiengesellschaft and Elanco Animal Health Incorporated (incorporated by reference to Exhibit 2.5 of the Current Report on Form 8-K filed with the SEC on August 3, 2020).
2.6	Annex 27 to the Share and Asset Purchase Agreement, dated as of August 20, 2019, between Bayer Aktiengesellschaft and Elanco Animal Health Incorporated (Incorporated by reference to Exhibit 4.3 of the Registration Statement on Form S-3 (File No. 333-235991) filed with the SEC on January 21, 2020).
2.7	Agreement and Plan of Merger, dated as of June 15, 2021, by and among Elanco Animal Health Incorporated, Knight Merger Sub, Inc., and Kindred Biosciences, Inc. (incorporated by reference to Exhibit 2.1 of the Current Report on Form 8-K filed with the SEC on June 16, 2021).
2.8	First Amendment to Agreement and Plan of Merger, dated as of June 30, 2021, by and among Elanco

Animal Health Incorporated, Knight Merger Sub, Inc., and Kindred Biosciences, Inc. (incorporated by reference to Exhibit 2.1 of the Current Report on Form 8-K filed with the SEC on July 1, 2021).

Evh!h!t	
Exhibit Number	Description
2.9	Asset Purchase Agreement by and between Elanco Animal Health Incorporated as Seller and Intervet International B.V. as Buyer dated as of February 5, 2024 (incorporated by reference to Exhibit 2.1 of the Current Report on Form 8-K filed with the SEC on February 5, 2024)**
3.1	Amended and Restated Articles of Incorporation of Elanco Animal Health Incorporated, effective May 18, 2022 (incorporated by reference to Exhibit 3.1 of the Quarterly Report on Form 10-Q filed with the SEC on August 8, 2022).
3.2	Amended and Restated Bylaws of Elanco Animal Health Incorporated, effective May 18, 2022 (incorporated by reference to Exhibit 3.1 of the Current Report on Form 8-K filed with the SEC on May 19, 2022).
4.1	Form of Certificate of Common Stock (incorporated by reference to Exhibit 4.1 of Amendment No. 1 to Registration Statement on Form S-1 (Registration No. 333-226536) filed with the SEC on August 28, 2018).
4.2	Indenture, dated August 28, 2018, between Elanco Animal Health Incorporated and Deutsche Bank Trust Company Americas, as trustee (incorporated by reference to Exhibit 4.2 of Amendment No. 1 to Registration Statement on Form S-1 (Registration No. 333-226536) filed with the SEC on August 28, 2018).
4.3	First Supplemental Indenture, dated August 28, 2018, between Elanco Animal Health Incorporated and Deutsche Bank Trust Company Americas, as trustee (incorporated by reference to Exhibit 4.3 of Amendment No. 1 to Registration Statement on Form S-1 (Registration No. 333-226536) filed with the SEC on August 28, 2018).
4.4	Second Supplemental Indenture, dated as of January 27, 2020, between Elanco Animal Health Incorporated and Deutsche Bank Trust Company Americas, as trustee, including the form of amortizing note (incorporated by reference to Exhibit 4.4 of Current Report on Form 8-K filed with the SEC on January 27, 2020).
4.5	Description of Securities (incorporated by reference to Exhibit 4.5 of the Annual Report on Form 10-K filed with the SEC on March 1, 2023).
10.1	Credit Agreement, dated as of August 1, 2020, among Elanco Animal Health Incorporated, as borrower, Elanco US Inc., as co-borrower, the lenders party thereto from time to time, Goldman Sachs Bank USA, as term loan administrative agent, and as collateral agent and security trustee, and JPMorgan Chase Bank, N.A., as revolver administrative facility agent (incorporated by reference to Exhibit 10.1 of the Current Report on Form 8-K filed with the SEC on August 3, 2020).
10.2	Incremental Assumption Agreement, dated August 12, 2021, by and among Elanco Animal Health Incorporated, Elanco US Inc., the subsidiary loan parties party thereto, Farm Credit Mid-America, PCA, as incremental term lender, and Goldman Sachs Bank USA, as the term facility agent (incorporated by reference to Exhibit 10.1 of the Current Report on Form 8-K filed with the SEC on August 12, 2021).
10.3	Incremental Assumption Agreement, dated April 19, 2022, by and among Elanco Animal Health Incorporated, Elanco US Inc., the subsidiary loan parties party thereto, Farm Credit Mid-America, PCA, as incremental term lender, and Goldman Sachs Bank USA, as the term facility agent (incorporated by reference to Exhibit 10.1 of the Current Report on Form 8-K filed with the SEC on April 20, 2022).
10.4	Incremental Assumption Agreement, dated June 28, 2022 by and among Elanco Animal Health Incorporated, Elanco US Inc., the subsidiary loan parties party thereto, Bank of America, N.A., as incremental term lender, each other person party thereto as incremental term lender, and Goldman Sachs Bank USA, as the term facility agent. (incorporated by reference to Exhibit 10.1 of the Current Report on Form 8-K filed with the SEC on June 29, 2022)
10.5	Receivables Loan Agreement among Elanco SPEAR LLC, Elanco US Inc., The Various Lenders and Lender Agents from Time to Time Party Thereto and Coöperatieve Rabobank U.A., New York Branch, dated as of August 3, 2023 (incorporated by reference to Exhibit 10.1 of the Current Report on Form 8-K filed with the SEC on August 7, 2023).
10.6	Elanco Animal Health Incorporated Directors' Deferral Plan as amended (incorporated by reference to Exhibit 10.1 of the Quarterly Report on Form 10-Q filed with the SEC on May 14, 2019)*

Exhibit	
Number	Description
10.7	Director Letter Agreement between Emu Holdings Company and R. David Hoover, dated as of May 25, 2018 (incorporated by reference to Exhibit 10.19 of Elanco Animal Health Incorporated's registration statement on Form S-1 (File No. 333-226536) filed with the SEC on August 2, 2018)*
10.8	Form of 2018 Change in Control Severance Pay Plan for Select Employees (incorporated by reference to Exhibit 10.20 of Amendment No. 1 to Elanco Animal Health Incorporated's registration statement on Form S-1 (File No. 333-226536) filed with the SEC on August 28, 2018).*
10.9	Form of Elanco Animal Health Incorporated Nonqualified Stock Option Award Agreement (incorporated by reference to Exhibit 10.22 of Amendment No. 1 to Elanco Animal Health Incorporated's registration statement on Form S-1 (File No. 333-226536) filed with the SEC on August 28, 2018).*
10.10	Employment Offer Letter with Mr. Todd S. Young, dated October 15, 2018, by and between Elanco US Inc. and Todd S. Young (incorporated by reference to Exhibit 10.1 to Elanco Animal Health Incorporated's Report on Form 8-K filed with the SEC on October 30, 2018).*
10.11	Form of Restricted Stock Unit Award Agreement (Incorporated by reference to Exhibit 10.2 to Form 8-K filed with the SEC on February 19, 2019)*
10.12	Form of Restricted Stock Unit Award Agreement (incorporated by reference to Exhibit 10.22 to the Annual Report on Form 10-K filed with the SEC on February 20, 2019)*
10.13	Form of Replacement Restricted Stock Unit Award Agreement for Certain Named Executive Officers (incorporated by reference to Exhibit 10.25 to the Annual Report on Form 10-K filed with the SEC on February 20, 2019)*
10.14	Form of Elanco Animal Health Incorporated Restricted Stock Unit Award Agreement for non-employee directors with respect to annual awards (incorporated by reference to Exhibit 10.2 of the Quarterly Report on Form 10-Q with the SEC on May 14, 2019).*
10.15	Form of Elanco Animal Health Incorporated Restricted Stock Unit Award Agreement for non-employee directors with respect to one-time founder award (incorporated by reference to Exhibit 10.3 of the Quarterly Report on Form 10-Q filed with the SEC on May 14, 2019).*
10.16	Elanco Animal Health Incorporated Replacement Restricted Stock Unit Award Agreement, dated March 12, 2019, by Elanco Animal Health Incorporated (incorporated by reference to Exhibit 10.4 of the Quarterly Report on Form 10-Q filed with the SEC on May 14, 2019).*
10.17	Elanco Animal Health Incorporated Executive Deferral Plan (incorporated by reference to Exhibit 10.1 of the Quarterly Report on Form 10-Q filed with the SEC on August 13, 2019)
10.18	Form of Elanco Animal Health Incorporated Restricted Stock Unit Award Agreement for executives with respect to 2020 annual awards (incorporated by reference to Exhibit 10.1 of the Quarterly Report on Form 10-Q filed with the SEC on May 7, 2020)*
10.19	Form of Elanco Animal Health Incorporated Performance-Based Award Agreement for executives with respect to 2020 annual awards (incorporated by reference to Exhibit 10.2 of the Quarterly Report on Form 10-Q filed with the SEC on May 7, 2020).*
10.20	Form of Elanco Animal Health Incorporated Sign-On Restricted Stock Unit Award Agreement for executives (incorporated by reference to Exhibit 10.4 of the Quarterly Report on Form 10-Q filed with the SEC on May 7, 2020).*
10.21	Elanco Executive Severance Pay Plan and Summary (filed incorporated by reference to Exhibit 10.31 of the Annual Report on Form 10-K filed with the SEC on March 1, 2021).*
10.22	Form of Elanco Animal Health Incorporated Restricted Stock Unit Award Agreement for executives with respect to 2021 annual awards (incorporated by reference to Exhibit 10.1 of the Quarterly Report on Form 10-Q filed with the SEC on May 7, 2021).*
10.23	Form of Elanco Animal Health Incorporated Performance-Based Award Agreement for executives with respect to 2021 annual awards (incorporated by reference to Exhibit 10.2 of the Quarterly Report on Form 10-Q filed with the SEC on May 7, 2021).*

Exhibit Number	Description
10.24	Elanco Animal Health Incorporated Amended and Restated Corporate Bonus Plan (incorporated by reference to Exhibit 10.23 of the Annual Report on Form 10-K filed with the SEC on March 1, 2023).*
10.25	Elanco Animal Health Incorporated Amended and Restated 2018 Elanco Stock Plan (incorporated by reference to Appendix C to the Definitive Proxy Statement for the 2023 Annual Meeting of Shareholders filed with the SEC on April 6, 2023).*
10.26	Form of Elanco Animal Health Incorporated Restricted Stock Unit Award Agreement for executives with respect to annual awards (incorporated by reference to Exhibit 10.25 of the Annual Report on Form 10-K filed with the SEC on March 1, 2023).*
10.27	Form of Elanco Animal Health Incorporated Performance-Based Award Agreement for executives with respect to annual awards (incorporated by reference to Exhibit 10.26 of the Annual Report on Form 10-K filed with the SEC on March 1, 2023).*
10.28	Form of Elanco Animal Health Incorporated Nonqualified Stock Option Award Agreement for executives with respect to annual awards (incorporated by reference to Exhibit 10.27 of the Annual Report on Form 10-K filed with the SEC on March 1, 2023).*
10.29	Elanco Animal Health Incorporated Amended and Restated Employee Stock Purchase Plan (incorporated by reference to Appendix B to the Definitive Proxy Statement for the 2023 Annual Meeting of Shareholders filed with the SEC on April 6, 2023).*
18	Ernst & Young LLP Preferability Letter dated February 26, 2024 (filed herewith).
21.1	Subsidiaries of Elanco Animal Health Incorporated (filed herewith).
23.1	Consent of Ernst & Young LLP (filed herewith).
31.1	Section 302 Certification of the Chief Executive Officer pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (filed herewith).
31.2	Section 302 Certification of the Chief Financial Officer pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (filed herewith).
32	Certification of the Chief Executive Officer and the Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (filed herewith).
97	Elanco Animal Health Incorporated Required Compensation Recovery Policy (filed herewith).*
101	Interactive Data Files.
104	The cover page from the Company's Annual Report on Form 10-K for the year ended December 31, 2023, formatted in Inline XBRL.

^{*}Management contracts or compensatory plans or arrangements

ITEM 16. FORM 10-K SUMMARY

Not applicable.

^{**}Schedules and exhibits have been omitted pursuant to Item 601(b)(2) of Regulation S-K. The company will furnish copies of any such schedules to the U.S. Securities and Exchange Commission upon request.

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.

ELANCO ANIMAL HEALTH INCORPORATED

(Registrant)

Date: February 26, 2024 /s/ Jeffrey N. Simmons

Jeffrey N. Simmons

President and Chief Executive Officer

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

/s/ Jeffrey N. Simmons Date: February 26, 2024

Jeffrey N. Simmons

President and Chief Executive Officer (principal executive officer) and

Director

/s/ Todd S. Young Date: February 26, 2024

Todd S. Young

Executive Vice President, Chief Financial Officer (principal financial

officer)

/s/ James M. Meer Date: February 26, 2024

James M. Meer

Senior Vice President, Chief Accounting Officer (principal accounting officer)

/s/ R. David Hoover Date: February 26, 2024

R. David Hoover

Chairman of the Board

/s/ Kapila Kapur Anand Date: February 26, 2024

Kapila Kapur Anand

Director

/s/ John P. Bilbrey Date: February 26, 2024

John P. Bilbrey

Director

/s/ William F. Doyle	Date February 26, 2024
William F. Doyle	
Director	
/s/ Art A. Garcia	Date: February 26, 2024
Art A. Garcia	
Director	
/s/ Michael J. Harrington	Date: February 26, 2024
Michael J. Harrington	Date. February 20, 2024
Director	
Director	
/s/ Paul Herendeen	Date: February 26, 2024
Paul Herendeen	
Director	
/s/ Deborah T. Kochevar	Date: February 26, 2024
Deborah T. Kochevar	
Director	
/s/ Lawrence E. Kurzius	Date: February 26, 2024
Lawrence E. Kurzius	
Director	
/s/ Kirk McDonald	Date: February 26, 2024
Kirk McDonald	20.0. 1 02.00. 20, 202 .
Director	
/s/ Denise Scots-Knight Ph.D.	Date: February 26, 2024
Denise Scots-Knight Ph.D.	
Director	

Securities Information

Stock Listing

Elanco common stock is listed on the New York Stock Exchange under the ticker symbol ELAN.

Shareholder of Record

Number of shares outstanding at the record date: 494,097,056

Annual Meeting of Shareholders

The Elanco Annual Meeting of Shareholders will be held on May 30, 2024, 12:00pm ET only online via webcast at: www.virtualshareholdermeeting.com/ELAN2024.

Corporate Information

Corporate Office Elanco Animal Health

2500 Innovation Way Greenfield, IN 46140 USA 1(877)352-6261

Elanco Contacts Colleen Dekker

Head, Global Corporate Communications 1(317)989-7011 colleen.dekker@elancoah.com

Katy Grissom

Head, Investor Relations 1(317)273-9284 kathryn.grissom@elancoah.com

Shiv O'Neill

Executive Vice President, General Counsel and Corporate Secretary 1(317)450-4071 shiv.oneill@elancoah.com

Elanco on the Web

You can find more information about Elanco, including financial results, press releases, career opportunities, news on Elanco products and services, and other activities, at our website www.elanco.com.

Transfer Agent and Registrar

Communications concerning shareholder address changes, stock transfer, changes of ownership,lost stock certificates, payment of dividends, dividend check replacements, duplicate mailings or other account services should be directed to the following:

Shareholder correspondence should be mailed to:

Computershare C/O: Shareholder Services P.O. Box 43078 Providence, RI 02940-3078

Overnight correspondence should be sent to:

Computershare C/O: Shareholder Services 150 Royall Street Suite 101 Canton, MA 02021

1(800)736-3001

1(781)575-3100

web.quiries@computershare.com

www.computershare.com/investor

Forward-Looking Statements

Please refer to our 2023 Form 10-K for a description of the substantial risks and uncertainties related to the forward-looking statements included in this Annual Report. Our Form 10-K is available on our website at investor.elanco. com/financials/sec-filings and on the Securities and Exchange Commission's website at www. sec.gov.

Non-GAAP Financial information

This Annual Report includes non-GAAP financial measures such as constant current revenue growth, adjusted EBITDA, adjusted EPS and net debt. We believe these non-GAAP financial measures are useful to investors because they provide greater transparency regarding our operating performance. The primary material limitations associated with the use of such non-GAAP measures as compared to GAAP results include the following: (i) they may not be comparable to similarly titled measures used by other companies, including those in our industry, (ii) they exclude financial information and events, such as the effects of an acquisition or amortization of intangible assets, that some may consider important in evaluating our performance, value or prospects for the future, (iii) they exclude items or types of items that may continue to occur from period to period in the future and (iv) they may not exclude all unusual or non-recurring items, which could increase or decrease these measures, which investors may consider to be unrelated to our long-term operations. These non-GĂAP measures are not, and should not, be viewed as substitutes for GAAP reported measures. We encourage investors to review our unaudited consolidated financial statements in their entirety and caution investors to use GAAP measures as the primary means of evaluating our performance, value and prospects for the future, and non-GAAP measures as supplemental measures. Reconciliation of non-GAAP financial measures and reported U.S. generally accepted accounting principles (GAAP) financial measures are included in the tables accompanying our earnings release dated February 26, 2024, and in the related presentation posted on our website at www.elanco.com.

