UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

Form 10-K

ANNUAL REPORT UNDER SECTION 13 or 15(d) OF THE
SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2020

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 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
5.00% Tangible Equity Units	ELAT	New York Stock Exchange

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

None.

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

Yes ☒ No ☐

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

Yes ☐ No ☒

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

Yes ☒ No ☐

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

Yes ☒ No ☐

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

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

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

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

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, 2020, the last business day of the Registrant’s most recently completed second fiscal quarter, was approximately $8.6 billion. The registrant has no non-voting common stock.

The number of shares of common stock outstanding as of February 24, 2021 was 472,169,683.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive proxy materials for its 2021 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, 2020
TABLE OF CONTENTS

FORWARD-LOOKING STATEMENTS AND RISK FACTOR SUMMARY

This Annual Report on Form 10-K includes forward-looking statements within the meaning of the federal securities laws. This annual report contains forward-looking statements, including, without limitation, statements concerning the impact on our business caused by the integration of the animal health business of Bayer Aktiengesellschaft (Bayer), expected synergies and our cost savings, product launches, independent company stand-up costs and timing, expectations relating to human capital resources, the coronavirus (COVID-19) global pandemic, reduction of debt, expectations relating to liquidity and sources of capital, our expected compliance with debt covenants, our estimated interest expense, 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:

- heightened competition, including from generics;
- the impact of disruptive innovations and advances in veterinary medical practices, animal health technologies and alternatives to animal-derived protein;
- changes in regulatory restrictions on the use of antibiotics in farm animals;
- our ability to implement our business strategies or achieve targeted cost efficiencies and gross margin improvements;
- consolidation of our customers and distributors;
- an outbreak of infectious disease carried by farm animals;
- the impact on our operations, the supply chain, customer demand, and our liquidity as a result of the COVID-19 global health pandemic;
- the success of our research and development (R&D) and licensing efforts;
- misuse, off-label or counterfeiting use of our products;
- unanticipated safety, quality or efficacy concerns associated with our products;
- the impact of weather conditions and the availability of natural resources;
- use of alternative distribution channels and the impact of increased or decreased sales to our channel distributors resulting in fluctuation in our revenues;
- manufacturing problems and capacity imbalances;
- challenges to our intellectual property rights or our alleged violation of rights of others;
- risks related to our presence in foreign markets;
- breaches of our information technology systems;
- our ability to successfully integrate the businesses we acquire, including the animal health business of Bayer (Bayer Animal Health);
- effect of our substantial indebtedness on our business; and
- the effect on our business resulting from our separation from Eli Lilly and Company (Lilly).

See "Risk Factors" in Part I, Item 1A of this Annual Report on 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 annual report. 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 annual report. For the reasons described above, 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 annual report. Any forward-looking statement made by us in this annual report 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. Comparisons of results for current and any prior periods are not intended to express any future trends or indications of future performance, unless specifically expressed as such, and should be viewed as historical data.

PART I

ITEM 1. BUSINESS

Overview

Founded in 1954 as part of Lilly, Elanco Animal Health Incorporated (Elanco Parent) and its subsidiaries (collectively, Elanco, the Company, we, us, or our) is a premier animal health company that innovates, develops, manufactures and markets products for pets and farm animals. Headquartered in Greenfield, Indiana, we are one of the largest animal health companies in the world, with pro forma combined revenue of Elanco and Bayer Animal Health of approximately $4.4 billion for the year ended December 31, 2020. Excluding Bayer Animal Health, globally, we are #1 in medicinal feed additives, #2 in poultry, and #3 in other pharmaceuticals, which are mainly pet health therapeutics, measured by 2019 revenue, according to Vetnosis. We have one of the broadest portfolios of pet parasiticides in the pet health sector. We offer a diverse portfolio of approximately 190 brands that make us a trusted partner to veterinarians and farm animal producers in more than 90 countries.

Elanco Parent was formed in 2018, as a wholly-owned subsidiary of Lilly, to serve as the ultimate parent company of substantially all of the animal health businesses of Lilly.

On September 24, 2018, we completed our initial public offering (IPO), pursuant to which we issued and sold 19.8% of our total outstanding shares. On September 20, 2018, our common stock began trading on the New York Stock Exchange (NYSE) under the symbol “ELAN.” On September 24, 2018, immediately preceding the completion of the IPO, Lilly transferred to us substantially all of its animal health businesses in exchange for (i) all of the net proceeds (approximately $1,659.7 million) we received from the sale of our common stock in the IPO, including the net proceeds we received as a result of the exercise in full of the underwriters’ option to purchase additional shares, (ii) all of the net proceeds (approximately $2,000 million) we received from the issuance of our senior notes; and (iii) all of the net proceeds ($498.6 million) we received from the entry into our term loan facility. In addition, immediately prior to the completion of the IPO, we entered into certain agreements with Lilly that provide a framework for our ongoing relationship with them. These transactions are collectively referred to herein as the Separation.

On February 8, 2019, Lilly announced an exchange offer whereby Lilly shareholders could exchange all or a portion of Lilly common stock for shares of Elanco common stock owned by Lilly. On that date, we filed a Registration Statement on Form S-4 with the SEC in connection with that exchange offer. The disposition of Elanco shares was completed on March 11, 2019, and resulted in the full separation of Elanco along with the disposal of Lilly's entire ownership and voting interest in Elanco.

On August 1, 2020, we completed the previously announced acquisition of Bayer Animal Health in a cash and stock transaction. The initial purchase price of $6.9 billion, subject to working capital and customary purchase price adjustments, was funded by $5.2 billion in cash and 72.9 million in shares of Elanco common stock at a fair value of $1.7 billion. We funded the cash portion of the acquisition consideration with available cash, which included $4.3 billion of net proceeds raised in the borrowings under a term loan B facility established in connection with the acquisition. The discussion throughout this Annual Report on Form 10-K incorporates the acquired Bayer Animal Health business unless otherwise noted.

In connection with the acquisition we divested *Osurnia*™, *Vecoxan*™, and the U.S. rights to *Capstar*™, along with certain other immaterial assets. Additionally, we divested the European Economic Area and United Kingdom rights to the *Drontal*™ and *Profender*™ product families from Bayer Animal Health. The divestitures were completed during the third quarter of 2020 with gross cash proceeds from the sales of $434.7 million. Other immaterial Bayer Animal Health assets were divested during the first quarter of 2021.

We believe the acquisition expands our portfolio to provide farmers, pet owners, and veterinarians more comprehensive animal health solutions. By combining Elanco’s longstanding focus on the veterinarian with Bayer Animal Health’s direct-to-consumer experience, the transaction creates new opportunities for growth and expands our omni-channel presence, enabling us to meet customers where and how they want to shop. Our existing product portfolio is enhanced by the addition of Bayer Animal Health, which complements our commercial operations and international infrastructure, and our robust R&D pipeline is now strengthened with expected launch equivalents from Bayer Animal Health. Subsequent to the acquisition date, our consolidated and combined financial statements

include the assets, liabilities, operating results and cash flows of Bayer Animal Health. Refer to “Item 8. Financial Statements and Supplementary Data — Note 6. Acquisitions and Divestitures” for additional information.

We continue to operate our business in a single segment directed at fulfilling our vision of enriching the lives of people through food, making protein more accessible and affordable, and through pet companionship, helping pets live longer, healthier lives. For additional information about our business segment, refer to “Item 8. Financial Statements and Supplementary Data — Note 18. Geographic Information.” During the third quarter of 2020, we renamed our four primary product categories by replacing "food animal" and "companion animal" with "farm animal" and "pet health," respectively, to better reflect the terminology used by our customers. We advance our vision by offering products in these four primary categories:

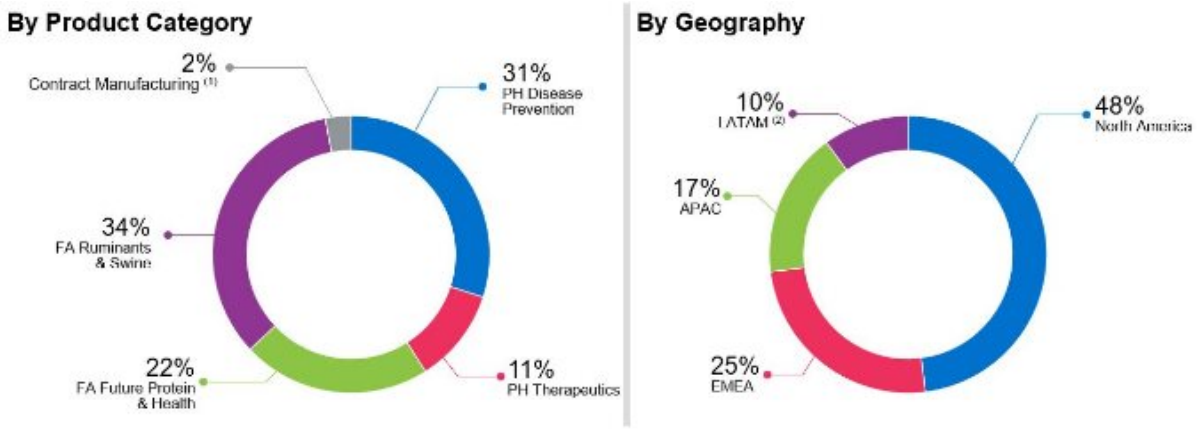
Pet Health Disease Prevention (PH Disease Prevention): We have one of the broadest parasiticide portfolios in the pet health sector based on indications, species and formulations, with products that protect pets from worms, fleas and ticks. Our *Seresto*™ and *Advantage*™, *Advantix*™, *Advocate*™ (collectively referred to as the *Advantage Family*) products represent treatments for the elimination and prevention, respectively, of fleas and ticks. Combining our parasiticide portfolio with our vaccines presence, we are a leader in the U.S. in the disease prevention category based on share of revenue.

Pet Health Therapeutics (PH Therapeutics): We have a broad pain and osteoarthritis portfolio across species, modes of action, indications and disease stages. Pet owners are increasingly treating osteoarthritis in their pets, and our *Galliprant*™ product is one of the fastest growing osteoarthritis treatments in the U.S. We also have treatments for otitis (ear infections) with *Claro*™, as well as treatments for certain cardiovascular and dermatology indications.

Farm Animal Future Protein & Health (FA Future Protein & Health): Our portfolio in this category, which includes vaccines, nutritional enzymes and animal-only antibiotics, serves the growing demand for protein and includes innovative products in poultry and aquaculture production, where demand for animal health products is outpacing overall industry growth. With our *Maxiban*™ product, we are a leader in the control and prevention of intestinal disease in poultry. We are focused on developing functional nutritional health products that promote farm animal health, including enzymes, probiotics and prebiotics. We are also a global leader in providing vaccines as alternatives to antibiotics to promote animal health based on share of revenue.

Farm Animal Ruminants & Swine (FA Ruminants & Swine): We have a range of farm animal products, including *Rumensin*™ and *Baytril*™, used extensively in ruminant (e.g., cattle, sheep and goats) and swine production.

Excluding Bayer Animal Health, we have a top four presence in all four key industry geographic regions: North America; Europe, the Middle East and Africa (EMEA); Latin America (LATAM); and Asia-Pacific (APAC), as measured by 2019 revenue, according to Vetnosis. The following graphs illustrate our revenue for the year ended December 31, 2020 by product category and geography:



(1) Represents revenue from arrangements in which we act as a contract manufacturer, including supply agreements associated with divestitures of products related to the acquisition of Bayer Animal Health. This category was previously called Strategic Exits.

(2) LATAM includes aquaculture in all regions.

Through our global sales force comprised of approximately 2,210 sales representatives, our veterinary consultants and our key distributors, we seek to build strong customer relationships and fulfill demand for our farm animal products primarily with farm animal producers, veterinarians and nutritionists, and for our pet health products primarily with veterinarians and, in some markets, pet owners. We are also expanding into retail channels in order to meet pet owners where they want to purchase.

Our inclusive approach to sourcing innovation helps us identify, attract, fund and develop new ideas that enhance our pipeline and reduce risk as compared to an in-house only approach. Through this process we have launched or acquired 14 new products since 2015, including the additions of *Entyce*™, *Nocita*™ and *Tanovea*™ in 2019, that delivered $440.8 million of revenue in 2020. This excludes our most recent acquisition of Bayer Animal Health, which added approximately 65 products to the Elanco portfolio that contributed post-acquisition revenues of $591.9 million in 2020.

We believe we have an experienced leadership team that fosters an adaptive, purpose-driven culture among approximately 10,200 employees worldwide as of December 31, 2020 and that our employees share a deep conviction for achieving our vision of food and companionship enriching life.

A summary of our 2020, 2019, and 2018 revenue and net income is as follows:

	Year Ended December 31,		
(Millions of Dollars)	**2020**	**2019**	**2018**
Revenue	$ 3,273.3	$ 3,071.0	$ 3,066.8
Net income (loss)	(560.1)	67.9	86.5

Products

We have a diverse portfolio of products marketed under approximately 190 brands, including products for both farm animals and pets.

Our farm animal products are designed to enable producers to keep animals healthy and deliver more food while using fewer resources. Our antibacterials, anticoccidials, vaccines and parasiticides aim to make food safer by preventing and controlling disease. We offer products and support to enhance the integrity of the food supply, while our productivity enhancers help make food more affordable and abundant by increasing the amount of meat or milk an animal can supply. Furthermore, our expertise and data analytics help our customers improve production efficiency and business performance. Farm animal products represented approximately 56% of our revenue for the year ended December 31, 2020.

Our pet health products help veterinarians better care for pets. We partner with pet owners and veterinarians for the purpose of providing a consistent flow of innovative and effective products and support. Our R&D focuses on products that prevent and treat disease, improve and extend quality of life and improve the type of care received by pets. We also partner closely with veterinarians to provide technical support and case management for our products. Pet health products represented approximately 42% of our revenue for the year ended December 31, 2020.

We group our products into four principal categories:

PH Disease Prevention: includes parasiticides and vaccine products for canines and felines.

PH Therapeutics: includes products for the treatment of pain, osteoarthritis, otitis, cardiovascular and dermatology indications in canines and felines.

FA Future Protein & Health: includes vaccines, antibiotics, parasiticides and other products used in poultry and aquaculture production, as well as functional nutritional health products, including enzymes, probiotics and prebiotics.

FA Ruminants & Swine: includes vaccines, antibiotics, implants, parasiticides and other products used in ruminants and swine production, as well as certain other farm animal products.

A significantly smaller portion of our revenue but a fast growing area within our business is derived from other non-pharmaceutical products, such as nutritionals. These products are categorized within FA Future Protein & Health and include enzymes, probiotics, and prebiotics, which impact animal microbiomes and other dietary factors to reduce disease incidence, improve gut health and enhance feed digestibility.

Rumensin, our top selling product, contributed approximately 7%, 10%, and 11% of our revenue in 2020, 2019, and 2018, respectively. No other product contributed 10% or more of our revenue. Our top five selling products, *Rumensin*, *Trifexis*™, *Maxiban*, *Interceptor Plus* and the aggregate *Advantage Family*, collectively contributed approximately 23% of our 2020 revenue. Our top 10 products, including *Seresto*, collectively contributed 37% of our 2020 revenue.

Set forth below is information regarding our principal products, which are defined as product lines and products that represented approximately 1% or more of our revenue in 2020. We used estimated pro forma 2020 revenues as the basis for acquired Bayer Animal Health products included below:

PH Disease Prevention Products

Product	Description	Primary Species
Advantix (1) (imidacloprid + permethrin + pyriproxyfen)	Monthly topical application that kills and repels fleas, ticks and mosquitoes, kills lice and repels biting flies. Provides broad-spectrum protection against these ectoparasites that can transmit diseases.	Dogs
Advantage (1) (imidacloprid + pyriproxyfen)	Monthly topical flea control that kills fleas, flea eggs and larvae on contact while also treating, preventing and controlling lice infestations.	Cats, Dogs
Advocate (1) (imidacloprid + moxidectin)	Monthly topical treatment to prevent flea infestations as well as heartworm (*Dirofilaria immitis*), lungworm (*Angiostrongylus*) and other gastrointestinal worm infections, including roundworms (*Toxocara canis* and *Toxascaris leonina*), whipworms (*Trichuris vulpis*), hookworms (*Ancylostoma caninum*, *Ancylostoma braziliense*, and *Unicinaria stenocephala*).	Cats, Dogs
Credelio (lotilaner)	Kills adult fleas and treats flea infestations (*Ctenocephalides felis*) and treats and controls tick infestations (*Amblyomma americanum* (lone star tick), *Dermacentor variabilis* (American dog tick), *Ixodes scapularis* (black-legged tick) and *Rhipicephalus sanguineus* (brown dog tick)) for one month in dogs and puppies 8 weeks of age or older and weighing at least 4.4 lbs.	Dogs
Duramune™ (vaccines)	Includes multiple products that collectively protect against distemper, adenovirus, parvovirus, corona, parainfluenza, leptospira canicola, and other diseases.	Dogs
Interceptor Plus (milbemycin oxime/praziquantel)	Prevents heartworm disease caused by *Dirofilaria immitis* and treats and controls adult roundworm (*Toxocara canis* and *Toxascaris leonina*), adult hookworm (*Ancylostoma caninum*), adult whipworm (*Trichuris vulpis*), and adult tapeworm (*Taenia pisiformis*, *Echinococcus multilocularis*, and *Echinococcus granulosus*) infections in dogs and puppies weighing at least 2 lbs. and 6 weeks of age or older. *Interceptor Plus* is a relaunch of a previously approved formula.	Dogs
Milbemax™ (milbemycin oxime + praziquantel)	Treats and controls parasitic infections due to adult hookworm, adult roundworm and adult tapeworm and prevents heartworm disease caused by *Dirofilaria immitis*.	Cats, Dogs

Seresto [1] *(imidacloprid + flumethrin)*	Flea and tick collar based on a patented low dose, slow release technology that kills and repels fleas and ticks, and kills lice for up to eight months with one single application, and reduces vector-borne disease transmission risk (e.g. leishmaniosis).	Cats, Dogs
Trifexis (spinosad + milbemycin oxime)	Prevents heartworm disease (*Dirofilaria immitis*) and kills fleas. *Trifexis* is indicated for the prevention and treatment of flea infestations (*Ctenocephalides felis*), and the treatment and control of adult hookworm *(Ancylostoma caninum)*, adult roundworm (*Toxocara canis* and *Toxascaris leonina*) and adult whipworm (*Trichuris vulpis*) infections in dogs and puppies 8 weeks of age or older and weighing at least 5 lbs.	Dogs

(1) Product was acquired from Bayer Animal Health on August 1, 2020.

PH Therapeutics Products

Product	Description	Primary Species
Atopica™ (cyclosporine A)	Controls atopic dermatitis in dogs weighing at least 4 lbs.	Dogs
Fortekor Plus™ (benazepril + pimobendan)	Treats congestive heart failure due to atrioventricular valve insufficiency or dilated cardiomyopathy.	Dogs
Claro / Neptra [1] (florfenicol + terbinafine + mometasone furoate	One-dose treatment for otitis externa associated with susceptible strains of bacteria (*Staphylococcus pseudintermedius*) and yeast (*Malassezia pachydermatis*).	Dogs
Galliprant (grapiprant)	Controls pain and inflammation associated with osteoarthritis.	Dogs
Onsior™ (robenacoxib)	Controls postoperative pain and inflammation associated with soft tissue surgery in dogs weighing at least 5.5 lbs. and 4 months of age or older and control postoperative pain and inflammation associated with orthopedic surgery, ovariohysterectomy and castration in cats weighing at least 5.5 lbs. and 6 months of age or older; for up to a maximum of 3 days.	Cats, Dogs

(1) Product was acquired from Bayer Animal Health on August 1, 2020.

FA Future Protein & Health

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
Clynav™ (plasmid deoxyribonucleic acid vaccine)	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 with salmonid alphavirus subtype 3 (SAV3).	Fish (Salmon)
Coban™ / *Elancoban*™ (monensin)	Aids in the prevention of coccidiosis in broiler and replacement chickens (caused by *Eimeria necatrix, E. tenella, E. acervulina, E. brunetti, E. mivati*, and *E. maxima*), in turkeys (caused by *Eimeria adenoeides, E. meleagrimitis* and *E. gallopavonis*) and in growing Bobwhite quail (caused by *Eimeria dispersa* and *E. lettyae*). Coban/Elancoban is an animal-only antibiotic and an ionophore.	Poultry
Imvixa™ (lufenuron)	Prevents and controls infestation caused by sea lice, *Caligus reogercresseyi,* in farmed salmon.	Fish (Salmon)
Maxiban (narasin + nicarbazin)	Prevents coccidiosis in broiler chickens caused by *Eimeria necatrix, E. tenella, E. acervulina, E. brunetti, E. mivati* and *E. maxima. Maxiban* is an animal-only antibiotic and an ionophore.	Poultry
Monteban™ (narasin)	Prevents coccidiosis in broiler chickens caused by *Eimeria necatrix, E. tenella, E. acervulina, E. brunetti, E. mivati* and *E. maxima. Monteban* is an animal-only antibiotic and an ionophore.	Poultry
Surmax™ / *Maxus*™ / *Inteprity* (avilamycin)	Prevents mortality caused by necrotic enteritis associated with *Clostridium perfringens* in broiler chickens. *Surmax, Maxis* and *Inteprity* are animal-only antibiotics.	Poultry

FA Ruminants & Swine

Product	Description	Primary Species
Baycox™ (1) (totrazuril)	Oral treatment for control of coccidiosis caused by *Isopora suis* infection in swine and clinical coccidiosis caused by *Eimeria bovis* or *Eimeria zuernii* in young cattle. Attacks all stages of the parasite.	Cattle, Swine
Baytril (1) (enrofloxacin)	Injectable antibiotic active against various bacterial diseases in cattle (major bovine pathogens) and swine (respiratory disease pathogens).	Cattle, Swine
Catosal™ / *Comforta*™ (1) (butaphosphan + cyanocobalamin)	Injectable for prevention or treatment of deficiencies of vitamin B12, Cyanocobalamin, and phosphorous.	Cattle, Horses
Cydectin™ (1) (moxidectin)	Injectable or pour-on for the treatment of infections and infestations due to internal and external parasites.	Cattle

Denagard (tiamulin)	Treats Swine Dysentery associated with *Serpulina hyodysenteriae* susceptible to tiamulin and swine bacterial enteritis caused by *Escherichia coli* and *Salmonella choleraesuis* sensitive to chlortetracycline and treatment of bacterial pneumonia caused by Pasteurella multocida sensitive to chlortetracycline. *Denagard* is a shared-class antibiotic.	Swine
Pulmotil™ (tilmicosin)	Controls swine respiratory disease associated with *Actinobacillus pleuropneumoniae* and *Pasteurella multocida.* Controls bovine respiratory disease (BRD) associated with *Mannheimia haemolytica, Pasteurella multocida* and *Histophilus somni* in groups of beef and non-lactating dairy cattle, where active BRD has been diagnosed in at least 10% of the animals in the group. *Pulmotil* is a shared-class antibiotic.	Cattle, Swine
Rumensin (monensin)	For cattle fed in confinement for slaughter, improves feed efficiency and prevents and controls coccidiosis due to *Eimeria bovis* and *Eimeria zuernii*. For dairy cows, increases milk production efficiency (production of marketable solids-corrected milk per unit of feed intake). For growing cattle on pasture or in dry lot (stocker and feeder and dairy and beef replacement heifers), increases rate of weight gain and prevents and controls coccidiosis due to *Eimeria bovis* and *Eimeria zuernii*. For mature reproducing beef cows, improves feed efficiency when receiving supplemental feed and prevents and controls coccidiosis due to *Eimeria bovis* and *Eimeria zuernii*. For goats, prevents coccidiosis due to *Eimeria crandallis, Eimeria christenseni* and *Eimeria ninakohlyakimovae* in goats maintained in confinement. For calves (excluding veal calves), prevents and controls coccidiosis due to *Eimeria bovis* and *Eimeria zuernii.* *Rumensin* is an animal-only antibiotic and an ionophore.	Cattle
Tylan™ *Premix* (tylosin phosphate)	Controls porcine proliferative enteropathies associated with *Lawsonia intracellularis* and controls porcine proliferative enteropathies associated with *Lawsonia intracellularis* immediately after medicating with *Tylan Soluble* (tylosin tartrate) in drinking water. *Tylan Premix* is a shared-class antibiotic.	Swine, Cattle, Poultry
Vira Shield™ (vaccines)	Includes multiple products that protect against infection, bovine rhinotracheitis, bovine viral diarrhea, bovine respiratory syncytial virus, bovine respiratory disease, leptospira canicola and other diseases.	Cattle

(1) Product was acquired from Bayer Animal Health on August 1, 2020.

Antibiotics

Antimicrobial resistance in humans, or the risk that bacterial pathogens that cause infectious disease in humans evolve or otherwise emerge that are resistant to antibiotics or other antimicrobials, is a significant health concern, and animal agriculture can play a role in mitigating this risk. As a company dedicated to the health and well-being of animals, we seek to help veterinarians and farmers responsibly use antibiotics when treating animals. In our efforts to address antibiotic resistance while protecting animal health, we introduced a global antibiotic stewardship plan focused on increasing responsible antibiotic use; reducing the need for shared-class antibiotics; and replacing antibiotics with alternatives to help livestock producers treat and prevent animal disease. Antibiotics, used responsibly, along with good animal care practices, help enhance food safety and animal well-being.

There are two classes of antibiotics used in animal health:

Animal-only antibiotics and ionophores: Not all pathogens that cause disease in animals are infectious in humans, and accordingly animal-only antibiotics are not used in human medicine. Ionophores are a special class of animal-only antimicrobials uniquely developed only for use in animals. In Europe and certain other jurisdictions, ionophores are not currently classified as antibiotics. Because of their animal-only designation, mode of action, and spectrum of activity, their use is not considered to create the same risk of resistance in human pathogens.

Shared-class antibiotics: These are used in both humans and animals. Some antibiotics are used to treat infectious disease caused by pathogens that occur in both humans and animals. Of the 18 major antibiotic resistance threats that the Centers for Disease Control and Prevention tracks, two are associated with infectious disease in animals. As part of our global antibiotic stewardship plan and in compliance with the U.S. Food & Drug Administration (FDA) guidance, shared-class antibiotics are labeled only for the treatment of an established need in animals and only with veterinarian oversight.

We have intentionally shifted away from shared-class antibiotics, and are focusing on animal-only antibiotics, as well as antibiotic-free solutions. In 2020, 12% of our revenue was from products classified as shared-class antibiotics (4% from sales in the U.S. and 8% from international sales), which is down from 16% in 2015. Revenue from animal-only antibiotics and ionophores represented 17% of our total revenue in 2020 (14% from ionophores), which is down from 23% in 2015. The decline in animal-only antibiotics is primarily a result of the inclusion of revenues from Bayer Animal Health products, which are disproportionately more pet health-focused than the existing legacy Elanco portfolio. Through our policies and efforts in this area, we seek to protect the benefits of antibiotics in human medicine, while responsibly protecting the health of farm animals and the safety of our food supply.

Sales and Marketing

Our sales organization includes sales representatives, veterinary consultants and other value added specialists. In markets where we do not have a direct commercial presence, we generally contract with distributors that provide logistics and sales and marketing support for our products. On a more limited basis, in certain markets, we sell certain products through retail and e-commerce channels. Our presence in these channels has been expanded by our acquisition of Bayer Animal Health.

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. 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, including through the use of our products. As a result of these relationships, our sales and consulting visits provide us with access to customer decision makers. In addition, our sales and marketing organization provides enhanced value by providing support to farm animal producers to help maximize their yields and reduce costs. Our analytics help customers analyze large amounts of health and production data. As of December 31, 2020, we had approximately 2,210 sales representatives.

Customers

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. We primarily sell our pet health products to third-party distributors, as well as directly to veterinarians who typically then sell our products to pet owners. With the acquisition of Bayer Animal Health, we have expanded our presence in retail and e-commerce channels in order to meet pet owners where they want to purchase. Certain principal pet health products acquired from Bayer Animal Health, including *Seresto* and the *Advantage Family*, are offered through these channels. Our largest customer, an affiliate of AmerisourceBergen Corp., is a third-party veterinary distributor and represented approximately 11% of our revenue for the year ended December 31, 2020. Our next two largest customers represented approximately 6% and 5% of our revenue for the year ended December 31, 2020. No other customer represented more than 5% of our revenue for the same period.

Research and Development

Our R&D organization is comprised of internal research, global development, global regulatory and external innovation collaborations and venture investing. As of December 31, 2020, we employed approximately 1,200 employees in our global R&D and Regulatory Affairs organizations. Our global R&D sites are comprised of the following:

Facilities	Co-located with Manufacturing Sites	Other R&D Operations
Greenfield, Indiana (R&D headquarters)	Fort Dodge, Iowa	Basel, Switzerland
Kemps Creek, Australia	Shawnee, Kansas	Sao Paulo, Brazil
Monheim, Germany	Cuxhaven, Germany	Shanghai, China
	Manukau, New Zealand	Bangalore, India

Certain R&D sites will be impacted by restructuring and integration activities expected to occur over the next year as we implement initiatives to realize cost efficiencies from the Bayer Animal Health acquisition.

We incurred R&D expenses of $327.0 million in 2020, $270.1 million in 2019 and $246.6 million in 2018.

New product innovation is a core part of our business strategy. Our R&D investment is focused on projects that target novel product introductions, as well as new indications, presentations, combinations and species expansion. Our approach is a build, buy, or ally strategy to develop compelling targets and concepts that originate from our scientists and innovators, academia, agribusiness, or human pharmaceutical and biotechnology at all stages of R&D. The ability to source our concepts from different areas allows us to create a pipeline that can be competitive in the categories in which we have chosen to compete, while reducing our risk by not owning and funding all aspects of our R&D projects.

We seek to concentrate our resources in areas where we believe the science and our capabilities best match the opportunities in the animal health market. Specifically, our R&D focuses on six areas across pets and farm animals. For pets, we have R&D activities in therapeutics, vaccines and parasiticides, while in farm animals we are pursuing pharmaceuticals, vaccines and nutritional health.

Our R&D efforts consist of more than 150 active programs balanced across species and technology platforms. For both farm animals and pets, we apply both large and small molecule approaches. In vaccines, our efforts encompass a full range of modified live, inactivated and nucleic acid strategies. In nutritional health, we focus on products based on enzymes, probiotics, prebiotics and other approaches that modulate biological activity in the animal digestive tract. 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 maximizes the capabilities within our internal and external manufacturing network.

We engage in licensing and business development to acquire assets for our pipeline and new R&D platforms and to establish strategic R&D collaborations. We make and maintain capital investments in venture capital vehicles that focus on agribusiness and animal health, and we engage in risk sharing collaborations to expand our external capital sources to augment internal investments. To support collaborations with innovation sources focused on human health we have developed capabilities to conduct translational comparative medical research trials in animals with naturally occurring conditions in animals that mimic a human disease or disorder. This type of collaboration de-risks unproven or less well-validated human hypotheses while potentially defining a clinically validated new approach in veterinary medicine.

Our R&D and commercial leadership allocate R&D investment annually with the goal of aligning near and long-term strategic opportunities and objectives. Portfolio investment decisions are made based on the probability of technical success and regulatory approval, timing of approval/launch and earlier milestones, feasibility and cost of development and manufacturing, intellectual property protection and market attractiveness/commercial forecast. R&D projects are supported by pharmaceutical project management approaches and we aim for all of our supporting R&D functional capabilities and capacities to be managed and matched to the evolving demands of the pipeline. We believe this overall R&D management system has enabled us to consistently gain product approvals while maintaining clear visibility to pipeline breadth and depth to support sustained launches into the future.

Manufacturing and Supply Chain

Our products are manufactured both at sites operated by us and sites operated by third-party contract manufacturing organizations (CMOs). We have a global manufacturing network of 20 sites comprised of the following:

International		U.S.
Barueri, Brazil	Kiel, Germany	Clinton, Indiana
Belford Roxo, Brazil	Santa Clara, Mexico	Terre Haute, Indiana
Prince Edward Island, Canada	Manukau, New Zealand	Fort Dodge, Iowa
Chengdu, China	Banwol, South Korea	Kansas City, Kansas
Wusi, China	Chungli, Taiwan	Shawnee, Kansas
Huningue, France	Speke, Liverpool, U.K.	Winslow, Maine
Cuxhaven, Germany	Binh Duong, Vietnam	

Manufacturing sites may be impacted by restructuring and integration activities expected to occur over the next year as we implement initiatives to realize cost efficiencies from the Bayer Animal Health acquisition.

Our global manufacturing and supply chain is also supported by a network of CMOs. As of December 31, 2020, this network was comprised of approximately 130 CMOs, including 50 relationships acquired from Bayer Animal Health. Our external manufacturing network centrally governs our global CMO relationships and provides oversight to these CMOs.

We select CMOs based on several factors: (i) their ability to reliably supply products or materials that meet our quality standards at an optimized cost; (ii) their access to specialty products and technologies; (iii) capacity; (iv) financial analyses; and (v) local presence. Our External Manufacturing Network seeks to ensure that all the CMOs we use adhere to our standards of manufacturing quality.

We purchase certain raw materials necessary for the commercial production of our products from a variety of third-party suppliers. We utilize logistics service providers as a part of our global supply chain, primarily for shipping and logistics support.

We intend to continue our efficiency improvement programs in our manufacturing and supply chain organization. We have strong globally managed and coordinated quality control and quality assurance programs in place at all internal manufacturing sites and external manufacturing hubs, and we regularly inspect and audit our internal sites and CMO locations.

Competition

We face intense competition. Principal methods of competition vary depending on the particular region, species, product category, or individual product. Some of these methods include new product development, quality, price, service and promotion.

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, the animal health division of E.I. du Pont de Nemours and Company, a subsidiary of DowDuPont, Inc. There are also several new 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, as appropriate.

Our product portfolio and certain product candidates enjoy the protection of approximately 6,500 patents and applications, filed in over 90 countries, with concentration in our major markets as well as other markets with strong patent systems, such as Australia, Brazil, Canada, Europe, Japan and the U.S. Many of the patents and patent applications in our portfolio are the result of our own work, while other patents and patent applications in our portfolio were at least partially developed, and licensed to us, by third parties. A subset of our current products or product candidates are covered by patents and patent applications in our portfolio.

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 countries where such patents are obtained. Below is a summary of our recent and upcoming key patent expirations:

- *Galliprant's* active ingredient, grapiprant, is encompassed by both compound and physical form patents in the U.S., Europe, Canada and other key markets, with terms that expire between October 2021 and March 2026.
- Various formulation and method of use patents encompass the spinosad pesticide products, *Comfortis* and *Trifexis*. The *Comfortis* formulation patent extended through August 2020 in the U.S., Canada and Australia, and, upon grant of applicable supplementing protection certificate (SPC), through August 2025 in Europe. At this time, there is no indication of market entry of a generic version of *Comfortis* in the U.S., Canada or Australia. The *Trifexis* formulation and method of use patents extend through September 2021 in the U.S., Canada and Australia, and, upon grant of applicable SPC, through September 2026 in Europe.
- 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., SPCs have been granted which expire in September 2026.
- *Advantage Family* products, acquired from Bayer Animal Health, are off-patent in most countries. If our customers increase their use of new or existing generic product alternatives, *Advantage Family* revenues could be adversely affected.

We typically maintain all of our patents and assert our patent rights against third parties as appropriate.

Additionally, many of our vaccine products, including the *Duramune* 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.

In order to facilitate the Separation and allow Lilly's and our operations to continue with minimal interruption, Lilly licensed to us the right to use certain intellectual property rights in the animal health field. In addition, Lilly granted us a transitional license to use certain of Lilly's trademarks for a period of time following the IPO.

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 15,000 trademark applications and registrations in major regions, primarily identifying products dedicated to the care of livestock and pets.

Regulatory

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 actively seeks to engage in dialogue with various global agencies regarding their policies that relate to animal health products. In the majority of our markets, the relevant health authority is separate from those governing human medicinal products.

United States

U.S. Food and Drug Administration. 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.

U.S. Department of Agriculture. The regulatory body in the U.S. for veterinary biologicals is the U.S. Department of Agriculture (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, 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. Post-approval monitoring of products is required. Reports of product quality defects, adverse events or unexpected results are maintained and submitted in accordance with the agency requirements.

Environmental Protection Agency. The main regulatory body in the U.S. for veterinary pesticides is the Environmental Protection Agency (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 EPA for products that are subject to regulation under both the FFDCA and the Federal Insecticide, Fungicide and Rodenticide Act. All manufacturers of animal health pesticides must show their products will not cause unreasonable adverse effects to man or the environment as stated in the act. Within the U.S., individual state pesticide authorities must, before distribution in that state, also approve pesticide products that are approved by the EPA. Post-approval monitoring of products is required, with reports provided to the EPA and some state regulatory agencies.

Food Safety Inspection Service. The FDA is authorized to determine the safety of substances (including "generally recognized as safe" substances, food additives and color additives), as well as prescribe their safe conditions of use. However, although the FDA has the responsibility for determining the safety of substances, the Food Safety and Inspection Service, the public health agency in the USDA, still retains, under the tenets of the Federal Meat Inspection Act and the Poultry Products Inspection Act and their implementing regulations, the authority to determine that new substances and new uses of previously approved substances are suitable for use in meat and poultry products.

International

European Union (EU). We are governed by the following EU regulatory bodies:

The European Medicines Agency (EMA) is a centralized agency of the EU responsible for the scientific evaluation of 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 and Immunological Veterinary Medicinal Products. If the CVMP concludes that all requirements for quality, safety and efficacy are met, it issues a positive opinion that is forwarded to the European Commission, who takes the final decision following the European comitology procedure. The centralized marketing authorization (commission decision) of the European Commission is valid in all of the EU. All countries that are not part of the EU but belong to the European Economic Area (EEA), i.e., 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 Commission decision. 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.

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).

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, the agency evaluates applications for feed additives, including 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, the agency conducts the evaluation of biocides for the EU.

With regard to Brexit, the U.K. formally left the EU on January 31, 2020. A transition period was in effect from February 1, 2020 until December 31, 2020, during which the U.K. and the EU would negotiate a trade agreement. On December 24, 2020, the EU and U.K. agreed to a trade deal with regulatory and customs cooperation mechanisms, no tariffs/quotas on products, as well as certain provisions ensuring open and fair competition. Post-separation, the U.K. has indicated it will look to continue working closely with the EMA, and that existing agreements between the EMA and other countries such as Switzerland, the U.S. and Canada provide a precedent on which the U.K. could build. Given the lack of comparable precedent, it is unclear what financial, trade, regulatory and legal implications the agreed Brexit trade deal will have on our business, particularly our U.K. and other European operations; however, Brexit and its related effects could have a material adverse impact on our consolidated and combined financial statements.

Brazil. 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. MAPA was also recently invited to be a Latin American representative at International Cooperation on Harmonisation of Technical Requirements for Registration of Veterinary Medicinal Products (VICH) meetings. Several normative instructions issued by MAPA have set regulatory trends in Latin America.

Japan. The Ministry of Agriculture, Forestry and Fishery (MAFF) is the regulatory body in Japan that is responsible for the regulation and control of pharmaceuticals (including biologicals and pesticide/disinfectant) and feed additive/feed for animal use. MAFF's regulatory activities are conducted through the Livestock & Aquaculture Product Safety Control Division under Consumer Safety Bureau. The animal drug reviews and approvals, reexamination reviews, GxP compliance checks, GxP site inspections and product assay checks (including vaccine national assays) are done by National Veterinary Assay Laboratory (NVAL). MAFF coordinates with other agencies such as Ministry of Health, Labor and Welfare (MHLW) and Food Safety Commission (FSC) to perform various license compliance checks (e.g. marketing authorization holder, manufacturer and oversea site accreditation) and ensure good promotional activities. Routine inspections, antimicrobial feed additive national assays and manufacturing inspections are done by the Food & Agriculture Material Inspection Center. For farm animal products, animal drug review is done by NVAL but the human food safety review is done by FSC (ADI establishment and antimicrobial risk assessment) and MHLW (MRL establishment). These three agencies (NVAL, FSC and MHLW) work together to approve farm animal products. In addition to those central government agencies, various licenses are delegated to the local municipal government, such as animal drug wholesaler and retailer licenses and feed additive distributor licenses.

China. The Ministry of Agriculture (MOA) 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 MOA that regulate animal health:

The Institute of Veterinary Drug Control 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.

Australia. The Australian Pesticides and Veterinary Medicines Authority (APVMA) is an Australian government statutory authority established in 1993 to centralize the registration of all agricultural and veterinary products into the Australian marketplace. Previously, each state and territory government had its own system of registration. The APVMA assesses applications from companies and individuals seeking registration so they can supply their product to the marketplace. Applications undergo rigorous assessment using the expertise of the APVMA's scientific staff and drawing on the technical knowledge of other relevant scientific organizations, Commonwealth government departments and state agriculture departments. If the product works as intended and the scientific data confirms that when used as directed on the product label it will have no harmful or unintended effects on people, animals, the environment or international trade, the APVMA will register the product. As well as registering new agricultural and veterinary products, the APVMA reviews older products that have been on the market for a substantial period of time to ensure they still do the job users expect and are safe to use. The APVMA also reviews registered products when particular concerns are raised about their safety and effectiveness. The review of a product may result in confirmation of its registration or it may see registration continue with some changes to the way the product can be used. In some cases, the review may result in the registration of a product being cancelled and the product taken off the market.

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), as well as company records and reports. Other countries' regulatory agencies typically either refer to the FDA, USDA, EU and other international animal health entities, including the World Organization for Animal Health, Codex Alimentarius or VICH (see below), in establishing standards and regulations for veterinary pharmaceuticals and vaccines, or review the quality, safety and effectiveness of the products themselves according to their own national requirements.

Global Policy and Guidance

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). They provide 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, estimate the maximum residue levels, review toxicological data and estimate acceptable daily intakes for humans of the pesticides under consideration. Elanco works with these committees to establish acceptable safe levels of residual product 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 ethical 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 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-USA) 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 and South Africa, or are linked to VICH on 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.

Human Capital

As of December 31, 2020, we employed approximately 9,400 full time employees. In addition, we employed approximately 800 fixed-duration employees, which are individuals hired for a pre-defined length of time (one to four years). Together, they total approximately 10,200 employees worldwide. Of the 10,200 global employees, approximately 3,200 are U.S.-based and approximately 7,000 are employed in other jurisdictions. Some of these employees are members of unions, works councils, trade associations or are otherwise subject to collective bargaining agreements, including approximately 140 union employees in the U.S. located at our Fort Dodge, Iowa manufacturing/R&D facility. Approximately 35% of our global population is in customer-facing roles, including but not limited to traditional sales roles, technical consultants, account managers and commercial and general managers.

The safety of employees, customers and suppliers with whom we frequently interact was our highest priority as COVID-19 spread across the globe. To limit exposure, we substantially restricted travel, required social distancing and supplied personal protective equipment to our workers who, as essential workers because the animal health industry has been designated an essential business, continued to be physically present in our manufacturing and research facilities while requiring non-essential employees to work remotely whenever possible. In 2020, our employees demonstrated resiliency, agility and engagement in support of business continuity despite the challenges that arose during the COVID-19 pandemic.

At Elanco, we are committed to fostering an inclusive culture where employees can make a difference, encouraging ownership, growth, and well-being. The following gives an overview of our approach to managing human capital resources.

Our Culture. We commit to create a culture built on the foundation of three values and four behavioral pillars:

Values that Guide our Decisions:

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 that Guide our Actions:

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.

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

Diversity, Equity and Inclusion. We are focused on discovering new ways in which healthier animals can solve the world's greatest health and environmental challenges, and this innovation is only possible through an inclusive culture of employees with diverse backgrounds, strengths, and perspectives. Diversity, equity and inclusion are critical to creating and maintaining our purpose-driven culture and strengthening our promises to our employees and customers.

Formed in 2015, our Global Elanco Diversity, Equity and Inclusion Council (EDEIC) serves as a catalyst for a culture where diversity, equity and inclusion are embraced and recognized as a business-result driver. Within this

framework, employee development is better supported, opinions and diverse backgrounds are embraced, and we are a stronger company. Current EDEIC focus areas include our *Be You!* Seminar series to raise awareness and provide a forum for an open discussion on the importance of a diverse and inclusive workplace at Elanco, strong Employee Resource Groups, an annual Multi-Cultural Summit, and aspirational goals for representation of women (globally) and minority group members (U.S.) in leadership. In addition, a clear direction has been established for the post COVID-19 pandemic "future of work" that will enable greater flexibility and access to more diverse talent in a wider range of locations.

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 ensure that we 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 and continually meet the ever-changing needs of our customers and other stakeholders in a dynamic and growing industry.

Beyond professional growth and development, Elanco employees actively engage in Elanco's *Healthy Purpose*,™ which is our initiative to advance the well-being of animals, people and the planet, enabling us to realize our vision of "Food and Companionship Enriching Life." This vision is built on a fundamental belief uniting the purpose of all Elanco employees – healthier animals are the key to solving some of the world's most pressing issues. Our 2020 Annual Voice of the Employee Survey found that more than 80 percent of employees feel a personal commitment to Elanco's corporate responsibility goals of improving food security and supporting the human-animal bond. Since 2014, our employees have engaged in more than 855 global volunteer projects and more than 95,000 employee volunteer hours have been logged in support of cause-related projects and disaster relief efforts.

Environmental, Health and Safety

We are subject to various federal, state, local and foreign environmental, health and safety (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.

Certain environmental laws impose joint and several liability, without regard to fault, for cleanup costs on persons who have disposed of or released hazardous substances into the environment, including at third-party sites or offsite disposal locations, or that currently own or operate (or formerly owned or operated) sites where such a release occurred. We could be subject to liability for the investigation and remediation of legacy environmental contamination caused by historical industrial activity at sites that we own or on which we operate. 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. We are also monitoring and investigating environmental contamination from past industrial activity at certain sites. As a result, we incurred capital and operational expenditures in 2020 for environmental compliance purposes and for the clean-up of certain past industrial activities. Environmental-related capital expenditures and other environmental-related expenditures were $0.0 million and $0.4 million in 2020, respectively.

In connection with past divestitures, we have undertaken certain indemnification obligations that may require us in the future, to conduct or finance environmental cleanups at sites that we no longer own or operate. In connection with certain of our acquisitions, we have also entered into indemnification agreements pursuant which we are or

may be indemnified for various environmental cleanups; 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.

Available Information

Our website address is www.elanco.com. On our website, 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 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 available on our website. 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 Annual Report on 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.

Risk Factor Summary

For a summary of risk factors, see our “Forward-Looking Statements and Risk Factor Summary" on page 4.

Risks Related to Elanco's Business and 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. 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. Several new start-up companies also compete in the animal health industry. 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 and an increase in competition. For example, many of our competitors have relationships with key distributors and, because of their size, the 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.

To the extent that 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. Competitive pressure could arise from, among other things, more favorable 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 us and the ability of competitors to access more or newer technology than us.

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 obsolete our products 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.

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 will 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. See "Business of Elanco - Products - Antibiotics." 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 December 2013, the FDA announced final guidance establishing procedures for the voluntary phase-out in the U.S. over a three-year period of the use of shared-class antibiotics in animal feed or water for growth promotion in farm animal production. The guidance allows for continued use of shared-class antibiotics in food-producing animals under the supervision of a veterinarian for treatment, control and, under certain circumstances, for prevention of disease. The FDA indicated that it took this action to help preserve the efficacy of shared-class antibiotics to treat infections in humans. As of January 1, 2017, under the FDA's guidance and the related rule known as the Veterinary Feed Directive, the use of shared-class antibiotics in the water or feed of food-producing animals requires written authorization by a licensed veterinarian. In addition, other countries in which we sell or plan to sell our products, such as 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).

From 2015 to 2020, our revenue from shared-class antibiotics declined at a compound annual growth rate (CAGR) of 3%, excluding the impact of foreign exchange rates. This was driven primarily by changing regulations in many markets, including the Veterinary Feed Directive, as well as changing market demand and our tiered approach to antibiotic stewardship, which included removing growth promotion from labels and requiring veterinary oversight in the U.S. and other markets. Globally, during 2020, our revenue from shared-class antibiotics increased 23%, excluding the impact of foreign exchange rates, but represented 12% (4% from sales in the U.S. and 8% from international sales) of total revenue, down from 16% in 2015. The increase was driven by of the addition of Bayer Animal Health product revenue. From 2015 to 2020, our revenue from animal-only antibiotics declined at a CAGR of 3%, excluding the impact of foreign exchange rates, driven by the inclusion of Bayer Animal Health product revenues which are disproportionately more pet health focused than the existing legacy Elanco portfolio. During 2020, our revenue from animal-only antibiotics declined 15%, excluding the impact of foreign exchange rates, and represented 17% of total revenue, down from 23% in 2015. In 2020, 85% 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.

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 regulatory data 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 *Rumensin*, *Maxiban*, *Denagard* and *Tylan Premix* 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 example, we have experienced significant competitive headwinds from generic ractopamine in the U.S. In the third quarter of 2013, a large established animal health company received U.S. approval for generic ractopamine. U.S. revenue from *Optaflexx*, our ractopamine beef product, has declined at a compound annual growth rate of 28% from 2015 to 2020 as a result of generic competition and international regulatory restrictions. In the third quarter of 2019, an established animal health company received U.S. approval for generic monensin in cattle and goats for certain indications. U.S. revenue from *Rumensin*, our monensin product, declined at a compound annual growth rate of 7% from 2015 to 2020 partly due to competition and may continue to decline as a result of the generic competition. We may face similar competition in the future for existing products that do not benefit from exclusivity or for existing products with material patents expiring in the future. See “Business of Elanco - 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, 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, our business, financial condition and results of operations could be materially adversely affected.

We may not successfully implement our business strategies or achieve targeted cost efficiencies and gross margin improvements.

We are pursuing strategic initiatives that management considers critical to our long-term success, including, but not limited to: improving manufacturing processes, reducing our manufacturing footprint, achieving lean initiatives, consolidating our CMO network, strategically insourcing projects, pursuing cost savings opportunities with respect to raw materials through a new procurement process and improving the productivity of our sales force. Following the acquisition of Bayer Animal Health, we have announced a restructuring program which includes the elimination of positions across 37 countries, primarily in sales and marketing, research & development, manufacturing and quality, and back office support. There are significant risks involved with the execution of this restructuring programming, including costly expenses related to severance, asset impairment and other charges. We may pursue additional strategic initiatives in the future to improve gross margins and achieve our targeted cost efficiencies. 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 involved with the execution of these initiatives, including significant business, economic and competitive uncertainties, many of which are outside of our control. Accordingly, we may not succeed in implementing these strategic initiatives. Realizing the anticipated benefits from these initiatives, if any benefits are achieved at all, may take several years. We may be unable to achieve our targeted cost efficiencies and gross margin improvements. Additionally, we may have insufficient access to capital to fund investments in strategic initiatives, or our business strategy may change from time to time, which could delay our ability to implement initiatives that we believe are important to our business.

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

Third-party distributors, veterinarians and farm animal producers are our primary customers. In recent years, there has been a trend towards the concentration of veterinarians in large clinics and hospitals. In addition, farm animal producers, particularly swine and poultry producers, and our distributors have seen recent consolidation in their industries. 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 towards 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.

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.

The COVID-19 pandemic has had, and is expected to continue to have, an adverse impact on our business, our future results of operations and our overall financial performance.

The COVID-19 pandemic has impacted and may further impact the U.S. and the broader economies of affected countries, including negatively impacting economic growth, the proper functioning of financial and capital markets, foreign currency exchange rates and interest rates. There continues to be uncertainty around its duration, ultimate impact and the timing of recovery. Therefore, the pandemic has led to extended disruptions, and could continue to result in further disruptions, of economic activity and the impact on our consolidated and combined results of operations, financial position and cash flows could be material.

As a result of the adverse impact that the COVID-19 pandemic is having on our economy and the economies in the countries in which we operate, the pandemic may affect our operations, including our supply chain distribution systems, production levels and research and development activities. In addition, any preventive or protective actions that governments implement or that we adopt in response to the COVID-19 pandemic, such as travel restrictions, quarantines, limited operations of governmental agencies or site closures, may interfere with the ability of our employees, vendors, and suppliers to perform their respective responsibilities and obligations relative to the conduct of our business. In particular, as a result of the COVID-19 pandemic, in-person interactions by our customer-facing professionals could be suspended and certain vet clinics and farms could limit such interactions, especially as some markets in which we operate experience additional waves of the COVID-19 pandemic. Our ability to market our products has been and may continue to be limited, which, in turn, could have an adverse effect on our ability to compete in the marketing and sales of our products. Additionally, government regulations that have been imposed in response to the COVID-19 pandemic may cause delays in the receipt of products, causing delays in our global supply chain, delaying the transportation of finished goods, disrupting our freight processes, which would result in higher shipping costs, and causing resources to be diverted that are necessary to administer certain of our products. In addition, some research and development projects could be impacted based on need for the reagents from suppliers and clinical trial activity requiring veterinary clinic access and support. Furthermore, social distancing guidelines could have an adverse impact on our research and development activities as our laboratories are not operating at full capacity.

Our customers, and therefore our business and revenues, are sensitive to negative changes in economic conditions. As a result, we experienced declines in revenue in 2020. With respect to our farm animal business, there have been a number of shutdowns of processing plants as a result of COVID-19 outbreaks within their operations, and there could be more of these shutdowns, which, in turn, have led and may lead to a further decrease in demand

for our customers' livestock. Such shutdowns could not only lead to a decrease in demand for our products, but could also significantly impact their ability to pay for our products. In addition, an effort by dairy farmers to decrease milk production could negatively impact demand for *Rumensin*. Additionally, decreased consumption in food service outlets has impacted demand and export opportunity for our food producing customers around the world. COVID-19 also impacted our pet health business, as social distancing guidelines decreased veterinary visits and reduced veterinary practice spending in the middle of 2020, but spending had rebounded to normal levels in most regions by the end of the year. We expect the negative impacts of the COVID-19 pandemic on our revenue will continue until conditions relating to the overall impact of COVID-19 on all aspects of the economy and life in general improve.

The impact of the COVID-19 pandemic on the global financial markets may reduce our ability to access capital, which could negatively impact our short-term and long-term liquidity. Additionally, our suppliers and third-party distributors may face difficulties maintaining operations and normal liquidity in light of government-mandated restrictions. Further, the resulting global economic downturn may negatively impact the ability of certain of our customers to make payments on a timely basis, adversely impacting our cash flows from operations. While our liquidity has not been significantly impacted by delayed collections thus far, we do not yet know the full extent of the impact of the COVID-19 pandemic and its resulting economic impact, which could have a material adverse effect on our liquidity, capital resources, operations and business.

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 through joint ventures and products that we are able to obtain through license or acquisition, including the acquisition of Bayer Animal Health. We commit substantial effort, funds and other resources to R&D, both through our own dedicated resources and through collaborations with third parties.

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. In addition, we cannot predict whether any products, once launched, will be commercially successful or will achieve sales and revenue that are 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 will be materially adversely affected.

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, and 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.

Animal health products are subject to unanticipated safety, quality or efficacy concerns, which may harm our reputation.

Unanticipated safety, quality or efficacy concerns arise from time to time with respect to animal health products, whether or not scientifically or clinically supported, 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 and could, depending on the circumstances, materially adversely affect our results of operations.

In addition, since we depend on positive perceptions of the safety, quality and efficacy of our products, and animal health products generally, 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 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 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, 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.

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 may also have a material impact on the aquaculture business. 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.

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, particularly U.S.-based farm animal producers, benefit from free trade agreements, such as the North American Free Trade Agreement (NAFTA). In November 2018, the U.S. negotiated a new trade deal with Canada and Mexico known as the United States-Mexico-Canada-Agreement (USMCA), aimed at re-negotiating and updating the terms of NAFTA. The USMCA was revised by the parties on December 10, 2019 and was entered into force on July 1, 2020. The full impact of the USMCA on us, our customers, and on economic conditions is currently unknown and, thus, could materially adversely affect our business, financial condition and results of operations.

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 to 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, *Rumensin*, *Trifexis*, *Maxiban*, *Interceptor Plus*, and the aggregate *Advantage Family* contributed approximately 23% of our revenue in 2020. Any issues with these top products, particularly *Rumensin*, which contributed approximately 7% of our revenue in 2020 and is now subject to generic competition in the U.S., could have a material adverse effect on our business, financial condition and results of operations.

Our business is subject to risk based on customer exposure to rising costs and reduced customer income.

Feed, fuel, transportation and other key costs for farm animal producers may 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 is a higher rate 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.

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 typically purchase 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 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, any significant decrease in visits to veterinarians by pet owners could reduce our market share for such products and materially adversely affect 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. We may not be adequately prepared or able to distribute our pet health products if an increased portion of our sales occur through these channels. Also, we may realize lower margins on sales through these 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. For example, in 2020, we completed the previously communicated channel inventory reduction, moving to inventory levels across the world and across species that represent the minimum necessary to allow our distributors to maintain strong service levels with their end customers.

Increased or decreased inventory levels at our channel distributors can lead to fluctuations in our revenues and variations in payment terms extended to our distributors can impact our cash flows.

In addition to selling our products directly to veterinarians, we sell to distributors who, in turn, sell our products to third parties. Inventory levels at our distributors may increase or decrease as a result of various factors, including end customer demand, new customer contracts, heightened and generic 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, including weather conditions or an outbreak of infectious disease such as COVID-19 or diseases carried by farm animals such as African Swine Fever.

These increases and decreases can lead to variations in our quarterly and annual revenues. In addition, like all companies that manufacture and sell products, we have policies that govern the payment terms that we extend to our customers. Due to consolidation amongst our distributors, as well as changes in the buying habits of end customers or the need for certain inventory levels at our distributors to avoid supply disruptions, from time to time, our distributors have requested exceptions to the payment term policies that we extend to them. Extensions of customer payment terms can impact our cash flows, liquidity and results of operations.

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

Under U.S. GAAP, if we determine goodwill or identifiable intangible assets are impaired, we will be required to write down these assets and record a non-cash impairment charge. As of December 31, 2020, we had recorded on our balance sheet goodwill of $6.2 billion and identifiable intangible assets of $6.4 billion. Identifiable intangible assets consist primarily of marketed products acquired or licensed from third parties, licensed platform technologies that have alternative future uses in R&D, manufacturing technologies, and customer relationships from business combinations. We also have indefinite-lived intangible assets, which consist of acquired in-process R&D projects from business combinations that are subject to impairment and non-cash impairment charges.

Determining whether an impairment exists and the amount of the potential impairment involves quantitative data and qualitative criteria that are based on estimates and assumptions requiring significant management judgment. Future events or new information may change management's valuation of an intangible asset in a short amount of time. The timing and amount of impairment charges recorded in our consolidated and combined statements of operations and write-downs recorded in our consolidated balance sheets could vary if our management's conclusions change. Any impairment of goodwill or identifiable intangible assets could have a material adverse effect on our business, financial condition and results of operations.

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 medicines and vaccines business, 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 that 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, 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 operating results and financial condition.

Manufacturing problems and capacity imbalances may cause product launch delays, inventory shortages, recalls 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 20 internal manufacturing sites located in 12 countries. We also employ a network of approximately 130 third-party CMOs. Many of our products involve complex manufacturing processes and are sole-sourced from certain manufacturing sites.

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;
- natural disasters;
- 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 near our production sites.

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.

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. 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.

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

Our business, financial condition and results of operations could be materially adversely affected by unfavorable results in pending or future litigation matters. 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 that were recently filed against us 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 intend to vigorously defend 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. 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.

Litigation matters, regardless of their merits or their 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 litigation matters. An adverse outcome of litigation or legal matters could result in us being responsible for significant damages. Any of these negative effects resulting from litigation matters could materially adversely affect our business, financial condition and results of operations.

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, 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 these 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 in each jurisdiction where we propose to market those products. Even after a product reaches market, we may be subject to re-review and may lose our approvals. 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.

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

We are subject to income taxes in the United States 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 generally accepted accounting principles, 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. 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.

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. In addition, products stolen or unlawfully diverted from inventory, warehouses, plants or while in transit, which are not properly stored or which have an expired shelf life and which have been repackaged or relabeled and which are sold through unauthorized channels, could adversely impact animal health and safety, our reputation and our business. With the acquisition of the Bayer Animal Health business, we have now expanded our business more into direct to retailer and e-commerce channels in order to meet the pet owners where they want to purchase, 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.

We are subject to complex environmental, health and safety laws and regulations.

We are subject to various federal, state, local and foreign environmental, health and safety 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 as sites that 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 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.

Our failure to comply with the environmental, health and safety 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 environmental, health and safety 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.

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; 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, 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 be approved on a timely basis, if at all. Similarly, any term extensions that we seek may not be approved on a timely basis, if at all. In addition, our issued patents, or any patents that may issue 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 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 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.

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 environmental, health and safety 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;
- 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. 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.

Significant portions of our operations are conducted in Europe and could be impacted by the withdrawal of the United Kingdom (U.K.) from the EU, commonly referred to as "Brexit."

In June 2016, voters in the U.K. approved an advisory referendum to withdraw from the EU, commonly referred to as Brexit. On March 29, 2017, the U.K. Prime Minister formally notified the European Council of the U.K.'s intention to withdraw from the EU under Article 50 of the Treaty of Lisbon. Brexit formally occurred on January 31, 2020. A transition period is in effect from February 1, 2020 until December 31, 2020, during which the U.K. and the EU will negotiate a trade agreement. During this period, EU rules and regulations will remain in effect for the U.K. The referendum and notice created political, regulatory and economic uncertainty, particularly in the U.K. and the EU, and this uncertainty may persist for years if the U.K. and the EU are unable to reach an agreement by the end of the transition period.

Our business is subject to substantial regulation. If a trade agreement is not reached by the end of the transition period, we may not be able to market certain products that entered the EU market following marketing authorization by U.K. authorities in all the nations that are parties to free trade agreements with the EU unless and until we have obtained all required regulatory approvals in each jurisdiction where we proposed to market those products.

In addition, the uncertainty related to Brexit has caused foreign exchange rate fluctuations in the past, including the strengthening of the U.S. dollar relative to the Euro and British pound immediately following the announcement of Brexit. Further developments with respect to Brexit could further impact foreign exchange rates, which could materially adversely affect our business, financial condition and results of operations.

The end of the transition period with no agreement in place could significantly disrupt the free movement of goods, services, and people between the U.K. and the EU, and result in increased legal and regulatory complexities, as well as potential higher costs of conducting business in Europe and declining gross domestic product in many European markets. The U.K.'s exit from the EU could also result in similar referendums or votes in other European countries in which we do business.

The uncertainty surrounding the terms of the U.K.'s withdrawal and its consequences could adversely impact consumer and investor confidence, and could affect sales or regulation of our products. Any of these effects, among others, 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 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.

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.

In the wake of the COVID-19 global pandemic, we are increasingly dependent on our information technology systems as our office workers, who are working 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 cyber security 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, revenue and competitive position. 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. In addition, due to a transitional services agreement (TSA) with Lilly, we rely on Lilly for certain privacy, compliance, and security functions, and personnel, and may experience difficulties maintaining and implementing all policies and practices following completion of the TSA for these services.

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. See “Business of Elanco - Regulatory.” 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.

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, including the U.S. 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.

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 our employees participate in that are either dedicated to our employees or where the plan assets and liabilities that relate to our employees were legally required to transfer to us at the time of the Separation. 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, 2020, for pension plans with projected benefit obligations in excess of plan assets, the projected benefit obligation was $545.2 million with plan assets of $220.2 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 return on plan assets can result in significant changes in the net periodic pension cost in the following years. The need to make additional cash contributions will divert resources from our operations and may have a material adverse effect on our business, financial condition and results of operations.

Risks Related to the Bayer Animal Health Acquisition

We may be unable to integrate the Bayer Animal Health business successfully and realize the anticipated benefits of the acquisition.

The successful integration of the Bayer Animal Health business and operations into those of our own and our ability to realize the expected synergies and benefits of the transaction is subject to a number of risks and uncertainties, many of which are outside of our control. We will also be required to devote significant management attention and resources to integrating business practices, cultures and operations of each business. The risks and uncertainties relating to integrating the two businesses and realizing the anticipated cost synergies include, among other things:

- the inability to achieve the anticipated revenue, earnings, accretion and other benefits due to the impact of the COVID-19 global health pandemic;
- the challenge of integrating complex organizations, systems, including the enterprise resource planning system upon which the Bayer Animal Health business is currently operating, operating procedures, compliance programs, technology, networks and other assets of the Bayer Animal Health business;
- the difficulties harmonizing differences in the business cultures of our company and the Bayer Animal Health business;
- the inability to combine successfully our respective businesses in a manner that permits us to achieve the cost savings, synergies and other anticipated benefits from the acquisition;
- the inability to minimize the diversion of management attention from ongoing business concerns during the process of integrating the Bayer Animal Health business into our businesses;
- the inability to resolve potential conflicts that may arise relating to customer, supplier and other important relationships of our business and the Bayer Animal Health business;
- the inability to transfer agreements relating to customers, suppliers and other important relationships of the Bayer Animal Health business;
- difficulties in retaining key management and other key employees;
- the challenge of managing the expanded operations of a significantly larger and more complex company and coordinating geographically separate organizations; and
- difficulties in fully exploring intellectual property licensed from Bayer in connection with the acquisition, given Bayer's rights as licensor of such intellectual property.

We have incurred substantial expenses to consummate and will continue to incur substantial expenses to integrate the acquisition but may not realize the anticipated cost synergies and other benefits to the extent

expected, on the timeline expected, or at all. In addition, even if we are able to integrate the Bayer Animal Health business successfully, the anticipated benefits of the acquisition may not be realized fully, or at all, or may take longer to realize than expected. Moreover, competition in the animal health industry, including competition that has negatively impacted results in the pet health parasiticide market, may also cause us not to fully realize the anticipated benefits of the acquisition. Given the size and significance of the acquisition, we may encounter difficulties in the integration of the operations of the Bayer Animal Health business and may fail to realize the full benefits and synergies of the acquisition, which could adversely impact our business, results of operation and financial condition.

Business continuity of the Bayer Animal Health business may be disrupted if conflicts arise with Bayer under the TSA and other long-term agreements.

To ensure business continuity after the transfer of the Bayer Animal Health business, we entered into transitional services agreements and other long-term agreements with Bayer. Bayer's performance of its obligations under such long-term agreements is important to our transition of the Bayer Animal Health business. Our inability to resolve conflicts with Bayer that may arise under those long-term agreements could compromise our ability to successfully integrate the Bayer Animal Health business. We may also encounter difficulties in securing another vendor to provide us with those same services, which could adversely affect our business, financial condition or results of operations.

Risks Related to our Indebtedness

We have substantial indebtedness.

We have a significant amount of indebtedness, which could materially adversely affect our business, financial condition and results of operations. As of December 31, 2020, in addition to $2.0 billion of senior unsecured notes, we had $4.2 billion of borrowings under our new term loan B facility. We have an additional $750.0 million of borrowing capacity under our new revolving credit facility (with incremental capacity available if certain conditions are met). The term loan B facility and new revolving credit facility (New Credit Facilities) were executed in connection with the acquisition of Bayer Animal Health. See Note 10: Debt to our consolidated and combined financial statements for further discussion.

Our high level of debt could have important consequences, including:

- making it more difficult for us to satisfy our obligations with respect to our debt and any failure to comply with the obligations of any of our debt instruments, including restrictive covenants and borrowing conditions, could result in an event of default under the agreements governing other indebtedness;
- requiring us to dedicate a substantial portion of our cash flow from operations to the payment of interest and the repayment of our indebtedness, thereby reducing funds available to us for other purposes;
- limiting our ability to obtain additional financing to fund future working capital, capital expenditures, business development or other general corporate requirements, including dividends;
- 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;
- causing us to make non-strategic divestitures;
- exposing us to the risk of increased interest rates as certain of our borrowings are and may in the future be at variable rates of interest;
- limiting our flexibility in planning for and reacting to changes in the animal health industry;
- impacting our effective tax rate; and
- increasing our cost of borrowing.

Despite our substantial indebtedness, we may still be able to incur significantly more debt, which could intensify the risks associated with our indebtedness.

We and our subsidiaries may be able to incur substantial indebtedness in the future, even following the incurrence of indebtedness in connection with the acquisition of Bayer Animal Health. Although the terms of the credit agreement governing the New Credit Facilities contain restrictions on our and our subsidiaries' ability to incur additional indebtedness, these restrictions are subject to a number of important qualifications and exceptions, and the indebtedness incurred in compliance with these restrictions could be substantial. These restrictions are also do not prevent us from incurring obligations that do not constitute indebtedness. In addition to our borrowings under the New Credit Facilities, the covenants under the credit agreement governing the New Credit Facilities are expected to, and the covenants under any other of our existing or future debt instruments could, allow us to incur a significant amount of additional indebtedness and, subject to certain limitations, such additional indebtedness could be secured. The more leveraged we become, the more we, and in turn our security holders, will be exposed to certain risks described above under "—We have substantial indebtedness."

We may not be able to generate sufficient cash to service all of our indebtedness and may be forced to take other actions to satisfy our obligations under our indebtedness, which may not be successful.

Our ability to make scheduled payments on or 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 and other factors beyond our control. We may be unable to maintain a level of cash flows from operating activities sufficient to permit us to pay the principal and interest on our indebtedness.

If our cash flows and capital resources are insufficient to fund our debt service obligations, we could face substantial liquidity problems and could be forced to reduce or delay investments and capital expenditures, or to dispose of material assets or operations, alter our dividend policy, seek additional debt or equity capital or restructure or refinance our indebtedness. We may not be able to effect any such alternative measures on commercially reasonable terms or at all and, even if successful, those alternative actions may not allow us to meet our scheduled debt service obligations. The instruments that will govern our indebtedness 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 capital 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, we conduct our operations through our subsidiaries. Accordingly, 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 have any obligation to pay amounts due on our indebtedness or to make funds available for that purpose. Our subsidiaries may not be able to, or may not be permitted to, make adequate distributions to enable us to make payments in respect of our indebtedness. Each subsidiary is a distinct legal entity and, under certain circumstances, legal, tax and contractual restrictions may limit our ability to obtain cash from our subsidiaries. In the event that we do not receive distributions from our subsidiaries, we may be unable to make required principal and interest payments on our indebtedness.

Our inability to generate sufficient cash flows to satisfy our debt obligations, or to refinance our indebtedness on commercially reasonable terms or at all, may materially adversely affect our business, financial condition and results of operations and our ability to satisfy our obligations under our indebtedness or pay dividends on our common stock.

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

Our New 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 and our subsidiaries' ability to, among other things:

- incur additional debt, guarantee indebtedness or issue certain preferred shares;
- pay dividends on or make distributions in respect of, or repurchase or redeem, our capital stock or make other restricted payments;
- prepay, redeem or repurchase certain debt;
- 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;
- substantially alter the businesses we conduct;
- enter into agreements restricting our subsidiaries' ability to pay dividends; and
- designate our subsidiaries as unrestricted subsidiaries.

In addition, the New Credit Facilities require us to comply with a net total leverage ratio and a minimum fixed charge coverage ratio under certain circumstances.

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, the New 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 the New 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 repay those amounts, the lenders under the New Credit Facilities and any of our other existing or future secured indebtedness could proceed against the collateral granted to them to secure the New Credit Facilities or such other indebtedness. We have pledged a significant portion of our assets as collateral under the New Credit Facilities.

Changes in our credit rating 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 that 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 on us and certain of our debt. As a result of the acquisition of Bayer Animal Health, our credit ratings were downgraded, resulting in increased borrowing costs. Because the ratings of certain of our senior unsecured notes have been downgraded, we are required to pay additional interest under the senior unsecured notes. Any further downgrades could result in requirements to pay additional interest under the senior unsecured notes. 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.

Our New Credit Facilities bear interest at variable interest rates that use the London Inter-Bank Offered Rate (LIBOR) as a benchmark rate. On July 27, 2017, the United Kingdom's Financial Conduct Authority (FCA), which regulates LIBOR, announced that it intends to stop persuading or compelling banks to submit LIBOR quotations after 2021 (the FCA Announcement). The FCA Announcement indicates that the continuation of LIBOR on the current basis cannot and will not be assured after 2021, and LIBOR may cease to exist or otherwise be unsuitable for use as a benchmark.

On November 30, 2020, ICE Benchmark Administration, the administrator of LIBOR, with the support of the U.S. Federal Reserve and the FCA, announced plans to extend the date on which most U.S. LIBOR tenors would cease publication from December 31, 2021 to June 30, 2023. While this announcement extends the transition period, the future of LIBOR is still uncertain and any changes may adversely affect our interest expense, our ability to refinance some or all of our existing indebtedness, and the valuation of derivative contracts, which could reduce our earnings and cash flows.

Recent proposals for LIBOR reforms may result in the establishment of new methods of calculating LIBOR or the establishment of one or more alternative benchmark rates. Although our New Credit Facilities provide for successor base rates, the successor base rates may be related to LIBOR, and the consequences of any potential cessation, modification or other reform of LIBOR cannot be predicted at this time. If LIBOR ceases to exist, we may need to amend our existing or enter into a new credit facility, and we cannot predict what alternative interest rate(s) will be negotiated with our counterparties.

Risk Related to Our Relationship with Lilly

We continue to be contractually bound to Lilly for access to certain intellectual property and to maintain the tax-free treatment to Lilly and its shareholders of the Separation. Some of these obligations restrict our ability to engage in certain transactions.

As part of the Separation, we entered into the following agreements that continue to affect our business:

- An intellectual property and technology license agreement, pursuant to which Lilly licenses to us certain of its intellectual property (excluding trademarks) related to the animal health business. Lilly also grants us a license to use Lilly's proprietary compound library for two years plus up to three additional one-year periods, with each such extension to be granted under Lilly's sole discretion. If we fail to comply with our obligations under this agreement and Lilly exercises its right to terminate it, our ability to continue to research, develop and commercialize products incorporating that intellectual property will be limited. In addition, this agreement includes limitations that affect our ability to develop and commercialize certain products, including in circumstances where Lilly has an interest in the licensed intellectual property in connection with its human health development programs. These limitations and termination rights may make it more difficult, time consuming or expensive for us to develop and commercialize certain new products or may result in our products being later to market than those of our competitors.

- A tax matters agreement to preserve the tax-free treatment to Lilly and its shareholders of the Separation and certain related transactions that restricts us from taking any action that prevents such transactions from being tax-free for U.S. federal income tax purposes. These restrictions limit our ability to pursue certain strategic transactions or engage in other transactions, including using our common stock to make acquisitions and in connection with equity capital market transactions that might increase the value of our business. Because of these restrictions, we will have limited ability to issue shares of our common stock until our tax matters agreement with Lilly expires in March 2021.

Risks Related to Elanco Common Stock

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. The New Credit Facilities contain restrictive covenants that impose significant operating and financial restrictions on us, including restrictions on our ability to pay dividends and make other restricted payments. As a result, capital appreciation, if any, of our common stock may be your major source of gain for the foreseeable future. While we may change this policy at some point in the future, we cannot assure you that we will make such a change.

The distributions we pay on our common stock may not qualify as dividends for U.S. federal income tax purposes, which could adversely affect the U.S. federal income tax consequences to you of owning our common stock.

Generally, any distributions that we make to a stockholder with respect to its shares of our common stock will constitute a dividend for U.S. federal income tax purposes to the extent of our current or accumulated earnings and profits as determined for U.S. federal income tax purposes. Furthermore, our ability to generate earnings and profits, as determined for U.S. federal income tax purposes, in any future year is subject to a number of variables that are uncertain and difficult to predict.

Generally, any distribution not constituting a dividend under the rules described above will be treated as first reducing the investor's adjusted basis in shares of our common stock and, to the extent that the distribution exceeds the adjusted basis in shares of our common stock, as gain from the sale or exchange of such shares, and if the investor is a domestic corporation, it will not be entitled to claim, with respect to such non-dividend distribution, a "dividends-received" deduction, which generally applies to dividends received from other domestic corporations.

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 that are 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;
- a two-thirds shareholder vote requirement to amend our amended and restated articles of incorporation;
- the exclusive right of our board of directors to amend our amended and restated bylaws; and
- the requirement that a 66 2/3% vote is necessary to remove directors.

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.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

The address of our principal executive offices is currently c/o Elanco, 2500 Innovation Way, Greenfield, IN 46140.

Our global manufacturing network is comprised of 20 manufacturing sites, including 8 sites acquired from the Bayer Animal Health acquisition. The largest manufacturing site in our global manufacturing network is our manufacturing site located in Clinton, Indiana, which has approximately 0.7 million square feet. In addition, our global manufacturing network will continue to be supplemented by approximately 130 CMOs. See "Item 1. Business — Manufacturing and Supply Chain."

We have R&D operations co-located with certain of our manufacturing sites in the U.S. to facilitate the efficient transfer of production processes from our laboratories to manufacturing sites. In addition, we maintain R&D operations at non-manufacturing locations in the U.S., Germany, Switzerland, Australia, Brazil, China and India. Our largest R&D facility is our U.S. R&D site located in Fort Dodge, Iowa, which has approximately 0.3 million square feet. See "Item 1. Business — Research and Development."

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

ITEM 3. LEGAL PROCEEDINGS

Information pertaining to certain legal proceedings is provided in Note 17: Commitments and Contingencies to our consolidated and combined financial statements included under Item 8, " Financial Statements and Supplementary Data," 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.”

Holders

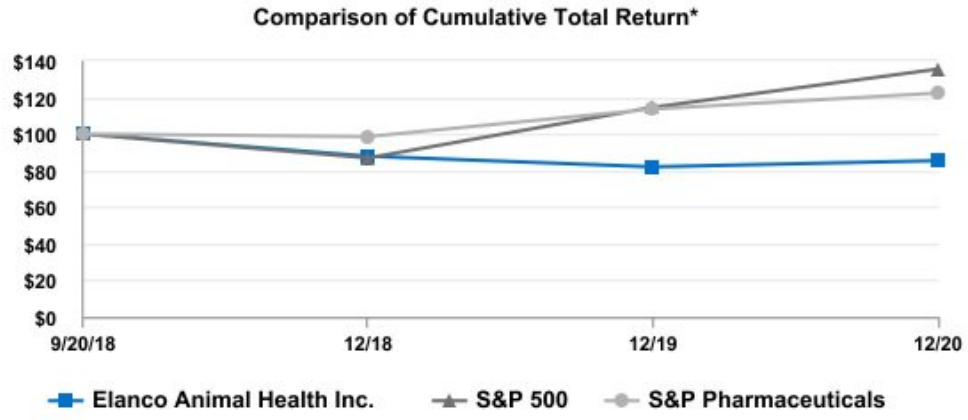
There were 291 holders of record of our common stock as of February 24, 2021. This does not include the number of stockholders who hold shares of our common stock through banks, brokers or other financial institutions.

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

This 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 from September 20, 2018 (the first day our common stock was traded in conjunction with our IPO) through December 31, 2020. The graph assumes that, on September 20, 2018, a person invested $100 each 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.



*$100 invested on 9/20/2018 in stock or index, including reinvestment of dividends. Fiscal year ending December 31.

	9/20/18	12/31/18	12/31/19	12/31/20
Elanco Animal Health Inc.	$ 100.00	$ 87.58	$ 81.81	$ 85.19
S&P 500 Index	100.00	86.97	114.36	135.40
S&P 500 Pharmaceuticals Index	100.00	98.62	113.50	122.04

ITEM 6. (REMOVED AND RESERVED)

Not applicable.

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

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 results of operations and financial position. This discussion and analysis should be read in conjunction with the consolidated and combined financial statements and accompanying footnotes in Item 8 of Part II of this Annual Report on Form 10-K. Certain statements in this Item 7 of Part II of this Annual Report on 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. For results of operations discussions related to years ending December 31, 2019 and 2018, refer to Item 7 of Part II in our Annual Report on Form 10-K for the year ended December 31, 2019 filed with the Securities and Exchange Commission on February 28, 2020.

Overview

Founded in 1954 as part of Eli Lilly & Co. (Lilly), Elanco is a premier animal health company that innovates, develops, manufactures and markets products for pets and farm animals. Headquartered in Greenfield, Indiana, we are one of the largest animal health companies in the world, with pro forma combined revenue of Elanco and Bayer Animal Health of approximately $4.4 billion for the year ended December 31, 2020. Excluding Bayer Animal Health, globally, we are #1 in medicinal feed additives, #2 in poultry, and #3 in other pharmaceuticals, which are mainly pet health therapeutics, measured by 2019 revenue, according to Vetnosis.

We have one of the broadest portfolios of pet parasiticides in the pet health sector. We offer a diverse portfolio of approximately 190 brands that make us a trusted partner to veterinarians and farm animal producers in more than 90 countries.

On September 24, 2018, we completed our initial public offering (IPO), pursuant to which we issued and sold 19.8% of our total outstanding shares. On September 20, 2018, our common stock began trading on the New York Stock Exchange (NYSE) under the symbol "ELAN." On September 24, 2018, immediately preceding the completion of the IPO, Lilly transferred to us substantially all of its animal health businesses in exchange for (i) all of the net proceeds (approximately $1,659.7 million) we received from the sale of our common stock in the IPO, including the net proceeds we received as a result of the exercise in full of the underwriters' option to purchase additional shares, (ii) all of the net proceeds (approximately $2,000 million) we received from the issuance of our senior notes; and (iii) all of the net proceeds ($498.6 million) we received from the entry into our term loan facility. In addition, immediately prior to the completion of the IPO, we entered into certain agreements with Lilly that provide a framework for our ongoing relationship with them.

On February 8, 2019, Lilly announced an exchange offer whereby Lilly shareholders could exchange all or a portion of Lilly common stock for shares of Elanco common stock owned by Lilly. On that date, we filed a Registration Statement on Form S-4 with the SEC in connection with that exchange offer. The disposition of Elanco shares was completed on March 11, 2019, and resulted in the full separation of Elanco along with the disposal of Lilly's entire ownership and voting interest in Elanco.

On August 1, 2020, we completed the acquisition of Bayer Animal Health. The acquisition expands our pet health product category, advancing our planned portfolio mix transformation and creating a better balance between our farm animal and pet health product categories. Our existing product portfolio and pipeline are enhanced by the addition of Bayer Animal Health, which complements our commercial operations and international infrastructure. See Note 6: Acquisitions and Divestitures to the consolidated and combined financial statements for additional information on the acquisition. Subsequent to the acquisition date, our consolidated and combined financial statements include the assets, liabilities, operating results and cash flows of Bayer Animal Health.

We operate our business in a single segment directed at fulfilling our vision of enriching the lives of people through food, making protein more accessible and affordable and through pet companionship, helping pets live longer, healthier lives. During the third quarter of 2020, we renamed our four primary product categories by replacing "food animal" and "companion animal" with "farm animal" and "pet health," respectively, to better reflect the terminology used by our customers. We advance our vision by offering products in these four primary

categories:

Pet Health Disease Prevention (PH Disease Prevention): We have one of the broadest parasiticide portfolios in the pet health sector based on indications, species and formulations, with products that protect pets from worms, fleas and ticks. Our *Seresto* and *Advantage*, *Advantix*, *Advocate* (collectively referred to as the *Advantage Family*) products represent treatments for the elimination and prevention, respectively, of fleas and ticks. Combining our parasiticide portfolio with our vaccines presence, we are a leader in the U.S. in the disease prevention category based on share of revenue.

Pet Health Therapeutics (PH Therapeutics): We have a broad pain and osteoarthritis portfolio across species, modes of action, indications and disease stages. Pet owners are increasingly treating osteoarthritis in their pets, and our *Galliprant* product is one of the fastest growing osteoarthritis treatments in the U.S. We also have treatments for otitis (ear infections) with *Claro*, as well as treatments for certain cardiovascular and dermatology indications.

Farm Animal Future Protein & Health (FA Future Protein & Health): Our portfolio in this category, which includes vaccines, nutritional enzymes and animal-only antibiotics, serves the growing demand for protein and includes innovative products in poultry and aquaculture production, where demand for animal health products is outpacing overall industry growth. With our *Maxiban* product, we are a leader in the control and prevention of intestinal disease in poultry. We are focused on developing functional nutritional health products that promote farm animal health, including enzymes, probiotics and prebiotics. We are also a global leader in providing vaccines as alternatives to antibiotics to promote animal health based on share of revenue.

Farm Animal Ruminants & Swine (FA Ruminants & Swine): We have a range of farm animal products, including *Rumensin* and *Baytril*, used extensively in ruminant (e.g., cattle, sheep and goats) and swine production.

A summary of our 2020, 2019, and 2018 revenue and net income is as follows:

	Year Ended December 31,		
	2020	2019	2018
Revenue	$ 3,273.3	$ 3,071.0	$ 3,066.8
Net income (loss)	(560.1)	67.9	86.5

Increases or decreases in inventory levels at our channel distributors can positively or negatively impact our quarterly and annual revenue results, leading to variations in quarterly revenues. 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, and procedures and environmental factors beyond our control, including weather conditions and the COVID-19 global pandemic.

Key Trends and Conditions Affecting Our Results of Operations

The animal health industry, which focuses on both farm animals and pets, is a growing industry that benefits billions of people worldwide.

As demand for animal protein grows, farm animal health is becoming increasingly important. Factors influencing growth in demand for farm animal medicines and vaccines include:

- one in three people needing improved nutrition;
- increased global demand for protein, particularly poultry and aquaculture;
- natural resource constraints, such as scarcity of arable land, fresh water and increased competition for cultivated land, driving the need for more efficient food production;
- loss of productivity due to farm animal disease and death;

- increased focus on food safety and food security; and
- human population growth, increased standards of living, particularly in many emerging markets, and increased urbanization.

Growth in farm animal nutritional health products (enzymes, probiotics and prebiotics) is influenced, among other factors, by demand for antibiotic alternatives that can promote animal health and increase productivity.

Factors influencing growth in demand for pet medicines and vaccines include:

- increased pet ownership globally;
- pets living longer; and
- increased pet spending as pets are viewed as members of the family by owners.

Factors Affecting Our Results of Operations

COVID-19 Pandemic

Our business has been impacted by the COVID-19 pandemic that originated in December 2019. We continue to monitor the global outbreak of COVID-19 and are working with our customers, employees, suppliers and other stakeholders to mitigate the risks posed by its spread. The COVID-19 pandemic continues to impact the economy in the United States and globally, and has had an effect on the operations of our company, vendors and suppliers, and supply of and demand for our products as follows:

Operations

As a result of the COVID-19 pandemic, governmental authorities have implemented and are continuing to implement numerous and constantly evolving measures to try to contain the virus, such as travel bans and restrictions, limits on gatherings, quarantines, shelter-in-place orders, site closures and business shutdowns. These measures have affected the ability of our employees, vendors, and suppliers to perform their respective responsibilities and obligations relative to the conduct of our business. We have important manufacturing operations worldwide that have been impacted by the outbreak. Measures requiring business shutdowns generally exclude certain essential services, and those essential services commonly include critical infrastructure and the businesses that support that critical infrastructure. Because the animal health industry has been designated an essential business, our manufacturing and research facilities remain operational, while our employees in other company functions are primarily working remotely. These measures have impacted and may further impact our workforce and operations, as well as those of our customers, vendors and suppliers.

Supply

In 2020, we did not experience significant impacts or interruptions to our supply chain as a result of the COVID-19 pandemic. However, as the pandemic continues, we may face supply chain disruptions due to operational difficulties experienced by our suppliers in light of government-ordered restrictions and shelter-in-place mandates. Although we regularly monitor the financial health of companies in our supply chain, the financial hardship on our suppliers caused by the COVID-19 pandemic could cause a disruption in our ability to obtain raw materials or components required to manufacture our products, adversely affecting our operations. Freight processes have experienced, and could continue to experience, lead time disruptions and increases in shipping costs, negatively impacting our profitability.

Demand

The COVID-19 pandemic has adversely impacted global economic conditions. In particular, the COVID-19 pandemic has created near-term uncertainty for our channel distribution partners with respect to end customer demand and working capital. Based on these factors, in addition to a shift in tactics for demand generation with our distributors, in the first and second quarters of 2020, we reduced the amount of inventory held in the channel. We anticipate that decreases in end customer demand could impact our pet health business, primarily in clinically administered pharmaceutical products such as vaccines, and in international markets, as social distancing guidelines could decrease veterinary visits again in the future, reducing veterinary practice revenue and increasing working capital considerations for all parties in the value chain. If this occurs, even if we are able to increase sales

in our direct to retailer and e-commerce channels, which have been important components of the Bayer Animal Health distribution model, those increases may not compensate for reduced sales through veterinary practices. Further, demand in our direct to retailer and e-commerce channels could be negatively impacted if global economic conditions do not improve or if they deteriorate further.

In our farm animal business, demand has been negatively impacted by processing plant closures, a backlog of animals ready for processing and pressured producer economics, which has and could continue to impact demand for a number of our farm animal products. While the impact has been most significant for the U.S. livestock industry, the pressure has occurred globally and across species. As the pandemic has continued through the beginning of 2021, our business has been affected by lower levels of demand in certain markets due to unfavorable macroeconomic conditions and reduced food service consumption trends. As a result, the industry has seen pressured prices and producer profitability across species, most notably in poultry and aqua. We anticipate that decreases in end consumer demand as compared to prior year will continue to occur, particularly in the farm animal business, into 2021.

Our third party distributors may face difficulties maintaining operations and normal liquidity in light of government-mandated restrictions. Due to liquidity and working capital pressure caused by the COVID-19 pandemic, our distributors are managing inventory more tightly. In response to this along with a shift in tactics for demand generation with our distributors, we reduced channel inventory levels during the first half of 2020 as we tightened our approach across all facets of our distributor relationships. We estimate that this decreased our revenue by approximately $160 million. These actions have allowed us to improve working capital management, implement new compensation structures with our distributors and enable greater control of overall stock levels. We continue to monitor the impacts on our customers' liquidity and therefore our ability to collect on our accounts receivable. While our allowance on these receivables factors in expected credit losses, continued disruption and declines in the global economy could result in difficulties in our ability to collect, which we have not experienced on a material basis at this time. If significant issues with collections occur, material increases in our allowance for doubtful accounts may be required.

Our Acquisition of Bayer Animal Health

We have incurred and expect to continue to incur expenses in connection with our acquisition of Bayer Animal Health including fees for professional services such as legal, accounting, consulting, and other advisory fees and expenses. In addition, we have incurred and expect to continue to incur costs related to the build out of processes and systems to support finance and global supply and logistics and to expand administrative functions, including, but not limited to, information technology, facilities management, distribution, human resources, and manufacturing, to replace services previously provided by the former parent company of Bayer Animal Health. We anticipate that these additional costs will be partially offset by expected synergies.

Product Development and New Product Launches

A key element of our targeted value creation strategy is to drive growth through portfolio development and product innovation, primarily in our three targeted growth categories of PH Disease Prevention, PH Therapeutics and FA Future Protein & Health. Since 2015, we have launched or acquired 14 new products, including the additions of *Entyce*, *Nocita* and *Tanovea* in 2019. Revenue from these products contributed $440.8 million to revenue for the year ended December 31, 2020. This excludes our most recent acquisition of Bayer Animal Health, which added approximately 65 products to the Elanco portfolio that contributed post-acquisition revenues of $591.9 million in 2020. The *Advantage Family* and *Seresto* contributed approximately $151 million and $84 million, respectively, to our revenues in 2020. We continue to pursue the development of new chemical and biological molecules through our approach to innovation. Our future growth and success depends on both our pipeline of new products, including new products that we may develop through joint ventures and products that we are able to obtain through license or acquisition, and the expansion of the use of our existing products. We believe we are an industry leader in animal health R&D, with a track record of product innovation, business development and commercialization.

Impact of Competition

The animal health industry is competitive. Established animal health companies which consistently deliver high quality products enjoy brand loyalty from their customers, which often continues after the loss of patent-based or regulatory exclusivity. In animal health, while potentially significant, erosion from generic competition is often not as

steep as in human health, with the originator often retaining a significant market share. However, generic competition can nevertheless significantly affect our results. While our largest product, *Rumensin* (monensin), has been subject to generic competition from monensin internationally for more than 10 years, our revenue from international *Rumensin* sales grew at a CAGR of 1% from 2015 to 2020. In the third quarter of 2019, an established animal health company received U.S. approval for generic monensin in cattle and goats for certain indications. U.S. revenue from *Rumensin* has declined as a result of the generic competition.

Although we believe brand loyalty is an important contributor to a product's ongoing success, our pet health business can also be impacted by competition. For example, our *Advantage Family* products, acquired from Bayer Animal Health, are off-patent in most countries. If our customers increase their use of new or existing generic product alternatives, *Advantage Family* revenues could be adversely affected.

Productivity

Our results during the periods presented have benefited from operational and productivity initiatives implemented following recent acquisitions and in response to changing market demand for antibiotics and other headwinds.

Prior to the acquisition of Bayer Animal Health, our acquisitions within the last six years added in the aggregate $1.4 billion in revenue, 4,600 full-time employees, 12 manufacturing and eight R&D sites. The acquisition of Bayer Animal Health on August 1, 2020 added 3,900 full-time employees, eight manufacturing sites, and four R&D sites. In addition, from 2015 to 2020, changing market demand for antibiotics and other headwinds, such as competition with generics and innovation, affected some of our highest gross margin products, resulting in a change to our product mix and driving operating margin lower. In response, we implemented a number of initiatives across the manufacturing, R&D and selling, general and administrative (SG&A) functions. Our manufacturing cost savings strategies included improving manufacturing processes and headcount through lean manufacturing (minimizing waste while maintaining productivity), closing three manufacturing sites, consolidating our CMO network, strategically insourcing certain projects, and pursuing cost savings opportunities with respect to raw materials via a new procurement process. Additional cost savings resulted from reducing the number of R&D sites from 16 to nine, SG&A savings from sales force consolidation, and reducing discretionary and other general and administrative (G&A) operating expense.

Foreign Exchange Rates

Significant portions of our revenue and costs are exposed to changes in foreign exchange rates. Our products are sold in more than 90 countries and, as a result, our revenue is influenced by changes in foreign exchange rates. For the years ended December 31, 2020 and 2019, approximately 49% and 44%, respectively, of our revenue was denominated in foreign currencies. As we operate in multiple foreign currencies, including the Euro, British pound, Swiss franc, Brazilian real, Australian dollar, Japanese yen, Canadian dollar, Chinese yuan, and other currencies, changes in those currencies relative to the U.S. dollar impact our revenue, cost of sales and expenses, and consequently, net income. These fluctuations may also affect the ability to buy and sell our products between markets impacted by significant exchange rate variances. Currency movements decreased revenue by 1% and 2% during the years ended December 31, 2020 and 2019, respectively. Currency movements had limited impact on revenue during the year ended December 31, 2018.

Components of Revenue and Costs and Expenses

Revenue

Our revenue is primarily derived from sales of our products to third-party distributors, and directly to food producers, veterinarians, and retailers. For additional information regarding our products, including descriptions of our products, see "Item 1. Business — Products."

We aggregate our products into five categories to understand revenue growth:

- PH Disease Prevention includes parasiticides and vaccine products for dogs and cats;
- PH Therapeutics includes products for the treatment of pain, osteoarthritis, otitis, cardiovascular and dermatology indications in dogs and cats;

- FA Future Protein & Health includes vaccines, antibiotics, parasiticides and other products used in poultry and aquaculture production, as well as functional nutritional health products, including enzymes, probiotics and prebiotics;
- FA Ruminants & Swine includes vaccines, antibiotics, implants, parasiticides, and other products used in ruminants and swine production, as well as certain other farm animal products; and
- Contract Manufacturing represents revenue from arrangements in which we act as a contract manufacturer, including supply agreements associated with divestitures of products related to the acquisition of Bayer Animal Health. This category was previously called Strategic Exits.

Costs, Expenses and Other

Cost of sales consists primarily of cost of materials, facilities and other infrastructure used to manufacture our products, shipping and handling, inventory losses and expired products.

Marketing, selling and administrative expenses consist of, among other things, the costs of marketing, promotion and advertising and the costs of administration (business technology, facilities, legal, finance, human resources, business development, external affairs and procurement).

Amortization of intangible assets consists of the amortization expense for intangible assets that have been acquired through business combinations.

R&D expenses consist of project costs specific to new product R&D and product lifecycle management, overhead costs associated with R&D operations, regulatory, product registrations and investments that support local market clinical trials for approved indications. We manage overall R&D based on our strategic opportunities and do not disaggregate our R&D expenses incurred by nature or by product as we do not use or maintain such information in managing our business.

Asset impairment, restructuring and other special charges consist primarily of impairment of long-term assets, restructuring charges, costs associated with acquiring and integrating businesses, and certain non-recurring expenses, including costs related to the build out of processes and systems to support finance and global supply and logistics, among others, to stand our organization up as an independent company.

Interest expense, net of capitalized interest consists of interest incurred on our long-term debt.

Other expense (income), net consists primarily of various items including net (gains)/losses on asset disposals, unrealized foreign exchange translation (gains)/losses, (gains)/losses on equity investments and loss or impairment on other investments.

Comparability of Historical Results

Our historical results of operations for the periods presented may not be comparable with prior periods or with our results of operations in the future, due to many factors, included but not limited to the factors identified in "Key Trends and Conditions Affecting Our Results of Operations."

Our Relationship with Lilly and Additional Standalone Costs

We are currently investing in expanding our own administrative functions, including, but not limited to, information technology, facilities management, distribution, human resources, and manufacturing, to replace services previously provided by Lilly. Because of initial stand up costs and overlaps with services previously provided by Lilly, we have incurred and expect to continue to incur certain temporary, duplicative expenses in connection with the Separation. We have also incurred and expect to continue to incur costs related to the build out of processes and systems to support finance and global supply and logistics, among others. We currently estimate these costs taken together to be in a range from $280 million to $320 million, net of completed and potential real estate dispositions and employee benefit changes, of which a portion will be capitalized and the remainder will be expensed.

As a result of the IPO, we became subject to the reporting requirements of the Securities Exchange Act of 1934, as amended, and the Sarbanes-Oxley Act of 2002. We continue to establish and expand additional procedures and

practices as a standalone public company. As a result, we continue to incur additional costs as a standalone public company compared to the prior period, including internal audit, external audit, investor relations, stock administration, stock exchange fees and regulatory compliance costs.

Other Recent Acquisitions

Our financial results have been impacted by other recent acquisitions and integrations. For the periods presented, these include primarily the acquisitions and integrations of Aratana Therapeutics, Inc., which closed on July 18, 2019, and Prevtec Microbia Inc., which closed on July 31, 2019. For more information, see Note 6: Acquisitions and Divestitures to our consolidated and combined financial statements.

Asset Impairment, Restructuring and Other Special Charges

During the years ended December 31, 2020, 2019 and 2018 including in connection with the productivity initiatives described above under "Key Trends and Conditions Affecting Our Results of Operations - Productivity," we incurred charges related to asset impairment, restructuring and other special charges, including integration of acquired businesses. These charges include severance costs resulting from actions taken to reduce our costs, asset impairment charges primarily related to competitive pressures for certain pet health products, product rationalizations, site closures and integration costs related to acquired businesses, primarily Bayer Animal Health, and costs related to the build out of processes and systems to support finance and global supply and logistics, among others, as we stand our organization up as an independent company.

For more information on these charges, see Note 7: Asset Impairment, Restructuring and Other Special Charges to our consolidated and combined financial statements.

Results of Operations

The following discussion and analysis of our consolidated and combined statements of operations should be read along with our consolidated and combined financial statements and the notes thereto included elsewhere in this report. For more information, see Note 2: Basis of Presentation to our consolidated and combined financial statements.

	Year Ended December 31,			% Change	
(Dollars in millions)	2020	2019	2018	20/19	19/18
Revenue	$ 3,273.3	$ 3,071.0	$ 3,066.8	7%	—%
Costs, expenses and other:					
Cost of sales	1,666.6	1,470.3	1,573.8	13%	(7)%
% of revenue	51%	48%	51%		
Research and development	327.0	270.1	246.6	21%	10%
% of revenue	10%	9%	8%		
Marketing, selling and administrative	996.6	760.2	735.2	31%	3%
% of revenue	30%	25%	24%		
Amortization of intangible assets	359.9	200.4	197.4	80%	2%
% of revenue	11%	7%	6%		
Asset impairment, restructuring and other special charges	623.7	185.5	128.8	236%	44%
Interest expense, net of capitalized interest	149.8	78.9	29.6	90%	167%
Other expense (income), net	(178.3)	27.4	41.3	NM	NM
Income (loss) before taxes	(672.0)	78.2	114.1	NM	NM
% of revenue	(21)%	3%	4%	NM	NM
Income tax expense (benefit)	(111.9)	10.3	27.6	NM	(63)%
Net income (loss)	$ (560.1)	$ 67.9	$ 86.5	NM	NM

Certain amounts and percentages may reflect rounding adjustments.

NM - Not meaningful

Disaggregated Revenue

On a global basis, our revenue within our product categories was as follows:

(Dollars in millions)	Year Ended December 31, 2020	2019	2018	% Change 20/19	19/18
PH Disease Prevention	$ 992.7	$ 787.9	$ 804.6	26%	(2)%
PH Therapeutics	365.8	348.0	283.1	5%	23%
FA Future Protein & Health	734.1	745.1	711.2	(1)%	5%
FA Ruminants & Swine	1,100.5	1,110.3	1,174.0	(1)%	(5)%
Subtotal	3,193.1	2,991.3	2,972.9	7%	1%
Contract Manufacturing [(1)]	80.2	79.7	93.9	1%	(15)%
Total	$ 3,273.3	$ 3,071.0	$ 3,066.8	7%	0%

(1) Represents revenue from arrangements in which we act as a contract manufacturer, including supply agreements associated with divestitures of products related to the acquisition of Bayer Animal Health. This category was previously called Strategic Exits.

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

Full year 2020 (Dollars in millions)	Revenue	Price	FX Rate	Legacy Elanco Volume	Bayer Animal Health Volume	Total	CER*
PH Disease Prevention	$ 992.7	6%	—%	(18)%	38%	26%	26%
PH Therapeutics	365.8	2%	—%	(8)%	11%	5%	5%
FA Future Protein & Health	734.1	3%	(2)%	(8)%	6%	(1)%	1%
FA Ruminants & Swine	1,100.5	1%	(1)%	(17)%	16%	(1)%	—%
Core Revenue	3,193.1	3%	(1)%	(14)%	19%	7%	8%
Contract Manufacturing	80.2	1%	(2)%	(32)%	34%	1%	3%
Total	$ 3,273.3	3%	(1)%	(15)%	20%	7%	8%

Full year 2019 (Dollars in millions)	Revenue	Price	FX Rate	Volume	Total	CER*
PH Disease Prevention	$ 787.9	1%	(1)%	(2)%	(2)%	(1)%
PH Therapeutics	348.0	5%	(2)%	20%	23%	25%
FA Future Protein & Health	745.1	4%	(3)%	4%	5%	8%
FA Ruminants & Swine	1,110.3	1%	(2)%	(5)%	(5)%	(4)%
Core Revenue	2,991.3	2%	(2)%	1%	1%	3%
Contract Manufacturing	79.7	—%	—%	(15)%	(15)%	(15)%
Total	$ 3,071.0	2%	(2)%	—%	—%	2%

Note: Numbers may not add due to rounding

*CER = Constant exchange rate

Revenue

PH Disease Prevention revenue increased by $204.8 million or 26%, primarily driven by the addition of Bayer Animal Health product revenue of $300.0 million, including *Seresto* and the *Advantage Family,* and price increases across the legacy Elanco portfolio. The volume decrease in the legacy Elanco business was the result of actions taken across brands to reduce channel inventory levels, a decrease in demand for older generation parasiticides as a result of competitor innovation, decreased demand in veterinary products as a result of the COVID-19 pandemic, an unfavorable comparison to the prior period which included an initial stocking for a new customer agreement in the third quarter of 2019 and the impact from products divested in the third quarter of 2020 as part of antitrust

considerations for the Bayer Animal Health acquisition, partially offset by increases in sales through alternative channels outside vet clinics and increased demand for *Credelio* and vaccines.

PH Therapeutics revenue increased by $17.8 million or 5%, driven by an increase in revenue from Bayer Animal Health products totaling $38.9 million as a result of the acquisition, price increases across the legacy Elanco portfolio and the inclusion of sales for *Entyce* and *Nocita* from the acquisition of Aratana beginning in the third quarter of 2019. The volume decrease in the legacy Elanco business was a result of actions taken across brands to reduce channel inventory levels, an unfavorable comparison to the prior period which included an initial stocking for a new customer agreement in the third quarter of 2019, and the impact from products divested in the third quarter of 2020 as part of antitrust considerations for the Bayer Animal Health acquisition, partially offset by volume growth in the pain portfolio, including *Galliprant*.

FA Future Protein & Health revenue decreased by $11.0 million or 1%, driven by decreased volume in the legacy Elanco portfolio and an unfavorable impact from foreign exchange rates, partially offset by the addition of Bayer Animal Health product revenue of $43.4 million and price increases across the legacy Elanco portfolio. The decrease in legacy Elanco volume was driven by lower levels of demand in certain markets due to the negative impact of the COVID-19 pandemic on poultry and aqua consumption, production, and profitability, as well as an unfavorable comparison to the prior period as a result of the sale of the remaining inventory of a product that was phased out in China.

FA Ruminants & Swine revenue decreased by $9.8 million or 1%, driven by decreased volume in the legacy Elanco portfolio and an unfavorable impact from foreign exchange rates, partially offset by the addition of Bayer Animal Health product revenue of $182.7 million and to a lesser extent an increase in price across the legacy Elanco portfolio. The legacy Elanco volume decrease was driven by reduced demand as a result of the impact of the COVID-19 pandemic on global protein markets, primarily *Optaflexx*, and actions taken across brands to reduce channel inventory levels, primarily *Rumensin*. Volume was impacted by generic competition for *Rumensin*, trade pressure affecting *Paylean,* and an unfavorable comparison to the prior period as a result of lower sales from the commercial agreement for *Posilac*. Additionally, higher demand in China's swine market with favorable producer economics and positive efforts to repopulate herds impacted by African Swine Fever in 2019 was a partial offset to other revenue declines.

Contract Manufacturing revenue increased by $0.5 million to $80.2 million and represented 2% of total revenue. Contract Manufacturing revenue for the period includes $26.9 million resulting from the acquisition of Bayer Animal Health.

Cost of sales

Cost of sales increased $196.3 million in 2020 as compared to 2019 due primarily to increased revenues and the amortization of the fair value adjustment to inventory of $90.1 million due to the acquisition of Bayer Animal Health, partially offset by manufacturing productivity improvements. Cost of sales as a percent of revenues increased to 50.9% from 47.9%, primarily due to the amortization of the fair value adjustment to inventory due to the acquisition of Bayer Animal Health, along with unfavorable product and geographic mix and unfavorable leverage of fixed manufacturing costs across a lower revenue base from the legacy Elanco portfolio, partially offset by continued improvements in manufacturing productivity and increases in price. Excluding the amortization of the inventory fair value adjustment, cost of sales would have been approximately 48.2% of revenue.

Research and development

R&D expenses increased $56.9 million to $327.0 million for 2020 as compared to 2019 primarily due to the acquisition of Bayer Animal Health and investments in our pipeline, partially offset by strong expense management and adjustments to variable pay.

Marketing, selling and administrative

Marketing, selling and administrative expenses were $996.6 million in 2020, an increase of $236.4 million compared to 2019, primarily due to the acquisition of Bayer Animal Health, re-investment in our *Credelio* and *Galliprant* commercialization efforts in China and additional costs from acquired businesses in 2019, including Aratana and Prevtec, partially offset by disciplined cost management across the business as we have moved primarily to virtual operations due to the COVID-19 pandemic and adjustments to variable pay.

Amortization of intangible assets

Amortization of intangible assets increased $159.5 million to $359.9 million for 2020 as compared to 2019, primarily due to the addition of amortization of intangible assets recorded from the acquisition of Bayer Animal Health during 2020.

Asset impairment, restructuring and other special charges

For additional information regarding our asset impairment, restructuring and other special charges, see Note 7: Asset Impairment, Restructuring and Other Special Charges to our consolidated and combined financial statements.

Asset impairment, restructuring and other special charges increased $438.2 million to $623.7 million in 2020 as compared to 2019, primarily due to severance associated with the restructuring program announced during the third quarter of 2020 as well as higher transaction costs directly related to business acquisitions, including the acquisition of Bayer Animal Health, higher integration costs of acquisitions, and costs associated with the implementation of new systems, programs, and processes due to the Separation from Lilly and in connection with the acquisition of Bayer Animal Health, as more fully described in Note 7.

Interest expense, net of capitalized interest

Interest expense increased $70.9 million to $149.8 million for the year ended December 31, 2020, primarily due to incremental interest as well as debt issuance costs associated with the term loan B used to finance the Bayer Animal Health acquisition, partially offset by a decrease related to the repayment of indebtedness outstanding under our existing term loan facility during the first quarter of 2020.

Other expense (income), net

Other expense (income), net was $178.3 million in income for 2020 compared to an expense of $27.4 million in 2019. Other income recorded in 2020 is composed of $156.7 million of gains recorded on the divestitures of certain products (see Note 6: Acquisitions and Divestitures for further discussion), the $45.6 million gain on the sale of land and buildings in New South Wales, Australia (see Note 14: Leases for further discussion), $11.0 million of increases in the fair value of equity investments, and $3.9 million of decreases in the fair value of the Prevtec contingent consideration (see Note 11: Financial Instruments and Fair Value for further discussion). We also recorded $36.3 million of expense related to financing commitment and advisory fees associated with the execution of the Bayer Animal Health acquisition.

Income tax expense

Our historical income tax expense may not be indicative of our future expected tax rate. See “Comparability of Historical Results” for further discussion.

Income tax expense was a benefit of $111.9 million, which was a decrease of $122.2 million in 2020 as compared to 2019. This is primarily due to a pre-tax loss, partially offset by a non-cash charge of $74.9 million relating to the establishment of valuation allowances on U.S. deferred tax assets. See Note 16: Income Taxes to our consolidated and combined 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 of 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, following U.S. tax reforms, the income taxes associated with transferring cash to the U.S. See Note 16: Income Taxes to our consolidated and combined financial statements. We currently intend to indefinitely reinvest foreign earnings for continued use in our foreign operations. As our structure evolves as a standalone company, 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 which include principal and interest payments as well as interest rate swaps, operating lease payments, purchase obligations, and costs associated with the integration of the animal health business of Bayer. In addition, we have the ability to access capital markets to obtain debt refinancing for longer-term funding, if required, to service our long-term debt obligations. 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 markets 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 may not be able to generate sufficient cash to service all of our indebtedness and may be forced to take other actions to satisfy our obligations under our indebtedness, which may not be successful."

As of December 31, 2020, cash and cash equivalents was $494.7 million, an increase of $160.7 million compared to $334.0 million at December 31, 2019. We also held $10.7 million of restricted cash at December 31, 2020, which is available solely to pay the remainder of the purchase for our businesses to Lilly. We have a corresponding liability recorded on our consolidated balance sheet and included in Payable to Lilly. Refer to the Consolidated and Combined Statements of Cash Flows for additional details on the significant sources and uses of cash for the years ended December 31, 2020, 2019 and 2018.

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,			$ Change	
Net cash provided by (used for):	2020	2019	2018	20/19	19/18
Operating activities	$ (41.0)	$ 224.1	$ 487.3	$ (265.1)	$ (263.2)
Investing activities	(4,779.2)	(234.8)	(127.0)	(4,544.4)	(107.8)
Financing activities	4,953.9	(304.8)	(35.2)	5,258.7	(269.6)
Effect of exchange-rate changes on cash and cash equivalents	26.6	(16.9)	29.0	43.5	(45.9)
Net (decrease) increase in cash, cash equivalents and restricted cash	$ 160.3	$ (332.4)	$ 354.1	$ 492.7	$ (686.5)

Operating activities

Our cash flow from operating activities decreased by $265.1 million from cash provided by operating activities of $224.1 million for the year ended December 31, 2019 to cash used for operating activities of $41.0 million for the year ended December 31, 2020. The decrease in operating cash flows was primarily attributable to a decrease in net income from year to year. Cash flows from operating activities during the year ended December 31, 2020 also decreased due to increases in accounts receivable, inventories and other assets, the impact of which was partially offset by increases in accounts payable and other current liabilities. The COVID-19 global health pandemic and related economic downturn led to an increase in customer accounts receivable that were past due at the end of the first quarter of 2020; however, customer collections improved throughout the remainder of the year and payment terms decreased. In the past, we have extended our payment terms for distributors on occasion. Although we presently have no plans to do so in the future, it is possible that we will need to extend payment terms in certain situations as a result of the COVID-19 global health pandemic, competitive pressures and the need for certain inventory levels at our channel distributors to avoid supply disruptions. If so, such extensions of customer payment terms could result in additional uses of our cash flow.

Investing activities

Our cash flow used for investing activities increased $4,544.4 million, to $4,779.2 million for the year ended December 31, 2020 compared to $234.8 million for the year ended December 31, 2019. The change was primarily

driven by acquisition payments resulting from $5,170.1 million of cash consideration paid to acquire Bayer Animal Health, partially offset by cash acquired of $168.8 million, as well as a $119.3 million increase in purchases of software as compared to prior year. The impact of these items was partially offset by proceeds of $434.7 million and $32.7 million from product divestitures required to close the acquisition of Bayer Animal Health and the net investment hedge settlement, respectively.

Financing activities

Our cash provided by financing activities was $4,953.9 million in 2020 as compared to cash used for financing activities of $304.8 million in 2019. Cash provided by financing activities in 2020 consists of proceeds from our borrowings under the term loan B and issuances of common stock and tangible equity units to finance the acquisition of Bayer Animal Health, partially offset by the retirement of our term loan A credit facility and pre-payments on our new term loan B credit facility. Cash used for financing activities during 2019 reflected $121.1 million of payments on our term credit facility as well as $191.6 million of payments to Lilly in connection with local country asset purchases and other financing activities related to the Separation.

Capital Expenditures and Software Purchases

Capital expenditures were $134.6 million during 2020, a decrease of $5.8 million compared to 2019. Purchases of software were $176.3 million during 2020, an increase of $119.3 million compared to 2019. We expect 2021 capital expenditures and software purchases to be approximately $170 million to $200 million.

Description of Indebtedness

For a complete description of our debt and available credit facilities as of December 31, 2020, see Note 10: Debt to our consolidated and combined financial statements.

Off Balance-Sheet Arrangements

Other than the commitments and contingencies disclosed in Note 16: Commitments and Contingencies, we had no off-balance sheet arrangements that have, or are reasonably likely to have, a current or future material effect on our financial condition, results of operations, or liquidity.

Contractual Obligations

Our contractual obligations and commitments as of December 31, 2020 are primarily comprised of long-term debt obligations, including interest payments, and purchase obligations.

Our long-term debt obligations are comprised of our expected principal and interest obligations and our interest rate swaps. Payments due under our long-term debt obligations based on scheduled maturity dates are as follows:

		Years			
(Dollars in millions)	**Total**	**Less than 1 year**	**1 - 3 Years**	**4 - 5 Years**	**More Than 5 Years**
Long-term debt obligations, including interest payments	$ 7,413.6	$ 758.6	$ 1,211.5	$ 1,163.1	$ 4,280.4

We used current period assumptions for interest rates to compute expected interest payments on variable rate debt instruments and swaps.

Purchase obligations consist of open purchase orders as of December 31, 2020 and contractual payment obligations with significant vendors which are noncancelable and are not contingent. These obligations are primarily short-term in nature.

Critical Accounting Policies

The preparation of financial statements in accordance with U.S. GAAP requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses. Certain of our accounting

policies are considered critical because these policies are the most important to the depiction of our financial statements and require significant, difficult or complex judgments by us, often requiring the use of estimates about the effects of matters that are inherently uncertain. Actual results that differ from our estimates could have an unfavorable effect on our financial position and results of operations. We apply estimation methodologies consistently from year to year. The following is a summary of accounting policies that we consider critical to the consolidated and combined financial statements.

Revenue Recognition

Our gross product revenue is subject to deductions that are generally estimated and recorded in the same period that the revenue is recognized and that primarily represent revenue incentives (rebates and discounts) and sales returns. For example:

- for 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; and
- for sales returns, we consider items such as: local returns policies and practices; returns as a percentage of revenue; an understanding of the reasons for past returns; estimated shelf life by product; and estimate of the amount of time between shipment and return to estimate the impact of sales returns.

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.

Although the amounts recorded for these 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.

See Note 4: Summary of Significant Accounting Policies to our consolidated and combined financial statements for further discussion regarding our revenue recognition policy.

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 and combined 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 volume and prices, 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. Depending on the facts and circumstances, we may deem it necessary to engage an independent valuation expert to assist in valuing significant assets and liabilities.

We determine fair value of any contingent consideration liability that results from a business combination by utilizing a market approach (i.e., based on quoted market values, significant other observable inputs for identical or comparable assets or liabilities) a discounted cash flow analysis, or a Monte Carlo simulation (i.e., based on multiple potential financial outcomes using estimated variables such as expected revenues, growth rates, and a discount rate). Estimating the fair value of contingent consideration requires the use of significant estimates and judgments, including, but not limited to, revenue and the discount rate and will be remeasured every reporting period.

Impairment of Indefinite-Lived and Long-Lived Assets

We review the carrying value of long-lived assets (both intangible and tangible) for potential impairment on a periodic basis and whenever events or changes in circumstances indicate the carrying value of an asset (or asset

group) may not be recoverable. We identify impairment by comparing the projected undiscounted cash flows to be generated by the asset (or asset group) to its carrying value. If an impairment is identified, a loss is recorded equal to the excess of the asset's net book value over its fair value utilizing a discounted cash flow analysis, and the cost basis is adjusted.

Goodwill and indefinite-lived intangible assets are reviewed for impairment at least annually and when certain impairment indicators are present. When required, a comparison of fair value to the carrying amount of assets is performed to determine the amount of any impairment.

The estimated cash flows and fair values used in our impairment reviews require significant judgment with respect to future volume; use of working capital; foreign currency exchange rates; 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. We make these judgments based on our historical experience, relevant market size, historical pricing of similar products and expected industry trends. 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, and results of research and development. A change in these assumptions or the use of alternative estimates and assumptions could have a significant impact on the estimated fair values of the assets, and may result in an impairment of the existing assets in a future period.

During the years ended December 31, 2020, 2019 and 2018, we recorded asset impairments of $17.5 million, $15.4 million and $81.9 million, respectively, primarily due to product rationalization or changes in business strategy. For more information related to our impairment charges, see Note 7: Asset Impairment, Restructuring and Other Special Charges to our consolidated and combined financial statements.

Deferred Tax Asset Valuation Allowances

We maintain valuation allowances unless it is more likely than not that all or a portion of the deferred tax asset will be realized. Changes in valuation allowances are 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, 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. Concluding that a valuation allowance is not required is difficult when there is significant negative evidence which is objective and verifiable, such as cumulative losses in recent years. We prepare a rolling three-year cumulative pre-tax book income or loss analysis adjusted for certain permanent book to tax differences as a measure of our cumulative results in recent years. In the U.S. and certain foreign jurisdictions, our analysis indicates that we have cumulative three-year historical losses on this basis. This is considered significant negative evidence which is objective and verifiable and therefore, difficult to overcome. However, the three-year cumulative loss position is not solely determinative and accordingly, we consider all other available positive and negative evidence in our analysis. In making such judgments, significant weight is given to evidence that can be objectively verified.

As of December 31, 2020 and 2019, we had valuation allowances of $94.4 million and $32.7 million, respectively. In recent years we have incurred pre-tax losses in the U.S. primarily as a result of transaction, restructuring, integration and other costs as well the negative impacts of the COVID-19 pandemic. As a result, we have concluded that it is “more likely than not” that we will not be able to utilize a portion of the U.S. deferred tax assets and have established a valuation allowance of $74.9 million 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 that 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” the deferred tax asset will be realized.

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 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.

We face foreign currency exchange exposures when we enter into transactions arising from subsidiary trade and loan payables and receivables denominated in foreign currencies and purchases of local subsidiaries due to local regulations as a result of the acquisition of Bayer Animal Health. We also face currency exposure that arises from translating the results of our global operations to the U.S. dollar at exchange rates that have fluctuated from the beginning of the period. We may enter into foreign currency forward or option derivative contracts to reduce the effect of fluctuating currency exchange rates in future periods.

We estimate that a hypothetical 10% adverse movement in all foreign currency exchange rates related to the translation of the results of our foreign operations would decrease our net income by approximately $15.9 million for the year ended December 31, 2020.

Interest Risk

Borrowings under our new term loan facility are exposed to interest rate fluctuations based on LIBOR. As of December 31, 2020, we held certain interest rate swap agreements with a notional value of $4.05 billion that have the economic effect of modifying the variable-interest obligations associated with the new term loan facility, so that a portion of the variable-rate interest payable becomes fixed. During the year ended December 31, 2020, we recorded a loss of $60.4 million, net of taxes on these interest rate swaps in other comprehensive loss. The loss is primarily attributable to market conditions resulting from the COVID-19 pandemic and the resulting cut to interest rates by the U.S. Federal Reserve in the first quarter of 2020. See Note 11: Financial Instruments and Fair Value for further information.

Recently Issued Accounting Pronouncements

For discussion of our new accounting standards, see Note 4: Summary of Significant Accounting Policies - Implementation of New Financial Accounting Pronouncements to our consolidated and combined financial statements.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

You can find quantitative and qualitative disclosures about market risk (e.g., interest rate risk) at Item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operations - Liquidity and Capital Resources - Quantitative and Qualitative Disclosures About Market Risk.” That information is incorporated in this Item 7A by reference.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

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, 2020 and 2019, the related consolidated and combined statements of operations, comprehensive income (loss), equity and cash flows for each of the three years in the period ended December 31, 2020, and the related notes (collectively referred to as the “consolidated and combined financial statements”). In our opinion, the consolidated and combined financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2020 and 2019, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2020, 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, 2020, 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 March 1, 2021 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 and combined 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.

Sales rebates and discounts

Description of the matter

At December 31, 2020, the Company's US sales rebates and discounts liability totaled $153.6 million. As explained in Note 5 to the consolidated and combined financial statements, the Company estimates a sales rebates and discounts liability for direct customers and other indirect customers in the distribution chain under the terms of their arrangements using the expected value approach. The sales rebates and discounts are recorded as a deduction to revenue at the time the Company recognizes a sale to a customer.

Auditing the sales rebates and discounts liability in the US 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, estimates of the expected rebate rates based on projected sales volumes derived from current sales data and recent trends, estimates of future rebates to be paid to indirect customers in the distribution chain based on inventory volumes and historical experience with similar rebate incentive programs.

How we addressed the matter in our audit

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 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 assumptions discussed above and testing the completeness and accuracy of the underlying data used in management's expected value analysis. For example, we compared the significant assumptions to third-party reports used by the Company to estimate indirect sales volumes during the period. Furthermore, we confirmed product remaining in the distribution channel at period end. In addition, we inspected the underlying direct and indirect customer rebate programs and compared the rebate percentages used in the Company's analyses with the program percentages. Additionally, 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 rebates and discounts liability resulting from changes in the assumptions.

Acquisition of Bayer Animal Health

Description of the matter

During 2020, the Company completed its acquisition of Bayer Animal Health for total consideration of $6,787.0 million, as disclosed in Note 6 to the consolidated and combined financial statements. The acquisition was accounted for as a business combination. Auditing the Company's accounting for its acquisition of Bayer Animal Health was complex due to the significant estimation uncertainty in determining the fair value of identified intangible assets, which principally consisted of intellectual property related to marketed products of $3,950.0 million. The significant estimation uncertainty was primarily due to the sensitivity of the respective fair values to the significant underlying assumptions about the future performance of the acquired business. The Company used a discounted cash flow model to measure the intellectual property related to marketed product intangible assets. The significant assumptions used to estimate the value of these intangible assets included certain assumptions that form the basis of the forecasted results (e.g., revenue growth rates and EBITDA margins). These significant assumptions are forward-looking and could be affected by future economic and market conditions.

How we addressed the matter in our audit

We tested the Company's controls over its accounting for acquisitions. This included testing controls over the recognition and measurement of consideration transferred and related intangible assets, including the valuation models and underlying assumptions discussed above used to develop such estimates.

To test the estimated fair value of the intellectual property related to marketed product intangible assets our audit procedures included, among others, evaluating the Company's use of the income approach and testing the significant assumptions discussed above used in the models, including the completeness and accuracy of the underlying data. For example, we compared the forecasted revenue and EBITDA margins to current industry and economic trends as well as the historic financial performance of the acquired business. We also performed sensitivity analyses of the significant assumptions to evaluate the changes in the fair value of the intangible assets resulting from changes in the assumptions. We involved our valuation specialists to assist in our evaluation of the methodology used by the Company and certain assumptions included in the fair value estimates.

/s/ Ernst & Young LLP

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

Indianapolis, Indiana
March 1, 2021

Elanco Animal Health Incorporated
Consolidated and Combined Statements of Operations
(in millions, except per-share data)

	Year Ended December 31,		
	2020	**2019**	**2018**
Revenue	$ 3,273.3	$ 3,071.0	$ 3,066.8
Costs, expenses and other:			
Cost of sales	1,666.6	1,470.3	1,573.8
Research and development	327.0	270.1	246.6
Marketing, selling and administrative	996.6	760.2	735.2
Amortization of intangible assets	359.9	200.4	197.4
Asset impairment, restructuring and other special charges	623.7	185.5	128.8
Interest expense, net of capitalized interest	149.8	78.9	29.6
Other expense (income), net	(178.3)	27.4	41.3
	3,945.3	2,992.8	2,952.7
Income (loss) before income taxes	(672.0)	78.2	114.1
Income tax expense (benefit)	(111.9)	10.3	27.6
Net income (loss)	$ (560.1)	$ 67.9	$ 86.5
Earnings (loss) per share:			
Basic	$ (1.27)	$ 0.18	$ 0.28
Diluted	$ (1.27)	$ 0.18	$ 0.28
Weighted average shares outstanding:			
Basic	441.4	369.0	313.7
Diluted	441.4	370.3	313.7

See notes to consolidated and combined financial statements.

Elanco Animal Health Incorporated
Consolidated and Combined Statements of Comprehensive Income (Loss)
(in millions)

	Year Ended December 31,		
	2020	2019	2018
Net income (loss)	$ (560.1)	$ 67.9	$ 86.5
Other comprehensive income (loss):			
Unrealized loss on derivatives for cash flow hedges, net of taxes	(60.4)	—	—
Foreign currency translation	558.2	19.8	(47.1)
Defined benefit pension and retiree health benefit plans, net of taxes	(21.1)	28.7	25.4
Other comprehensive income (loss), net of taxes	476.7	48.5	(21.7)
Comprehensive income (loss)	$ (83.4)	$ 116.4	$ 64.8

See notes to consolidated and combined financial statements.

Elanco Animal Health Incorporated
Consolidated Balance Sheets
(in millions)

	December 31, 2020	December 31, 2019
Assets		
Current Assets		
Cash and cash equivalents	$ 494.7	$ 334.0
Accounts receivable, net of allowances of $8.5 (2020) and $6.2 (2019)	871.6	816.9
Other receivables	205.1	73.0
Inventories	1,578.1	1,050.7
Prepaid expenses and other	256.3	87.4
Restricted cash (Note 21)	10.7	11.1
Total current assets	3,416.5	2,373.1
Noncurrent Assets		
Goodwill	6,224.8	2,989.6
Other intangibles, net	6,387.3	2,482.8
Other noncurrent assets	347.8	185.0
Property and equipment, net	1,316.3	955.3
Total assets	$ 17,692.7	$ 8,985.8
Liabilities and Equity		
Current Liabilities		
Accounts payable	$ 501.0	$ 222.6
Employee compensation	143.6	99.6
Sales rebates and discounts	295.3	211.0
Current portion of long-term debt	554.5	24.5
Other current liabilities	576.9	244.4
Payable to Lilly (Note 21)	5.0	16.4
Total current liabilities	2,076.3	818.5
Noncurrent Liabilities		
Long-term debt	5,572.4	2,330.5
Accrued retirement benefits	345.7	82.5
Deferred taxes	900.3	100.8
Other noncurrent liabilities	322.1	106.6
Total liabilities	9,216.8	3,438.9
Commitments and Contingencies		
Equity		
Preferred stock, 1,000,000,000 shares authorized, no par value; none issued	—	—
Common stock, 5,000,000,000 shares authorized, no par value; 471,921,116 and 373,011,513 shares issued and outstanding as of December 31, 2020 and 2019, respectively	—	—
Additional paid-in capital	8,650.1	5,636.3
Retained earnings (accumulated deficit)	(477.2)	84.3
Accumulated other comprehensive income (loss)	303.0	(173.7)
Total equity	8,475.9	5,546.9
Total liabilities and equity	$ 17,692.7	$ 8,985.8

See notes to consolidated and combined financial statements.

Elanco Animal Health Incorporated
Consolidated and Combined Statements of Equity
(in millions)

	Common Stock					Accumulated Other Comprehensive Income (Loss)				
	Shares	Amount	Additional Paid-in Capital	Net Parent Company Investment	Retained Earnings (Accumulated Deficit)	Cash Flow Hedge	Foreign Currency Translation	Defined Benefit Pension and Retiree Health Benefit Plans	Total	Total Equity
January 1, 2018	293.3	$ —	$ —	$ 8,036.9	$ —	$ —	$ (227.2)	$ (29.4)	$ (256.6)	$ 7,780.3
Net income	—	—	—	70.1	16.4	—	—	—	—	86.5
Adoption of Accounting Standards Update (ASU) 2016-16	—	—	—	(0.3)	—	—	—	—	—	(0.3)
Other comprehensive income (loss), net of tax	—	—	—	—	—	—	(47.1)	25.4	(21.7)	(21.7)
Transfers (to)/from Lilly, net	—	—	—	(226.3)	—	—	—	—	—	(226.3)
Separation adjustments [1]	—	—	—	43.5	—	—	56.1	—	56.1	99.6
Issuance of common stock	72.3	—	1,659.7	—	—	—	—	—	—	1,659.7
Consideration to Lilly in connection with Separation	—	—	(4,194.9)	—	—	—	—	—	—	(4,194.9)
Reclassification of net parent company investment	—	—	7,923.9	(7,923.9)	—	—	—	—	—	—
Stock compensation	—	—	1.8	—	—	—	—	—	—	1.8
Capital contribution from Lilly	—	—	12.8	—	—	—	—	—	—	12.8
December 31, 2018	365.6	—	5,403.3	—	16.4	—	(218.2)	(4.0)	(222.2)	5,197.5
Net income	—	—	—	—	67.9	—	—	—	—	67.9
Other comprehensive income, net of tax	—	—	—	—	—	—	19.8	28.7	48.5	48.5
Separation activities [2]	—	—	(51.2)	—	—	—	—	—	—	(51.2)
Stock compensation	—	—	40.7	—	—	—	—	—	—	40.7
Issuance of stock under employee stock plans, net	0.1	—	—	—	—	—	—	—	—	—
Issuances of stock in connection with Aratana acquisition:										
Issuance to Aratana shareholders for acquisition	7.2	—	238.0	—	—	—	—	—	—	238.0
Accelerated vesting of equity awards	0.1	—	3.6	—	—	—	—	—	—	3.6
Other	—	—	1.9	—	—	—	—	—	—	1.9
December 31, 2019	373.0	—	5,636.3	—	84.3	—	(198.4)	24.7	(173.7)	5,546.9
Net loss	—	—	—	—	(560.1)	—	—	—	—	(560.1)
Adoption of ASU 2016-13[3]	—	—	—	—	(1.4)	—	—	—	—	(1.4)
Other comprehensive income (loss), net of tax	—	—	—	—	—	(60.4)	558.2	(21.1)	476.7	476.7
Separation activities [2]	—	—	38.0	—	—	—	—	—	—	38.0
Stock compensation	—	—	47.7	—	—	—	—	—	—	47.7
Issuance of stock under employee stock plans, net	1.0	—	(14.4)	—	—	—	—	—		(14.4)
Issuance of common stock and tangible equity units, net of issuance costs	25.0	—	1,220.0	—	—	—	—	—	—	1,220.0
Issuance of stock to Bayer for acquisition, net of issuance costs	72.9	—	1,722.8	—	—	—	—	—	—	1,722.8
Other	—	—	(0.3)	—	—	—	—	—	—	(0.3)
December 31, 2020	471.9	$ —	$ 8,650.1	$ —	$ (477.2)	$ (60.4)	$ 359.8	$ 3.6	$ 303.0	$ 8,475.9

(1) See Note 3: Impact of Separation for further discussion.

(2) See Note 21: Related Party Agreements and Transactions for further discussion.

(3) See Note 4: Summary of Significant Accounting Policies for further discussion.

See notes to consolidated and combined financial statements.

Elanco Animal Health Incorporated
Consolidated and Combined Statements of Cash Flows
(in millions)

	Year Ended December 31,		
	2020	2019	2018
Cash Flows from Operating Activities			
Net income (loss)	$ (560.1)	$ 67.9	$ 86.5
Adjustments to reconcile net income (loss) to cash flows from operating activities:			
Depreciation and amortization	516.9	314.5	296.0
Change in deferred income taxes	(124.8)	0.1	(60.7)
Stock-based compensation expense	47.7	49.4	26.0
Asset impairment charges	25.1	32.6	120.5
Gain on sale of assets	(51.3)	—	(0.8)
Gain on divestitures	(170.0)	—	—
Inventory fair value step-up amortization	90.1	0.6	—
Other non-cash operating activities, net	19.7	(12.7)	49.0
Other changes in operating assets and liabilities, net of acquisitions and divestitures:			
Receivables	14.0	(172.4)	(122.0)
Inventories	(94.7)	(33.7)	(20.1)
Other assets	(122.9)	7.0	(3.2)
Accounts payable and other liabilities	369.3	(29.2)	116.1
Net Cash Provided by (Used for) Operating Activities	(41.0)	224.1	487.3
Cash Flows from Investing Activities			
Purchases of property and equipment	(134.6)	(140.4)	(134.5)
Disposals of property and equipment	72.7	0.3	9.4
Purchases of software	(176.3)	(57.0)	(2.0)
Cash paid for acquisitions, net of cash acquired (Note 6)	(5,001.3)	(32.8)	—
Divestiture proceeds (Note 6)	434.7	—	—
Proceeds from settlement of net investment hedges (Note 11)	32.7	—	—
Other investing activities, net	(7.1)	(4.9)	0.1
Net Cash Used for Investing Activities	(4,779.2)	(234.8)	(127.0)
Cash Flows from Financing Activities			
Proceeds from issuance of long-term debt	4,804.2	—	2,500.0
Repayments of long-term borrowings	(951.5)	(121.1)	(7.5)
Proceeds from issuance of common stock and tangible equity units (Note 1 and Note 9)	1,219.9	—	1,659.7
Debt issuance costs	(102.5)	—	(24.5)
Consideration paid to Lilly in connection with the Separation (Note 1)	—	(191.6)	(3,991.3)
Other financing activities, net	(16.2)	1.6	(17.2)
Other net transactions with Lilly	—	6.3	(154.4)
Net Cash Provided by (Used for) Financing Activities	4,953.9	(304.8)	(35.2)
Effect of exchange rate changes on cash and cash equivalents	26.6	(16.9)	29.0
Net (decrease) increase in cash, cash equivalents and restricted cash	160.3	(332.4)	354.1
Cash, cash equivalents and restricted cash at January 1	345.1	677.5	323.4
Cash, cash equivalents and restricted cash at December 31	$ 505.4	$ 345.1	$ 677.5

Elanco Animal Health Incorporated
Consolidated and Combined Statements of Cash Flows (cont'd)
(in millions)

	December 31,		
	2020	**2019**	**2018**
Cash and cash equivalents	$ 494.7	$ 334.0	$ 474.8
Restricted cash (Note 21)	10.7	11.1	202.7
Cash, cash equivalents and restricted cash at December 31	$ 505.4	$ 345.1	$ 677.5

See notes to consolidated and combined financial statements.

Note 1. Nature of Business and Organization

Nature of Business

Elanco was formed as a wholly-owned subsidiary of Lilly, and is a global animal health company that innovates, develops, manufactures and markets products for pets and farm animals. We offer a diverse portfolio of approximately 190 brands to veterinarians and farm animal producers in more than 90 countries.

Organization

Elanco Parent was formed in May 2018, as a wholly-owned subsidiary of Lilly, to serve as the ultimate parent company of substantially all of the animal health businesses of Lilly.

On September 24, 2018, Elanco Parent completed an IPO resulting in the issuance of 72.3 million shares of its common stock (including shares issued pursuant to the underwriters' option to purchase additional shares), which represented 19.8% of the outstanding shares, at $24 per share resulting in total net proceeds, after underwriting discounts and commissions, of $1.7 billion. In connection with the completion of the IPO, through a series of equity and other transactions, Lilly transferred to Elanco Parent the animal health businesses that form its business. In exchange, Elanco Parent has paid to Lilly approximately $4.2 billion, which included the net proceeds from the IPO, the net proceeds from the debt offering completed by Elanco Parent in August 2018 and the term loan facility entered into by Elanco Parent in September 2018 (see Note 10: Debt). These transactions are collectively referred to herein as the Separation.

On February 8, 2019, Lilly announced an exchange offer whereby Lilly shareholders could exchange all or a portion of Lilly common stock for shares of Elanco common stock owned by Lilly. The disposition of Elanco shares was completed on March 11, 2019 and resulted in the full separation of Elanco along with the disposal of Lilly's entire ownership and voting interest in Elanco.

On August 1, 2020, we completed the previously announced acquisition of Bayer Animal Health, for payment of $5.2 billion in cash, subject to customary post-closing adjustments, and approximately 72.9 million shares of Elanco common stock. See Note 6: Acquisitions and Divestitures for additional information.

Note 2. Basis of Presentation

We have prepared the accompanying consolidated and combined 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. The accounts of all wholly-owned and majority-owned subsidiaries are included in the consolidated and combined financial statements, and 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 and have evaluated subsequent events up to the time of the filing.

For the periods after Separation, the financial statements are prepared on a consolidated basis and reflect the results of operations, comprehensive income, financial position, equity and cash flows resulting from our operations as an independent company. For periods prior to Separation, our financial statements are combined, have been prepared on a standalone basis, and are derived from Lilly's consolidated financial statements and accounting records. The consolidated and combined financial statements reflect the financial position, results of operations and cash flows related to the animal health businesses that were transferred to Elanco Parent and are prepared in conformity with GAAP.

The combined financial statements include the attribution of certain assets and liabilities that historically have been held at the Lilly corporate level but which are specifically identifiable or attributable to the businesses that have been transferred to Elanco Parent. All intercompany transactions and accounts within Elanco have been eliminated. All transactions between us and Lilly are considered to be effectively settled in the combined financial statements at the time the intercompany transaction is recorded. The total net effect of the settlement of these intercompany transactions is reflected in the combined statements of cash flows as a financing activity and in the consolidated and combined statement of equity as net parent company investment.

Prior to Separation, these combined financial statements include an allocation of expenses related to certain Lilly corporate functions, including executive oversight, treasury, legal, finance, human resources, tax, internal audit, financial reporting, information technology and investor relations, prior to IPO. These expenses were allocated to us based on direct usage or benefit where specifically identifiable, with the remainder allocated primarily on a pro rata basis of revenue, headcount and other measures. We consider the expenses methodology and results to be reasonable; however, the allocations may not be indicative of the actual expense that would have been incurred had we operated as an independent, publicly traded company for the periods presented. It is impractical to estimate what the standalone costs of Elanco would have been in the historical periods. After the Separation, a TSA between Lilly and Elanco went into effect. Under the terms of the TSA, we will be able to use these Lilly services for a fixed term established on a service-by-service basis. We are paying Lilly mutually agreed upon fees for the Lilly services provided under the TSA. Our consolidated and combined financial statements reflect the charges for Lilly services after the IPO. See Note 21: Related Party Agreements and Transactions for additional details.

Prior to Separation, Lilly maintained various benefit and combined stock-based compensation plans at a corporate level and other benefit plans at a country level. Our employees participated in such programs and the portion of the cost of those plans related to our employees is included in our financial statements. However, the consolidated balance sheets do not include any equity issued related to stock-based compensation plans or any net benefit plan obligations unless the benefit plan covers only our dedicated employees or where the legal obligation associated with the benefit plan transferred to Elanco. Upon Lilly's full divestiture of Elanco in March 2019, all Lilly share-based awards held by our employees were converted into awards that will be settled in Elanco shares.

Prior to Separation, our equity balance represented the excess of total assets over liabilities, including intercompany balances between Elanco and Lilly (net parent company investment) and accumulated other comprehensive income (loss). Net parent company investment is primarily impacted by contributions from Lilly which are the result of treasury activities and net funding provided by or distributed to Lilly. See Note 21: Related Party Agreements and Transactions for further information.

The basis of presentation for our income tax amounts is discussed in Note 16: Income Taxes.

Note 3. Impact of Separation

In connection with the Separation, we issued $2.0 billion aggregate principal amount of senior notes in a private placement, and we also entered into a $750.0 million senior unsecured revolving credit facility and $500.0 million senior unsecured term credit facility. See Note 10: Debt for further information. In connection with the Separation, we entered into various agreements with Lilly, including a master separation agreement, a tax matters agreement and the TSA.

In connection with the terms of the Separation, there were certain assets and liabilities included in the pre-Separation balance sheet that were retained by Lilly and there were certain assets not included in the pre-Separation balance sheet that were transferred to us. The cumulative adjustment to the historical balance sheet increased net assets and total equity by approximately $99.6 million. The impact on net assets primarily represents the elimination of certain income tax assets and liabilities and the contribution of additional assets.

We will also continue to have certain ongoing relationships with Lilly as described in Note 21: Related Party Agreements and Transactions.

Note 4. Summary of Significant Accounting Policies

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 generally is at the time we ship the product to the customer. Payment terms differ by jurisdiction and customer, but payment terms in most of our major jurisdictions typically range from 30 to 120 days from date of shipment. Revenue for our product sales has not been adjusted for the effects of a financing component as we expect, at contract inception, that 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. 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 is recognized over time when we are creating or enhancing an asset that the customer controls. In this instance revenue is recognized as the asset is created or enhanced or our performance does not create an asset with an alternative use and we have an enforceable right to payment for performance completed.

Provisions for rebates and discounts, as well as returns are established in the same period the related sales are recognized. We generally ship product shortly after orders are received; therefore, we generally only have a few days of orders received but not yet shipped at the end of any reporting period. Shipping and handling activities are considered to be 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.

Significant judgments must be made in determining the transaction price for sales of products related to anticipated rebates and discounts, and returns. The following describe the most significant of these judgments:

Sales Rebates and Discounts - Background and Uncertainties

- Many of our products are sold to wholesale distributors. We initially invoice our customers contractual list prices. Contracts with direct and indirect customers may 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 at the time we recognize a sale to a direct customer, we must estimate any rebates or discounts that ultimately will be due to the direct customer and other customers in the distribution chain under the terms of our contracts. Judgments are required in making these estimates.
- The rebate and discount amounts are recorded as a deduction to arrive at our net product sales. We estimate these accruals using an expected value approach.
- 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 and continually monitor the impact of this experience and adjust 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 time lag, in any particular period rebate adjustments may incorporate revisions of accruals for several periods.

Sales Returns - Background and Uncertainties

- We estimate a reserve for future product returns related to product sales using an expected value approach. This estimate is based on several factors, including: local returns policies and practices; returns as a percentage of revenue; an understanding of the reasons for past returns; estimated shelf life by product; and estimate of the amount of time between shipment and return. Adjustments to the returns reserve have been and may in the future be required based on revised estimates to our assumptions, which would have an impact on our consolidated and combined results of operations. We record the return amounts as a deduction to arrive at our net product sales.

Research and development expenses and acquired in-process research and development

Research and development expenses include the following:

- Research and development costs, which are expensed as incurred.
- Milestone payment obligations incurred prior to regulatory approval of the product, which are accrued when the event requiring payment of the milestone occurs.
- Acquired in-process research and development (IPR&D) expense, which includes the initial costs of IPR&D projects, acquired directly in a transaction other than a business combination, that do not have an alternative future use.

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).

Other significant accounting policies

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

Implementation of New Financial Accounting Pronouncements

The following table provides brief descriptions of accounting standards that were recently adopted:

Standard	Description	Effect on the financial statements or other significant matters
Accounting Standards Update 2016-02, Leases	This standard was issued to increase transparency and comparability among organizations by recognizing lease assets and lease liabilities, including leases classified as operating leases under previous GAAP, on the balance sheet and requiring additional disclosures about leasing arrangements.	We adopted the standard on January 1, 2019 using the modified retrospective approach, applied at the beginning of the period of adoption, and we elected the package of transition practical expedients. Upon adoption of the standard, we recorded $84.9 million of right-of-use assets and $85.3 million of operating lease liabilities on our consolidated balance sheet. Adoption of this standard did not have a material impact on our consolidated and combined statements of operations for the year ended December 31, 2019. See Note 14: Leases for further information.
Accounting Standards Update 2016-13, *Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments*	This standard modifies the impairment model by requiring entities to use a forward-looking approach based on expected losses to estimate credit losses on certain types of financial instruments, including trade receivables.	We adopted the standard on January 1, 2020 using the modified retrospective approach. The impact of adoption included the first-time recognition of expected credit losses (i.e., bad debt expense) on current receivables that are not past due, which resulted in a decrease in retained earnings of $1.4 million. Recognition of this allowance and other impacts of adoption were not material to the consolidated and combined financial statements.

Standard	Description	Effect on the financial statements or other significant matters
Accounting Standards Update 2018-15, *Intangibles - Goodwill and Other Internal-Use Software (Subtopic 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement that is a Service Contract*	This guidance aligns the requirements for capitalizing implementation costs incurred in a cloud-based hosting arrangement that is a service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software.	On January 1, 2020, we implemented the guidance on a prospective basis. The adoption did not have a significant impact on the consolidated and combined financial statements.

The following table provides brief descriptions of the accounting standards applicable to us that have not yet been adopted:

Standard	Description	Effective Date	Effect on the financial statements or other significant matters
Accounting Standards Update 2019-12, *Simplifying the Accounting for Income Taxes*	The amendments in this update include simplifications related to accounting for income taxes including removing certain exceptions related to the approach for intraperiod tax allocation and the recognition of deferred tax liabilities for outside basis differences. The standard also clarifies the accounting for transactions that result in a step-up in the tax basis of goodwill.	This standard is effective January 1, 2021, with early adoption permitted. We intend to adopt this standard on that date.	The adoption of this guidance will not have a material impact on our consolidated and combined financial statements.
Accounting Standards Update 2020-04, *Reference rate reform (Topic 848) - Facilitation of the Effects of Reference Rate Reform on Financial Reporting*	This update provides optional expedients and exceptions for applying U.S. GAAP to contracts, hedging relationships, and other transactions affected by reference rate reform if certain criteria are met.	This standard was effective as of March 12, 2020 through December 31, 2022 and adoption is permitted at any time during the period on a prospective basis.	We are currently in the process of evaluating the impact of the London Interbank Offered Rate (LIBOR) on our existing contracts, but do not expect that this update will have a material impact on our consolidated and combined financial statements.

Note 5. Revenue

Our sales rebates and discounts are based on specific agreements. The most significant of our sales rebate and discount programs in terms of accrual and payment amounts, percentage of our products that are sold via these programs, and level of judgment required in estimating the appropriate transaction price, relate to our programs in the U.S., France and the United Kingdom. As of December 31, 2020 and 2019, the aggregate liability for sales rebates and discounts for these countries represented approximately 73% and 83%, respectively, of our total

liability, with the U.S. individually representing approximately 52% and 71%, respectively, of our total liability. No other individual country represented 5% or more of our total liability for 2020 and 2019.

The following table summarizes the activity in the sales rebates and discounts liability in the U.S., France, and the United Kingdom:

	Year Ended December 31,	
	2020	2019
Beginning balance	$ 175.9	$ 138.2
Reduction of revenue	389.3	373.9
Payments	(401.3)	(336.2)
Additions related to the Bayer Animal Health acquisition	49.6	—
Foreign currency translation adjustments	3.0	—
Ending balance	$ 216.5	$ 175.9

Adjustments to revenue recognized as a result of changes in estimates for the judgments described above during the years ended December 31, 2020, 2019, and 2018 for product shipped in previous periods were not material.

Actual global product returns were 0.8%, 0.7%, and 0.8% of net revenue for the years ended December 31, 2020, 2019, and 2018 respectively, and have not fluctuated significantly as a percentage of revenue.

Disaggregation of Revenue

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

	2020	2019	2018
Pet Health Disease Prevention	$ 992.7	$ 787.9	$ 804.6
Pet Health Therapeutics	365.8	348.0	283.1
Farm Animal Future Protein & Health	734.1	745.1	711.2
Farm Animal Ruminants & Swine	1,100.5	1,110.3	1,174.0
Contract Manufacturing [(1)]	80.2	79.7	93.9
Total Revenue	$ 3,273.3	$ 3,071.0	$ 3,066.8

(1) Represents revenue from arrangements in which we act as a contract manufacturer, including supply agreements associated with divestitures of products related to the acquisition of Bayer Animal Health. This category was previously called Strategic Exits.

Note 6. Acquisitions and Divestitures

During 2020, we completed the acquisition of Bayer Animal Health. During 2019, we completed the acquisitions of all outstanding shares of Aratana Therapeutics, Inc. (Aratana) and Prevtec Microbia Inc. (Prevtec). These transactions were accounted for as business combinations under the acquisition method of accounting. The acquisition method requires, among other things, that assets acquired and liabilities assumed in a business combination 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. The results of operations of these acquisitions are included in our consolidated and combined financial statements from the dates of acquisition.

Bayer Animal Health Acquisition

On August 1, 2020, we completed our previously announced acquisition of Bayer Animal Health in a cash and stock transaction. Bayer Animal Health is a provider of products intended to improve the health and well-being of pets and farm animals. The acquisition expands our pet health product category, advancing our planned portfolio mix transformation and creating a better balance between our farm animal and pet health product categories. Our

existing product portfolio and pipeline are enhanced by the addition of Bayer Animal Health, which complements our commercial operations and international infrastructure while expanding our direct to retailer/e-commerce presence.

Total consideration transferred to Bayer and its subsidiaries for the acquisition is summarized as follows:

Cash consideration [1]	$	5,063.3
Fair value of Elanco common stock [2]		1,723.7
Fair value of total consideration transferred [3]	$	6,787.0

(1) Includes initial cash consideration of $5,170.1 million less estimated working capital and tax adjustments of $106.8 million, which have not yet been finalized. Our expectation is for the working capital adjustment to be final in the second quarter of 2021.

(2) Represents the acquisition date fair value of 72.9 million shares of Elanco common stock at $23.64 per share. Per the terms of the stock and asset purchase agreement, the number of shares was based on approximately $2.3 billion divided by the 20-day volume-weighted average stock price as of the last day of trading before the closing of the acquisition (but subject to a 7.5% symmetrical collar centered on the baseline share number of approximately $2.3 billion divided by an initial share price of $33.60).

(3) The purchase price is preliminary and subject to working capital and customary purchase price adjustments.

We recognized transaction costs related to the acquisition of Bayer Animal Health of $266.9 million and $42.6 million for the years ended December 31, 2020 and 2019, respectively. These costs were associated with legal and professional services related to the acquisition and are reflected within asset impairment, restructuring and other special charges in our consolidated and combined statements of operations.

The amount of revenues attributable to Bayer Animal Health included in our consolidated and combined statement of operations since the date of acquisition for the year ended December 31, 2020 is $591.9 million. Based on our current operational structure, we did not record standalone costs for Bayer Animal Health after the date of the acquisition. As a result, we are unable to accurately determine earnings or loss attributable to Bayer Animal Health since the date of acquisition.

The valuation of assets acquired and liabilities assumed has not yet been finalized as of December 31, 2020. The purchase price allocation is preliminary and subject to change, including the valuation of inventories, property and equipment, intangible assets, income taxes and goodwill, among other items. The amounts recognized will be finalized as the information necessary to complete the analysis is obtained, but no later than one year after the acquisition date. Finalization of the valuation during the measurement period could result in a change in the amounts recorded for the acquisition date fair value.

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

Estimated Fair Value at August 1, 2020		
Cash and cash equivalents	$	168.8
Accounts receivable		9.7
Inventories		487.2
Prepaid expenses and other current assets		50.7
Property and equipment		362.5
Intangible assets:		
Acquired in-process research and development		65.0
Marketed products		3,950.0
Assets held for sale		138.3
Accounts payable and accrued liabilities		(240.2)
Accrued retirement benefits		(220.2)
Other noncurrent assets and liabilities - net		(906.4)
Total identifiable net assets		3,865.4
Goodwill		2,921.6
Total consideration transferred	$	6,787.0

Inventories comprise $313.9 million, $79.1 million, and $94.2 million in finished products, work in process, and raw materials, respectively. The preliminary estimate of fair value of finished products was determined based on net realizable value adjusted for the costs to complete the sales process, a reasonable profit allowance from the sales process, and estimated holding costs. The preliminary estimate of fair value of work in process was determined based on net realizable value adjusted for costs to complete the manufacturing process, costs of the sales process, a reasonable profit allowance for the remaining manufacturing and sales process effort, and an estimate of holding costs. The fair value of raw materials was determined to approximate book value. The net fair value step-up adjustment to inventories of $147.9 million is being amortized to cost of sales when the inventory is sold to customers, which is expected to be within less than one year from the acquisition date.

Property and equipment is mostly composed of land, buildings, equipment (including machinery, furniture and fixtures, and computer equipment), and construction in progress. The preliminary estimate of fair value of real property was determined using the sales comparison data valuation technique and the preliminary estimate of fair value of personal property was determined using the direct replacement cost method. The recorded fair value of property and equipment located at the Shawnee, Kansas site is currently equal to its net book value at the time of the acquisition, as we are in the process of gathering information to update our fair value assessment.

Intangible assets relate to $65.0 million of IPR&D and $3,950.0 million of marketed products. The acquired definite-lived intangible assets are being amortized over a weighted-average estimated useful life of approximately 10 years on a straight-line basis. The estimated fair values of identifiable intangible assets were determined using the "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. Some of the significant assumptions inherent in the development of these asset 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 fair value of intangible assets as of December 31, 2020 is based on preliminary assumptions which are subject to change as we complete our valuation procedures.

Assets held for sale include $133.1 million of intangible assets, consisting of marketed products and IPR&D, and $5.2 million of inventory related to the divestitures of *Drontal*, *Profender* and other products. See the *Divestitures* section below for more information.

Accrued retirement benefits primarily relate to certain Bayer Animal Health international subsidiaries that have underfunded defined benefit pension plans. We have recorded the fair value of these plans using assumptions and accounting policies similar to those disclosed in Note 19: Retirement Benefits. Upon acquisition, the excess of projected benefit obligation over the fair value of plan assets was recognized as a liability and previously existing deferred actuarial gains and losses and unrecognized service costs or benefits were eliminated.

The goodwill recognized from this acquisition represents the value of additional growth platforms and an expanded revenue base as well as anticipated operational synergies and cost savings from the creation of a single combined global organization. The majority of goodwill associated with this acquisition is not deductible for tax purposes.

Pro forma financial information (unaudited)

The following table presents the estimated unaudited pro forma combined results of Elanco, Bayer Animal Health and Aratana for the years ended December 31, 2020 and 2019 as if the acquisitions had occurred on January 1, 2019:

	Year Ended December 31,	
	2020	2019
Revenues	$ 4,441.4	$ 4,691.3
Loss before income taxes	(675.0)	(159.5)

The supplemental pro forma financial information has been prepared using the acquisition method of accounting and is based on the historical financial information of Elanco, Bayer Animal Health and Aratana. The supplemental pro forma financial information does not necessarily represent what the combined companies' revenue or results of operations would have been had the acquisitions been completed on January 1, 2019, nor is it intended to be a projection of future operating results of the combined company. It also does not reflect any operating efficiencies or potential cost savings that might be achieved from synergies of combining Elanco, Bayer Animal Health and Aratana.

The unaudited supplemental pro forma financial information reflects primarily pro forma adjustments related to divestitures, fair value estimates for intangibles, property and equipment, and inventory, and interest expense and amortization of debt issuance costs for the debt issuance to finance the acquisition of Bayer Animal Health. The unaudited supplemental pro forma financial information includes transaction charges associated with the acquisition. There are no material, nonrecurring pro forma adjustments directly attributable to the acquisition included in the reported pro forma revenue and loss before income taxes.

Divestitures

In order to secure the necessary regulatory clearances for the acquisition of Bayer Animal Health, we signed agreements to divest the rights to manufacture and commercialize certain products. The following table summarizes the financial impact of the material divestitures completed during 2020 in connection with the acquisition of Bayer Animal Health, of which the pre-tax gains and losses are included in other expense (income), net in the consolidated and combined statement of operations.

	For the Year Ended December 31, 2020	
	Gross Cash Proceeds	Pre-tax Gain
Osurnia	$ 140.5	$ 93.2
Vecoxan	55.1	37.2
Capstar	95.9	25.6
Drontal and *Profender*	140.6	—
Other immaterial divestitures	2.6	0.7
Total [1]	$ 434.7	$ 156.7

(1) Pre-tax gain is net of transaction costs of $13.3 million.

We determined that the disposal of the related net assets does not qualify for reporting as a discontinued operation because it does not represent a strategic shift that has or will have a major effect on our operations and financial results.

Elanco product divestitures

In January 2020, we signed agreements to divest the worldwide rights to *Osurnia* and the U.S. rights to *Capstar*, and in February 2020, we signed an agreement to divest the worldwide rights to *Vecoxan*. The carrying value of the divested assets consisted of $114.1 million of marketed product rights and $7.9 million of inventory. In July 2020, we completed these sales, along with certain other immaterial divestitures. The transactions were accounted for as asset divestitures.

Bayer Animal Health product divestitures

To allow the Bayer Animal Health acquisition to close on a timely basis, we signed agreements to divest the rights to the *Drontal* and *Profender* product families within the United Kingdom and European Economic Area as well as other IPR&D. We completed the transactions, which were accounted for as asset divestitures, on August 3, 2020. *Drontal, Profender,* and the IPR&D were acquired as part of the Bayer Animal Health acquisition. The related assets were classified as held for sale on the balance sheet as of the acquisition date and measured at fair value at the time of the acquisition; therefore, no gains were recognized on the sales. A loss of $7.3 million was recorded on the sale of IPR&D as recognition of the potential income from the divestiture was constrained by revenue accounting standards. The estimated fair value of the divested assets consisted of $135.0 million of marketed product rights, $7.3 million of IPR&D, and $3.6 million of inventory.

There are additional marketed and pipeline products that we are required to dispose of in order to comply with regulatory requirements. These divestitures are not expected to have a material effect on our operations, cash flows or financial position.

Assets Held For Sale

In connection with advancing our efforts to secure the necessary regulatory clearances for our acquisition of Bayer Animal Health, we signed agreements to divest the worldwide rights to the legacy Elanco products *Itrafungol*™ and *Clomicalm*™. The related assets met the assets held for sale criteria as of December 31, 2020. We expect the divestiture to close in the first half of 2021. An $8.2 million impairment charge was recorded to adjust the assets to the lower of their carrying amounts or fair values less costs to sell on the consolidated balance sheet. The fair value of the assets was measured on a nonrecurring basis and categorized within Level 3 of the fair value hierarchy. We determined the fair value using a market approach, estimated based on the negotiated value of the assets.

The related assets for the *Osurnia* and *Capstar* divestitures met the assets held for sale criteria as of December 31, 2019. No adjustments were required to record the assets at the lower of their carrying amounts or fair values less costs to sell on the consolidated balance sheet.

Assets and liabilities considered held for sale in connection with the above divestitures were included in the respective line items on the consolidated balance sheet as follows:

	December 31, 2020	December 31, 2019
Inventories	$ 2.1	$ 10.6
Other intangibles, net	3.5	61.2
Property and equipment, net	—	0.2
Deferred tax asset	1.0	—
Total assets held for sale	$ 6.6	$ 72.0
Deferred tax liability	$ —	$ (1.4)
Total liabilities held for sale	$ —	$ (1.4)

Other intangibles, net classified as held for sale primarily consisted of marketed products.

2019 Acquisitions

Aratana Therapeutics, Inc.

On July 18, 2019, we acquired Aratana, a pet therapeutics company focused on innovative therapies for dogs and cats, for stock and cash-based contingent value rights. Aratana is the creator of the canine osteoarthritis medicine, *Galliprant*, the rights to which we acquired in 2016. The acquisition enhances our presence in the areas of appetite stimulants in dogs, pain relief in dogs and cats, and treatments of other conditions in the U.S. and internationally. In connection with the acquisition, we issued approximately 7.2 million shares with a value of $238.0 million to Aratana shareholders, based on our stock price on the last trading day immediately prior to the closing date. The purchase consideration also included up to $12 million in contingent value rights, which represent the rights of Aratana shareholders to receive a contingent payment of $0.25 per share in cash upon the achievement of a specified milestone as outlined in the merger agreement. We calculated an immaterial fair value for the contingent value rights using the Monte Carlo simulation model.

Contingent consideration liabilities that we previously recorded for future royalty and milestone payments in relation to the 2016 acquisition of rights to *Galliprant* were settled upon the closing of our acquisition of Aratana. The liabilities were valued at $84.7 million as of the acquisition date using the Monte Carlo simulation model. The resulting $7.5 million loss upon settlement was recorded in other expense (income), net in the consolidated and combined statement of operations for the year ended December 31, 2019.

The following table summarizes the amounts recognized for assets acquired and liabilities assumed as of the acquisition date:

Estimated Fair Value at July 18, 2019		
Cash and cash equivalents	$	26.4
Inventories		10.3
Acquired in-process research and development		31.9
Marketed products [1]		36.7
Other intangible assets [1]		13.2
Other assets and liabilities - net		4.1
Total identifiable net assets		122.6
Goodwill [2]		30.7
Settlement of existing contingent consideration liabilities		84.7
Total consideration transferred	$	238.0

(1) These intangible assets, which are being amortized on a straight-line basis over their estimated useful lives, are expected to have a weighted average useful life of approximately 12.5 years.

(2) The goodwill recognized from this acquisition is attributable primarily to expected synergies from combining the operations of Aratana with our legacy business. The majority of goodwill associated with this acquisition is not deductible for tax purposes.

The accounting for this acquisition is complete. A $19.9 million measurement period adjustment was recorded primarily to establish a deferred tax liability for the preexisting *Galliprant* contingent consideration liability during the year ended December 31, 2020.

We issued 0.1 million shares and recorded $3.6 million of stock-based compensation expense for the vesting of Aratana equity awards that was accelerated upon the closing of the acquisition during 2019.

Prevtec Microbia Inc.

On July 31, 2019, we acquired Prevtec in a cash transaction for approximately $60.3 million, inclusive of certain post-closing adjustments. Prevtec is a Canadian biotechnology company specializing in the development of vaccines intended to help prevent bacterial diseases in farm animals. The acquisition allows us to expand on our previous distribution arrangement for *Coliprotec* and is consistent with our efforts to explore innovative antibiotic alternatives.

The purchase consideration included up to $16.3 million in additional cash consideration, contingent upon the achievement of specific sales milestones by December 31, 2021. We have recorded a $4.7 million liability on the consolidated balance sheet as of the acquisition date based on the fair value of the contingent consideration as calculated using the Monte Carlo simulation model.

A previously existing $0.7 million receivable owed from Prevtec to Elanco Animal Health UK Limited was settled upon the closing of our acquisition of Prevtec. The resulting immaterial gain upon settlement was recorded in other expense (income), net in the consolidated and combined statement of operations for the year ended December 31, 2019.

The following table summarizes the amounts recognized for assets acquired and liabilities assumed as of the acquisition date:

Estimated Fair Value at July 31, 2019		
Cash and cash equivalents	$	0.9
Property and equipment		0.5
Acquired in-process research and development		2.8
Marketed products[1]		58.9
Other intangible assets		1.1
Other assets and liabilities - net		(9.3)
Total identifiable net assets		54.9
Goodwill [2]		10.1
Total consideration transferred	$	65.0

(1) These intangible assets, which are being amortized on a straight-line basis over their estimated useful lives, are expected to have a weighted average useful life of 10 years.

(2) The goodwill recognized from this acquisition is attributable primarily to expected synergies from combining the operations of Prevtec with our legacy business and future unidentified projects and products. The goodwill associated with this acquisition is not deductible for tax purposes.

The accounting for this acquisition is complete. An immaterial measurement period adjustment to deferred taxes was recorded during the year ended December 31, 2020.

Note 7. 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. Restructuring activities primarily include charges associated with facility rationalization and workforce reductions. In connection with our recent acquisitions, including the acquisition of Bayer Animal Health, we have also incurred costs associated with executing transactions and integrating acquired operations, which may include expenditures for banking, legal, accounting, and other similar services. 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 expenses associated with our tangible and intangible assets can be incurred as a result of revised fair value projections and/or determinations to no longer utilize certain assets in the business on an ongoing basis.

For finite-lived intangible asset and other long-lived assets, whenever impairment indicators are present, we calculate the undiscounted value of projected cash flows associated with the asset, or group of assets, and compare it to the carrying amount. If the carrying amount is greater, we record an impairment loss for the excess of book value over fair value. Determinations of fair value can result from a complex series of judgments and rely on estimates and assumptions. See Note 2: Basis of Presentation and Note 4: Summary of Significant Accounting Policies for discussion regarding estimates and assumptions.

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

	2020	2019	2018
Restructuring charges:			
Severance and other costs [1]	$ 155.0	$ 8.2	$ 15.5
Facility exit costs [1]	(2.7)	—	5.7
Acquisition related charges:			
Transaction and integration costs [2]	423.8	144.7	26.5
Non-cash and other items:			
Asset impairment [3]	17.5	15.4	81.9
Asset write-down [4]	19.1	17.2	—
Gain on sale of fixed assets [5]	(3.8)	—	(0.8)
Settlements and other [6]	14.8	—	—
Total expense	$ 623.7	$ 185.5	$ 128.8

(1) For the year ended December 31, 2020, these charges primarily related to a restructuring program initiated following the acquisition of Bayer Animal Health. See below for further details. Also included in facility exit costs is a favorable true-up of a lease termination related to a previous restructuring program.

For the year ended December 31, 2019, these charges primarily relate to a program that eliminated certain positions across multiple locations and functions, including exiting R&D operations in Prince Edward Island, Canada, ceasing certain manufacturing operations in Wusi, China, and streamlining operations in Speke, England. These activities were substantially complete as of December 31, 2020.

For the year ended December 31, 2018, these charges primarily relate to a program to streamline international operations, including shifting focus and resources to priority areas. Among other actions, amounts reflect a change from having a physical location to a distribution model in certain countries in connection with the Separation. These activities were substantially complete as of December 31, 2019.

(2) Transaction costs represent external costs directly related to acquiring businesses and primarily include expenditures for banking, legal, accounting and other similar services. Integration costs represent internal and external incremental costs directly related to integrating acquired businesses, including the acquisition of Bayer Animal Health (e.g., expenditures for consulting, system and process integration, and product transfers), as well as stand-up costs related to the implementation of new systems, programs, and processes due to the Separation from Lilly.

(3) Asset impairment charges are associated with the following:

- For the year ended December 31, 2020, primarily attributable to the impairment of acquired IPR&D and indefinite-lived intangible assets. The impairment to acquired IPR&D related to reassessments of geographic viability and project priority, which was partially prompted by the addition of the Bayer Animal Health IPR&D pipeline. The impairment of the indefinite-lived intangible assets related to adjustments made to record assets classified as held for sale at the lower of their carrying amounts or fair values less costs to sell.
- For the year ended December 31, 2019, the write-off of certain IPR&D and manufacturing assets in the U.S., Canada and Speke, resulting from the adjustment to fair value of property and equipment and intangible assets that were subject to product rationalization.
- For the year ended December 31, 2018, the decision to dispose of a manufacturing facility in the U.S., the suspension of commercial activities for *Imrestor*, the write-off of certain idle assets in a U.S. manufacturing facility and product rationalization.

(4) For the year ended December 31, 2020, asset write-down expenses resulted from adjustments recorded to write assets classified as held and used down to their current fair value. These included charges related to fixed assets in Basel, Switzerland, in connection with the 2020 program initiated following the acquisition of Bayer Animal Health, and fixed assets in Indianapolis, Indiana. Also included are charges related to fixed assets in Wusi, China in connection with the announced 2019 program to streamline operations.

For the year ended December 31, 2019, asset write-down expenses resulted from the adjustments recorded to write assets classified as held and used and held for sale down to their current fair values. These charges primarily related to fixed assets in Prince Edward Island, Canada; Wusi, China and Indianapolis, Indiana. $11.2 million of Property and equipment, net in Prince Edward Island, Canada and Indianapolis, Indiana are classified as held for sale.

(5) For the year ended December 31, 2020, represents a gain on the disposal from the sale of an R&D facility in Prince Edward Island, Canada, which was written down during the third quarter of 2019 as part of the announced 2019 program to streamline operations.

For the year ended December 31, 2018, represents a gain on the disposal of a site that was previously closed as part of the acquisition and integration of Novartis Animal Health beginning on January 1, 2015.

(6) Charges primarily relate to a non-recurring litigation settlement for a matter that originated prior to the Separation and a one-time expense associated with our agreement to build a new corporate headquarters.

In September 2020, following the closing of the Bayer Animal Health acquisition, we implemented a restructuring program designed to reduce duplication, drive efficiency and optimize our footprint in key geographies. As part of the restructuring plan, we have eliminated approximately 900 positions across 40 countries, primarily in the commercial and marketing functions, but also in the R&D, manufacturing and quality, and back office support

functions. As of December 31, 2020, we have incurred restructuring charges of $162.1 million, primarily related to severance and asset write-down expenses. We expect to incur additional non-severance related restructuring charges of approximately $11 million in 2021 to complete these actions.

In January 2021, we announced a restructuring in our ongoing efforts to improve operating efficiencies. The proposed actions are focused on streamlining processes and delivering increased efficiency in functional areas, while improving the productivity of our investments in innovation. As part of the restructuring plan, we intend to close R&D sites in Manukau, New Zealand and Cuxhaven, Germany, subject to appropriate local consultation processes. We will also reduce duplication and optimize structures in U.S. operations, marketing, manufacturing and quality central functions, and administrative areas. The restructuring will result in the elimination of approximately 350 positions around the world. We expect to record a majority of the charges totaling $58 million to $77 million in the first quarter of 2021, primarily consisting of severance and other cash charges.

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

	Exit costs	Severance	Total
Balance at December 31, 2018	$ 9.3	$ 35.1	$ 44.4
Charges	—	19.3	19.3
Reserve adjustment [1]	—	(11.1)	(11.1)
Cash paid	(3.9)	(27.8)	(31.7)
Balance at December 31, 2019	5.4	15.5	20.9
Charges	0.7	155.8	156.5
Reserve adjustment [1] [2]	(3.4)	(0.8)	(4.2)
Cash paid	(2.7)	(40.8)	(43.5)
Balance at December 31, 2020	$ —	$ 129.7	$ 129.7

(1) Reserve adjustment represents the reversal of reserves for severance programs that are no longer active.

(2) Primarily represents to a favorable true-up related to a lease termination from a previous restructuring program.

These reserves are included in other current and noncurrent liabilities on the consolidated balance sheets. Substantially all of the reserves are expected to be paid in the next 18 months primarily due to certain country negotiations and regulations. We believe that the reserves are adequate.

Note 8. Inventories

We state all inventories at the lower of cost or net realizable value. We use the last-in, first-out (LIFO) method for a portion of our inventories located in the continental U.S. Other inventories are valued by the first-in, first-out (FIFO) method or the weighted average cost method.

Inventories at December 31 consisted of the following:

	2020	2019
Finished products	$ 771.4	$ 402.9
Work in process	625.2	603.2
Raw materials and supplies	210.2	83.9
Total	1,606.8	1,090.0
Decrease to LIFO cost	(28.7)	(39.3)
Inventories	$ 1,578.1	$ 1,050.7

Inventories valued under the LIFO method comprised $233.6 million and $197.2 million of total inventories at December 31, 2020 and 2019, respectively.

During the year ended December 31, 2018, we recognized $38.6 million of inventory write-offs in cost of sales primarily related to the suspension of commercial activities for *Imrestor*.

Note 9. Equity

Common Stock Offering

On January 22, 2020, we entered into an underwriting agreement in which we agreed to sell approximately 22.7 million shares of our common stock at a public offering price of $32.00 per share. In connection with the offering, we granted the underwriters an option to purchase up to an additional 2.3 million shares, which was exercised in full on January 23, 2020. As a result, we issued and sold a total of approximately 25.0 million shares of our common stock for $767.5 million, after issuance costs.

Tangible Equity Unit (TEU) Offering

On January 22, 2020, we also completed our offering of 11 million, 5.00% TEUs. Total proceeds, net of issuance costs, were $528.5 million. Each TEU, which has a stated amount of $50, is comprised of a prepaid stock purchase contract (prepaid stock) and a senior amortizing note due February 1, 2023. Subsequent to issuance, each TEU may be legally separated into the two components. The prepaid stock is considered a freestanding financial instrument, indexed to Elanco common stock, and meets the conditions for equity classification.

The value allocated to the prepaid stock is reflected net of issuance costs in additional paid-in capital. The value allocated to the senior amortizing notes is reflected in long-term debt on the consolidated balance sheet, with payments expected in the next twelve months reflected in current portion of long-term debt. Issuance costs related to the amortizing notes are reflected as a reduction of the carrying amount and will be amortized through the maturity date using the effective interest rate method.

The proceeds from the issuance were allocated to equity and debt based on the relative fair value of the respective components of each TEU as follows:

	Equity Component	Debt Component	Total
Fair value per unit	$ 42.80	$ 7.20	$ 50.00
Gross proceeds	$ 470.8	$ 79.2	$ 550.0
Less: Issuance costs	18.4	3.1	21.5
Net proceeds	$ 452.4	$ 76.1	$ 528.5

The senior amortizing notes have an aggregate principal amount of $79.2 million and bear interest at 2.75% per year. On each February 1, May 1, August 1, and November 1 until the maturity date, we will pay equal quarterly cash installments of $0.6250 per each amortizing note with an initial principal amount of $7.2007 (except for the first installment payment of $0.6528 per amortizing note paid on May 1, 2020). Each installment constitutes a payment of interest and partial payment of principal, and in the aggregate will be equivalent to 5.00% per year with respect to the $50 stated amount per TEU.

Unless settled early at the holder's or our election, each prepaid stock purchase contract will automatically settle on February 1, 2023 (the mandatory settlement date) for a number of shares of common stock per contract based on the average of the volume-weighted average trading prices during the 20 consecutive trading day period beginning on, and including the 21st scheduled trading day immediately preceding February 1, 2023 (applicable market value) with reference to the following settlement rates:

Applicable Market Value	Common Stock Issued
Equal to or greater than $38.40	1.3021 shares (minimum settlement rate)
Less than $38.40, but greater than $32.00	$50 divided by applicable market value
Less than or equal to $32.00	1.5625 (maximum settlement rate)

The prepaid stock purchase contracts are mandatorily convertible into a minimum of 14.3 million shares or a maximum of 17.2 million shares of our common stock on the mandatory settlement date (unless redeemed by us or settled earlier at the unit holder's option). The 14.3 million minimum shares are included in the calculation of basic

weighted average shares outstanding. The difference between the minimum and maximum shares represents potentially dilutive securities, which are included in the calculation of diluted weighted average shares outstanding on a pro rata basis to the extent that the average applicable market value is higher than $32.00 but is less than $38.40 during the period.

Note 10. Debt

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

	2020	2019
Term loan B credit facility	$ 4,164.3	$ —
Term credit facility	—	371.4
3.912% Senior Notes due 2021	500.0	500.0
4.272% Senior Notes due 2023	750.0	750.0
4.900% Senior Notes due 2028	750.0	750.0
TEU amortizing notes	59.8	—
Other obligations	0.5	0.4
Unamortized debt issuance costs	(97.7)	(16.8)
	6,126.9	2,355.0
Less current portion of long-term debt	554.5	24.5
Total long-term debt	$ 5,572.4	$ 2,330.5

Maturities on long-term debt consisted of the following:

As of and for the years ending December 31	
2021	$ 568.9
2022	69.6
2023	799.6
2024	42.8
2025	39.9
2026 and thereafter	4,703.3
Total obligations and commitments	6,224.1
Unamortized debt issuance costs and other obligations	(97.2)
Total debt	$ 6,126.9

New Credit Facility

In connection with the acquisition of Bayer Animal Health, on August 1, 2020, we executed our previously announced borrowing of $4,275.0 million under a term loan B credit facility, of which $4,164.3 million was outstanding as of December 31, 2020. The term loan B facility bears interest at a floating rate of LIBOR plus 175 basis points over a seven-year term.

Simultaneously, we entered into a revolving credit facility providing up to $750.0 million (with incremental capacity available if certain conditions are met) and maturing over a five-year term. The revolving credit facility bears interest at LIBOR plus an applicable margin ranging between 1.50% and 2.25% per annum based on our corporate family rating or corporate credit rating. We capitalized approximately $9.1 million of debt issuance costs associated with our revolving credit facility, which is classified as other noncurrent assets on the consolidated balance sheet. In 2020, we drew down and subsequently repaid $450.0 million on the revolving credit facility to fund local country asset purchases in connection with our acquisition of Bayer Animal Health subsidiaries. Pursuant to the stock and asset purchase agreement, Bayer has reimbursed us for these purchases. In February 2021, we drew down $150.0 million on the revolving credit facility to fulfill working capital needs.

We have capitalized deferred financing costs of approximately $90.2 million, consisting of legal, accounting and other fees relating to our new credit facility. Deferred financing costs are recorded as a contra-liability and presented net against long-term debt on the consolidated balance sheet. Upon closing the acquisition of Bayer Animal Health on August 1, 2020, we terminated our unused commitments and incurred approximately $13.8 million in fees, which are included in other expense (income), net in the consolidated and combined statement of operations.

Proceeds from the equity and debt activities were used to finance the cash portion of our acquisition of Bayer Animal Health and to pay related fees and expenses (see Note 6: Acquisitions and Divestitures for further discussion). Subsequent to these borrowings, we have terminated all unused commitments to our lenders.

These senior secured first lien credit facilities are secured by a significant portion of our assets. They include 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. 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, beginning with the fiscal quarter ending September 30, 2020. 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 exceeding 7.71 to 1.00 of our pro forma adjusted EBITDA for the four fiscal quarters ended December 31, 2020.

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, beginning with the fiscal quarter ended September 30, 2020. We were in compliance with all covenants under the credit facility as of December 31, 2020.

Debt Extinguishment

On January 31, 2020, we repaid indebtedness outstanding under our existing term loan facility. We paid $372.4 million in cash, composed of $371.4 million of principal and $1.0 million of accrued interest, resulting in a debt extinguishment loss of $0.8 million (recognized in interest expense, net of capitalized interest in the consolidated and combined statement of operations for the year ended December 31, 2020), primarily related to the write-off of deferred debt issuance costs.

On September 25, 2020, we made a repayment of principal of $100.0 million on the indebtedness outstanding under our new term loan B facility. The repayment was accounted for as a partial debt extinguishment and resulted in a debt extinguishment loss of $2.1 million (recognized in interest expense, net of capitalized interest in the consolidated and combined statement of operations for the year ended December 31, 2020), primarily related to the write-off of deferred debt issuance costs.

TEU Amortizing Notes

On January 22, 2020, we issued $550 million in TEUs. We offered 11 million, 5.00% TEUs at the stated amount of $50 per unit, comprised of prepaid stock purchase contracts and a senior amortizing note due February 1, 2023 (the mandatory settlement date). Total cash of $528.5 million was received, comprised of $452.4 million of prepaid stock purchase contracts and $76.1 million of senior amortizing notes, net of issuance costs. We paid $20.9 million representing partial payment of principal and interest on the TEU amortizing notes during the year ended December 31, 2020. See Note 9: Equity for further information.

Note 11. Financial Instruments and Fair Value

Financial instruments that are potentially subject to credit risk consist principally of trade receivables. We evaluate the creditworthiness of our customers on a regular basis, monitor economic conditions, and calculate allowances for estimated credit losses on our trade receivables on a quarterly basis using an expected credit loss model. We assess whether collectability is probable at the time of sale and on an ongoing basis. Collateral is generally not required. The risk associated with this concentration is mitigated by our ongoing credit-review procedures.

A large portion of our cash is held by a few major financial institutions. We monitor the exposure with these institutions and do not expect any of these institutions to fail to meet their obligations. All highly liquid investments with a maturity of three months or less from the date of purchase are considered to be cash equivalents. The cost of these investments approximates fair value. We also consider the carrying value of restricted cash balances to be representative of its fair value.

As of December 31, 2020 and 2019, we had $33.4 million and $18.8 million, respectively, of investments included in other noncurrent assets in our consolidated balance sheet. These include investments with readily determinable fair values, investments without readily determinable fair values, and equity method investments. We recorded a net unrealized gain related to our equity securities held during 2020 of $11.0 million. Unrealized net gains and losses in 2019 and 2018 were immaterial.

The following table summarizes the fair value information at December 31, 2020 and 2019 for foreign exchange contract assets (liabilities), contingent consideration liabilities, net investment hedge assets (liabilities) and cash flow hedge assets (liabilities) measured at fair value on a recurring basis in the respective balance sheet line items, as well as long-term debt (including TEU amortizing notes) for which fair value is disclosed on a recurring basis:

		Fair Value Measurements Using			
Financial statement line item	Carrying Amount	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Fair Value
December 31, 2020					
Prepaid expenses and other - foreign exchange contracts not designated as hedging instruments	$ 35.8	$ —	$ 35.8	$ —	$ 35.8
Other current liabilities - foreign exchange contracts not designated as hedging instruments	(36.1)	—	(36.1)	—	(36.1)
Other noncurrent liabilities- contingent consideration	(0.8)	—	—	(0.8)	(0.8)
Other noncurrent liabilities - forward-starting interest rate contracts designated as cash flow hedges	(75.8)	—	(75.8)	—	(75.8)
Long-term debt - senior notes	(2,000.0)	—	(2,218.3)	—	(2,218.3)
TEU amortizing notes	(59.8)	—	(58.4)	—	(58.4)
Term loan B	(4,164.3)	—	(4,143.7)	—	(4,143.7)
December 31, 2019					
Prepaid expenses and other - foreign exchange contracts not designated as hedging instruments	$ 0.8	$ —	$ 0.8	$ —	$ 0.8
Other current liabilities - foreign exchange contracts not designated as hedging instruments	(1.1)	—	(1.1)	—	(1.1)
Other noncurrent liabilities- contingent consideration	(4.7)	—	—	(4.7)	(4.7)
Other noncurrent assets - cross currency interest rate contracts designated as net investment hedges	2.3	—	2.3	—	2.3
Long-term debt - senior notes	(2,000.0)	—	(2,120.6)	—	(2,120.6)
Long-term debt - term credit facility [1]	(371.4)	—	(371.4)	—	(371.4)

(1) We consider the carrying value to be representative of its fair value because of the variable interest rate associated with this instrument.

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.

Contingent consideration liabilities as of December 31, 2020 and December 31, 2019 related to contingent consideration associated with the acquisitions of Aratana and Prevtec during 2019. For Aratana, we will pay up to $12 million in contingent value rights that are dependent on the achievement of a specified milestone as outlined in the merger agreement. For Prevtec, based on the terms of the purchase agreement, we will pay up to $16.3 million contingent upon the achievement of specific *Coliprotec* sales milestones by December 31, 2021. The fair value of both contingent consideration liabilities was estimated using the Monte Carlo simulation model and Level 3 inputs including historical revenue, discount rate, asset volatility, and revenue volatility. During the year ended

December 31, 2020, primarily as a result of a decrease in forecasted revenues related to *Coliprotec*, we decreased the fair value of the contingent consideration liability associated with the Prevtec acquisition by $3.9 million, and recognized the gain in other expense (income), net in the consolidated and combined statement of operations. See Note 6: Acquisitions and Divestitures for further discussion.

Derivative Instruments and Hedging Activities

We are exposed to market risks, such as changes in foreign currency exchange rates and interest rates. To manage the volatility related to these exposures, 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. Additionally, we assess, both at inception and 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.

Derivatives Not Designated as Hedges

We may enter into foreign exchange forward or option contracts to reduce the effect of fluctuating currency exchange rates. These derivative financial instruments primarily offset exposures in the British pound, Canadian dollar, Euro, Japanese yen, Swiss franc (CHF), and Chinese renminbi. 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 (income), net in the consolidated and combined statements of operations. Forward contracts generally have maturities not exceeding 12 months. At December 31, 2020 and December 31, 2019, we had outstanding foreign exchange contracts with aggregate notional amounts of $1,391.3 million and $861.2 million, respectively.

The amount of net gain/(loss) on derivative instruments not designated as hedging instruments, recorded in other expense (income), net are as follows:

	For the Year Ended December 31,		
	2020	2019	2018
Foreign exchange forward contracts [1]	$ (4.0)	$ (4.5)	$ 7.9

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

Derivatives Designated as Hedges

In October 2018, as a means of mitigating the impact of currency fluctuations on our operations in Switzerland, we entered into a five-year cross-currency fixed interest rate swap with a 750 million CHF notional amount, which was designated as a net investment hedge (NIH) against CHF denominated assets (the fair value of which was estimated based on quoted market values of similar hedges and was classified as Level 2). During the year ended December 31, 2020, we fully liquidated our cross currency interest rate swaps for a cash benefit of $35.1 million (including $2.4 million in interest). Notwithstanding settlement, gains and losses within accumulated other comprehensive income (loss) will remain in accumulated other comprehensive income (loss) until either the sale or substantial liquidation of the hedged subsidiary.

Gains on the NIH, recognized within interest expense, net of capitalized interest, are as follows:

	For the Year Ended December 31,		
	2020	2019	2018
Cross-currency interest rate swap contracts	$ 6.2	$ 25.1	$ 5.6

Over the life of the derivative, gains or losses due to spot rate fluctuations were recorded in cumulative translation adjustment in other comprehensive income (loss). The amounts of net gains on interest rate swap contracts, recorded, net of tax, in accumulated other comprehensive income (loss), are as follows:

	For the Year Ended December 31,		
	2020	2019	2018
Cross-currency interest rate swap contracts	$ 24.0	$ 7.7	$ (5.9)

Separately, in March 2020, as a means of mitigating variability in cash flows associated with the anticipated term loan B issuance, we executed forward-starting interest rate swaps with a $4.05 billion notional amount, which are designated as cash flow hedges and have maturity dates ranging between 2022 and 2025. These instruments effectively convert floating-rate debt to fixed-rate debt. The cash flow hedges are recorded at fair value on our consolidated balance sheet, while changes in the fair value of the hedge are recognized in other comprehensive income (loss). Fair value is estimated based on quoted market values of similar hedges and is classified as Level 2. Amounts recorded in accumulated other comprehensive income (loss) will be recognized in earnings in interest expense, net of capitalized interest when the hedged transaction affects earnings (i.e., when interest payments are accrued on the term loan B). During the year ended December 31, 2020, we recorded a loss of $60.4 million (net of tax benefit of $15.4 million), on the cash flow hedges in other comprehensive income (loss). Over the next 12 months we expect to reclassify $28.5 million from accumulated other comprehensive income (loss) to interest expense, net of capitalized interest due to the amortization of net losses on the interest rate swaps. During the year ended December 31, 2020, we reclassified $7.0 million of net losses into interest expense.

Note 12. Goodwill and Intangibles

Goodwill

Goodwill was $6.2 billion and $3.0 billion as of December 31, 2020 and 2019. Goodwill results from excess consideration in a business combination over the fair value of identifiable net assets acquired. Goodwill is not amortized but is reviewed for impairment at least annually and when impairment indicators are present. Goodwill may be impaired if the carrying amount of a reporting unit exceeds the fair value of that reporting unit, calculated as based on discounted cash flows. An impairment charge would be recorded for the excess, if any, of the reporting unit's carrying amount over its fair value, but not to exceed the total amount of goodwill allocated to the reporting unit. The estimated fair value is based on a number of assumptions, including current market capitalization as corroboration of fair value. See Note 6: Acquisitions and Divestitures for further discussion of goodwill resulting from recent business combinations and changes in the carrying amount of goodwill.

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

Balance as of December 31, 2019	$ 2,989.6
Aratana measurement period adjustments	19.9
Additions related to the Bayer Animal Health acquisition	2,921.6
Foreign currency translation adjustments	293.7
Balance as of December 31, 2020	$ 6,224.8

No impairments occurred with respect to the carrying value of goodwill for the years ended December 31, 2020, 2019 and 2018.

Other Intangibles

The components of intangible assets other than goodwill at December 31 were as follows:

Description	2020 Carrying Amount, Gross	2020 Accumulated Amortization	2020 Carrying Amount, Net	2019 Carrying Amount, Gross	2019 Accumulated Amortization	2019 Carrying Amount, Net
Finite-lived intangible assets:						
Marketed products	$ 7,393.7	$ (1,342.1)	$ 6,051.6	$ 3,302.7	$ (980.6)	$ 2,322.1
Software	346.3	(108.0)	238.3	159.2	(72.2)	87.0
Other	61.8	(39.4)	22.4	58.3	(34.0)	24.3
Total finite-lived intangible assets	7,801.8	(1,489.5)	6,312.3	3,520.2	(1,086.8)	2,433.4
Indefinite-lived intangible assets:						
Acquired in-process research and development	75.0	—	75.0	49.4	—	49.4
Other intangibles	$ 7,876.8	$ (1,489.5)	$ 6,387.3	$ 3,569.6	$ (1,086.8)	$ 2,482.8

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. For transactions other than a business combination, we capitalize milestone payments incurred at or after the product has obtained regulatory approval for marketing.

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. These costs include software classified as "in process" until the project is substantially complete and the software is ready for its intended purpose, at which point the costs are amortized on a straight-line basis over the estimated useful life. Depreciation expense includes $35.0 million in 2020, $20.4 million in 2019, and $18.4 million in 2018 for amortization of software.

Other finite-lived intangibles consist primarily of the amortized cost of licensed platform technologies that have alternative future uses in research and development, manufacturing technologies and customer relationships from business combinations. Acquired IPR&D consists of the related costs capitalized, adjusted for subsequent impairments, if any. The costs of acquired IPR&D projects acquired directly in a transaction other than a business combination are capitalized if the projects have an alternative future use; otherwise, they are expensed immediately. The fair values of acquired IPR&D projects acquired in business combinations are capitalized as other intangible assets.

Several methods may be used to determine the estimated fair value of marketed products, IPR&D, and other finite-lived intangibles acquired in a business combination. We utilize the "income method" for these intangibles. This method is a Level 3 fair value measurement and applies a probability weighting that considers the risk of development and commercialization to the estimated future net cash flows that are 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. This analysis is performed for each group of assets independently. The 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 amortized over the remaining useful life or written off, as appropriate.

During 2020, we added approximately $65.0 million of IPR&D and $3,950.0 million of marketed products as a result of the Bayer Animal Health acquisition. See Note 6: Acquisitions and Divestitures for further discussion of intangible assets acquired in recent business combinations.

Indefinite-lived intangible assets are reviewed for impairment at least annually and when impairment indicators are present. The fair value of the indefinite lived intangible assets (acquired IPR&D) is estimated using the same assumptions as used for goodwill and by applying a probability weighting that reflects the risk of development and commercialization to the estimated future net cash flows that are derived from projected revenues and estimated

costs. Finite-lived intangible assets are reviewed for impairment when an indicator of impairment is present. We compare the carrying amounts of the assets with the estimated undiscounted future cash flows. In the event the carrying amount exceeds the undiscounted cash flows, an impairment charge is recorded for the amount by which the carrying amount of the asset exceeds the estimated fair value, which is determined based on discounted future cash flows.

During 2020, we recorded impairment charges of $17.5 million (comprised of $9.3 million impairment of acquired IPR&D and $8.2 million impairment of marketed products) which are included in asset impairment, restructuring and other special charges in the consolidated and combined statements of operations. The impairment to acquired IPR&D related to reassessments of geographic viability and project priority, which was partially prompted by the addition of the Bayer Animal Health IPR&D pipeline. The impairment of marketed products related to adjustments made to record assets classified as held for sale at the lower of their carrying amounts or fair values less costs to sell.

During 2019, we recorded impairment charges of $11.4 million primarily related to indefinite-lived intangible assets which are included in asset impairment, restructuring and other special charges on the consolidated and combined statements of operations. The impairment of indefinite-lived intangible assets primarily related to product rationalization.

During 2018, we recorded impairment charges of $22.5 million (comprised of $9.5 million impairment of finite-lived intangible assets and $13.0 million impairment of indefinite-lived intangible assets) which are included in asset impairment, restructuring and other special charges on the consolidated and combined statements of operations. The impairment of finite-lived intangible assets primarily related to competitive pressures for a certain marketed product resulting in a reduction of projected cash flows. The impairment of indefinite-lived intangible assets primarily related to revised projections of fair value due to competitive pressures and to a lesser extent product rationalization.

Intangible assets with finite lives are capitalized and are amortized over their estimated useful lives, ranging from 3 to 20 years. As of December 31, 2020, the remaining weighted-average amortization periods for finite-lived intangible assets are as follows:

	Weighted Average Life (Years)
Marketed products	11
Software	4
Other	8

The estimated amortization expense for each of the next five years associated with our finite-lived intangible assets as of December 31, 2020 is as follows:

	2021	2022	2023	2024	2025
Estimated amortization expense	$ 586.5	$ 585.8	$ 585.5	$ 581.0	$ 563.2

Note 13. Property and Equipment

Property and equipment is stated on the basis of cost. Provisions for depreciation of buildings and equipment are computed generally by the straight-line method at rates based on their estimated useful lives (12 to 50 years for buildings and 3 to 25 years for equipment). We review the carrying value of long-lived assets for potential impairment on a periodic basis and whenever events or changes in circumstances indicate the carrying value of an asset may not be recoverable. Impairment is determined by comparing projected undiscounted cash flows to be generated by the asset to its carrying value. If an impairment is identified, a loss is recorded equal to the excess of the asset's net book value over its fair value utilizing a discounted cash flow analysis, and the cost basis is adjusted.

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

	2020	2019
Land	$ 46.0	$ 28.3
Buildings	756.0	608.5
Equipment	1,360.6	1,109.4
Construction in progress	191.0	139.1
Finance lease asset	0.6	0.5
	2,354.2	1,885.8
Less accumulated depreciation	(1,037.9)	(930.5)
Property and equipment, net	$ 1,316.3	$ 955.3

Depreciation expense related to property and equipment was as follows:

	2020	2019	2018
Depreciation expense	$ 122.0	$ 93.7	$ 81.3

Note 14. Leases

We determine if an arrangement is a lease at inception. We have operating leases for corporate offices, research and development facilities, vehicles, and equipment. Our leases have remaining lease terms of one to 15 years, some of which have options to extend or terminate the leases. Finance leases are included in property and equipment, current portion of long-term debt, and long-term debt in our consolidated balance sheet. Finance leases are not material to our consolidated and combined statements of operations, consolidated balance sheet, or consolidated and combined statement of cash flows. Beginning January 1, 2019, operating leases are included in noncurrent assets, other current liabilities, and other noncurrent liabilities in our consolidated balance sheet.

Right-of-use assets included in noncurrent assets represent our right to use an underlying asset for the lease term and lease liabilities represent our obligation to make lease payments arising from the lease. Right-of-use assets and operating lease liabilities are recognized at 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 commencement date in determining the present value of lease payments. We use the implicit rate if it is readily determinable. The right-of-use asset also includes any lease payments made and excludes lease incentives. Our lease terms may include options to extend or terminate the lease when it is reasonably certain and there is a significant economic incentive to exercise that option.

Operating lease expense for right-of-use assets 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 other than the passage of time, are expensed in the period in which the obligation for these payments was incurred.

We elected not to apply the recognition requirements of ASC 842, *Leases*, to short-term leases, which are deemed to be leases with a lease term of 12 months or less. Instead, we recognize lease payments in the consolidated and combined statements of operations on a straight-line basis over the lease term and variable payments in the period in which the obligation for these payments are incurred. We elected this policy for all classes of underlying assets. We elected not to apply the practical expedient related to the separation of lease and non-lease components or the practical expedient which allows entities to use hindsight when determining lease term.

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

	2020	2019
Lease cost		
Operating lease cost	$ 38.4	$ 26.1
Short-term lease cost	1.2	0.5
Variable lease cost	2.8	2.5
Total lease cost [1]	$ 42.4	$ 29.1
Other information		
Operating cash outflows from operating leases	$ 35.9	$ 24.0
Right-of-use assets obtained in exchange for new operating lease liabilities [2]	138.2	20.1
Weighted-average remaining lease term - operating leases	8.2 years	5.1 years
Weighted-average discount rate - operating leases	3.8 %	3.6 %

(1) Rental expense for all leases was $47.5 million for the year ended December 31, 2018.

(2) Includes approximately $15.7 million of right-of-use assets acquired in the Bayer Animal Health acquisition.

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

Asset/Liability	Balance Sheet Classification	December 31, 2020	December 31, 2019
Right-of-use assets	Other noncurrent assets	$ 187.1	$ 85.0
Current operating lease liabilities	Other current liabilities	37.0	23.7
Non-current operating lease liabilities	Other noncurrent liabilities	151.4	61.7

As of December 31, 2020, the annual minimum lease payments of our operating lease liabilities were as follows:

2021	$ 43.5
2022	35.6
2023	26.5
2024	18.9
2025	16.7
2026 and thereafter	83.4
Total lease payments	224.6
Less imputed interest	(36.2)
Total	$ 188.4

Australia Sale-Leaseback

On June 26, 2020, our wholly-owned subsidiary, Elanco Australasia PTY LTD, sold land and an R&D facility located in New South Wales, Australia, for aggregate proceeds of $55.1 million, and leased the property back for an initial term of 15 years through a sale-leaseback transaction. Under the terms of the purchase and sale agreement, we determined that control of the assets was relinquished to the buyer-lessor. Therefore, we recognized a pre-tax gain on the sale of $45.6 million in other expense (income), net in the consolidated and combined statement of operations during the year ended December 31, 2020. Operating lease right-of-use assets and liabilities include the present value of $27.8 million for the associated lease payments, which are presented in other noncurrent assets and other noncurrent liabilities and other current liabilities on the consolidated balance sheet.

Note 15. Stock-Based Compensation

Elanco Stock Compensation Plans

The 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 Committee of the Board of Directors. The Plan initially authorized the issuance of up to 5.5 million common shares (subject to adjustments for certain events). Pursuant to the terms of the Plan, an additional 5.5 million common shares became automatically available for all awards upon completion of the Separation. The total number of shares authorized for stock-based compensation awards is 11 million as of December 31, 2020.

Stock-Based Compensation Expense

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

	2020	2019	2018
Stock-based compensation expense [1]	$ 47.7	$ 40.7	$ 1.8
Related tax benefit	(8.1)	(9.8)	(0.4)

(1) Includes the impact of estimated forfeitures

Restricted Stock Units

RSUs are granted to certain employees and are settled in shares of our common stock. RSU shares are accounted for at fair value based upon the closing stock price on the date of the grant. The corresponding expense is amortized over the vesting period, 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)	2020	2019	2018
Granted units	1.3	2.9	0.2
Weighted-average fair value	$ 27.44	$ 31.22	$ 31.09

Changes in the nonvested portion of RSUs for 2020 are summarized below:

(Shares in millions)	Shares	Weighted-Average Grant Date Fair Value
Nonvested units at January 1, 2020	2.2	$ 30.42
Granted	1.3	27.44
Vested	(1.0)	30.64
Forfeited	(0.1)	30.01
Nonvested units at December 31, 2020	2.4	28.90

The fair market value of RSUs vesting in 2020 and 2019 was $32.5 million and $23.4 million, respectively. No RSUs vested in 2018.

As of December 31, 2020 the total remaining unrecognized stock-based compensation expense related to nonvested RSUs was $28.2 million, which is expected to be amortized over a weighted-average remaining requisite service period of 19 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. PA shares 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, 2020 is summarized below:

(Shares in millions)	Shares	Weighted-Average Grant Date Fair Value
Nonvested awards at January 1, 2020	0.8	$ 25.75
Granted	0.5	27.78
Vested	(0.1)	25.93
Forfeited	—	—
Nonvested awards at December 31, 2020	1.2	26.63

The fair market value of PAs vesting in 2020 was $1.6 million. No PAs vested in 2019 and 2018.

As of December 31, 2020, the total remaining unrecognized stock-based compensation expense related to nonvested PAs was $9.5 million, which is expected to be amortized over a weighted-average remaining requisite service period of 12 months.

Stock Option Program

Stock options represent the right to purchase shares of our common stock within a specified period of time at a specified price. The exercise price for a stock option will be not less than 100% of the fair market value of the common stock on the date of the grant.

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 date of grant. The corresponding expense is generally amortized on a straight-line basis over the vesting term.

Stock options were granted in 2018 to our officers, management and board members at exercise prices equal to the fair market value of our stock at the date of the grant. Options fully vest 3 years from the grant date and have a term of 10 years. No stock options were granted in 2020 and 2019.

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 year ended December 31:

	2018
Expected dividend yield(1)	0.70 %
Risk-free interest rate(2)	3.07 %
Expected stock price volatility(3)	28.25 %
Expected term(4) (years)	6.5

(1) Determined using the expected quarterly dividend divided by the available three-month average stock price as of the valuation date, annualized and continuously compounded.

(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.

Stock option activity during the year ended December 31, 2020 is summarized below:

(Shares in millions)	Shares of Common Stock Attributable to Options	Weighted-Average Exercise Price of Options	Weighted-Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value[1]
Outstanding at January 1, 2020	0.3	$ 31.61		
Granted	—	—		
Exercised	—	—		
Forfeited or expired	—	—		
Outstanding at December 31, 2020	0.3	$ 31.61	7.8	$ —
Exercisable at December 31, 2020	—	—	—	—

(1) Market price of underlying Elanco common stock less exercise price. Options do not have an intrinsic value unless the market price exceeds the exercise price.

As of December 31, 2020, there was approximately $1.1 million of unrecognized compensation costs related to nonvested stock options, which is expected to amortize over an expected remaining weighted-average period of 11 months.

The following table summarizes data related to our stock option activity:

	2019	2018
Weighted-average grant date fair value per stock option	$ —	$ 10.21
Aggregate intrinsic value on exercise	0.10	—
Cash received upon exercise	1.9	—

Treatment of Lilly Equity Awards

Prior to the Separation, our employees participated in Lilly stock-based compensation plans, the cost of which was allocated to us and recorded in costs of sales, research and development, and marketing, selling and administrative expense in the consolidated and combined statements of operations. The cost of such plans related to our employees was $0.0 million, $5.1 million and $26.0 million for the years ended December 31, 2020, 2019 and 2018, respectively.

Following the IPO and until completion of the exchange offer, the equity awards previously granted to our employees by Lilly continued to vest with Elanco service counting toward the Lilly award's vesting provisions. On March 11, 2019, Elanco completed the exchange offer whereby Lilly disposed of all of its shares of Elanco common stock owned by Lilly. As a result, our employees' unvested Lilly equity awards were forfeited and replaced with Elanco RSUs (replacement awards), which were equivalent in value and vest on the same date as their forfeited Lilly equity awards. These replacement awards are included in the RSU activity described above.

Note 16. Income Taxes

Our income taxes for the year ended December 31, 2020 and 2019 reflect the results on a standalone basis independent of Lilly, except for the period during which we were included in a combined tax return until full separation. In the jurisdictions in which we were included in a combined tax return, our income taxes were determined based on the tax matters agreement between us and Lilly. Prior to the Separation, the income tax expense included in these financial statements has been calculated using the separate return basis as if Elanco filed separate tax returns.

We are included in Lilly's U.S. tax examinations by the Internal Revenue Service 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 of tax years 2016 - 2018 began in the fourth quarter of 2019 and remains ongoing; therefore, the resolution of this audit period will likely extend beyond the next 12 months. Certain matters of Lilly's U.S. examination of tax years 2013 - 2015 settled in 2019 and the resulting adjustments did not require any cash tax payments by Elanco.

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. We recognize the tax benefit from an uncertain tax position 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.

Following is the composition of income (loss) before income tax expense (benefit):

	2020	2019	2018
Federal	$ (495.0)	$ 55.5	$ 12.2
Foreign	(177.0)	22.7	101.9
Income (loss) before income taxes	$ (672.0)	$ 78.2	$ 114.1

Following is the composition of income tax expense (benefit):

	2020	2019	2018
Current:			
Federal	$ (36.0)	$ (5.5)	$ 45.1
Foreign	55.6	13.4	45.5
State	(6.7)	2.3	(2.3)
Total current tax expense	12.9	10.2	88.3
Deferred:			
Federal	(8.0)	14.5	(56.8)
Foreign	(124.7)	(7.5)	(5.6)
State	7.9	(6.9)	1.7
Total deferred tax expense (benefit)	(124.8)	0.1	(60.7)
Income tax expense (benefit)	$ (111.9)	$ 10.3	$ 27.6

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

	2020	2019
Deferred tax assets:		
Compensation and benefits	$ 68.5	$ 25.3
Accruals and reserves	88.7	13.7
Tax credit carryovers	33.9	12.8
Tax loss carryovers	168.4	69.5
Inventories	18.5	20.1
Restructuring and other reserves	32.8	24.6
Operating lease liabilities	48.4	20.5
Other	24.9	2.3
Total gross deferred tax assets	484.1	188.8
Valuation allowances	(94.4)	(32.7)
Total deferred tax assets	389.7	156.1
Deferred tax liabilities:		
Right-of-use assets	(48.4)	(20.5)
Intangibles	(1,043.6)	(134.5)
Property and equipment	(114.8)	(56.4)
Other	—	(0.6)
Total deferred tax liabilities	(1,206.8)	(212.0)
Deferred tax liabilities - net	$ (817.1)	$ (55.9)

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

At December 31, 2020, we have tax credit carryovers of $33.9 million available to reduce future income taxes. The amount is comprised of foreign, U.S. federal and state credits. The foreign credits total $6.5 million and if unused, will begin to expire in 2036. The U.S. federal credits total $19.6 million and if unused, will begin to expire in 2030. The state credits total $7.8 million and if unused, will begin to expire in 2021. The U.S. federal credits are subject to a partial valuation allowance and state credits are subject to a full valuation allowance.

At December 31, 2020, we have net operating loss carryovers and other carryovers for foreign, U.S. federal and state income tax purposes of $168.4 million: $50.4 million will expire between 2021 and 2042; and $118.0 million of the carryovers have an indefinite carryforward period. Net operating losses and other carryovers for foreign and state income tax purposes are subject to a partial valuation allowance.

The movements in the valuation allowance are as follows:

	2020	2019
January 1	$ (32.7)	$ (21.4)
Increase	(74.9)	(23.2)
Release	13.2	11.9
December 31	$ (94.4)	$ (32.7)

The increase in the valuation allowance during 2020 is primarily attributable to the realizability of U.S. federal and state deferred tax assets as a result of U.S. pre-tax losses.

Deferred taxes are not provided on the unremitted earnings of subsidiaries outside of the United States because it is expected that these earnings will be reinvested indefinitely. For the amount considered to be 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 we would have to make. 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.

In accordance with the 2017 Tax Act, 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.

Cash payments of income taxes were as follows:

	2020	2019	2018
Cash payments of income taxes	$ 97.0	$ 42.5	$ 26.9

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:

	2020	2019	2018
Income tax expense (benefit) at the U.S. federal statutory tax rate	$ (141.1)	$ 16.4	$ 24.0
Add (deduct):			
Taxation of international operations	(14.6)	20.7	20.5
State taxes	(10.0)	2.9	4.4
Income tax credits	(23.6)	(9.8)	(17.3)
Non-deductible employee compensation	0.3	4.2	(1.9)
IPO and separation costs	—	—	2.3
Other permanent adjustments	17.9	(4.2)	(1.0)
Change in uncertain tax positions	(7.2)	(14.7)	(1.7)
Change in valuation allowance	66.4	(5.2)	(1.7)
Income tax expense (benefit)	$ (111.9)	$ 10.3	$ 27.6

A reconciliation of the beginning and ending amount of gross unrecognized tax benefits is as follows:

	2020	2019	2018
Beginning balance at January 1	$ 8.2	$ 14.7	$ 29.6
Adjustments related to Separation	—	(2.2)	(17.6)
Adjusted beginning balance at January 1	8.2	12.5	12.0
Additions based on tax positions related to the current year	0.1	1.3	2.2
Changes for tax positions of prior years	(2.1)	(1.2)	4.0
Settlements	(3.6)	(4.3)	(3.0)
Changes related to the impact of foreign currency translation	(0.1)	(0.1)	(0.5)
Ending balance at December 31	$ 2.5	$ 8.2	$ 14.7

The total amount of unrecognized tax benefits that, if recognized, would affect tax expense was $2.5 million and $8.2 million at December 31, 2020 and 2019, respectively. Adjustments related to the Separation represent unrecognized tax benefits assumed by Lilly in the Separation and have no impact on income tax expense in the consolidated and combined financial statements.

We file income tax returns in the U.S. federal jurisdiction and various state, local and non-U.S. jurisdictions. Prior to full separation, certain of these income tax returns were filed on a consolidated or combined basis with Lilly.

We recognize both accrued interest and penalties related to unrecognized tax benefits in income tax benefit. We recognized income tax benefit related to interest and penalties as follows:

	2020	2019	2018
Income tax benefit	$ (1.7)	$ (10.6)	$ (2.5)

At December 31, 2020 and 2019, our accruals for the payment of interest and penalties totaled $1.3 million and $3.0 million, respectively.

Note 17. Commitments and Contingencies

Legal matters

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 (the Court) against Elanco, Jeffrey Simmons and Todd Young. On September 3, 2020, the Court appointed a lead plaintiff, and on November 9, 2020, the lead plaintiff filed an amended complaint. 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 supply chain, inventory, revenue and projections. The lawsuit seeks 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 Therapeutics, Inc. We filed a motion to dismiss on January 13, 2021. The timing of the Court's decision is uncertain. We believe the claims made in the case are meritless, and we intend to vigorously defend our position. The process of resolving these matters is inherently uncertain and may develop over an extended period of time; therefore, at this time, the ultimate resolution cannot be predicted.

On October 16, 2020, a shareholder class action lawsuit captioned *Safron 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. 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/ASR 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 5.00% TEUs issued in connection with the public offering. This case is currently stayed in deference to *Hunter v. Elanco Animal Health Inc*. We believe the claims made in the case are meritless, and we intend to vigorously defend our position. The process of resolving these matters is inherently uncertain and may develop over an extended period of time; therefore, at this time, the ultimate resolution cannot be predicted.

We are party to various other legal actions in the normal course of business. In determining whether a pending matter is significant for financial reporting and disclosure purposes, we consider both quantitative and qualitative factors in order to assess materiality. We accrue for certain liability claims to the extent that it is probable we will incur a loss and we can formulate a reasonable estimate of the costs. As of December 31, 2020 and 2019, we had no material liabilities established related to litigation as there were no significant claims which were probable and estimable. We have not historically had any significant litigation expense and are not currently subject to a significant claim other than the lawsuits noted above.

Note 18. Geographic Information

We operate as a single operating segment engaged in the development, manufacturing, marketing and sales of animal health products worldwide for both farm animals and pets. Consistent with our operational structure, our President and Chief Executive Officer (CEO), as the chief operating decision maker, makes resource allocation and business process decisions globally across our consolidated business. Strategic 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. Our global research and development organization is responsible for development of new products. Our manufacturing organization is responsible for the manufacturing and supply of products and for the optimization of our supply chain. Regional leaders are responsible for the distribution and sale of our products and for local direct costs. The business is also supported by global corporate staff functions. 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.

Our products include *Rumensin*, *Optaflexx*, *Denagard*, *Tylan*, *Maxiban, Baycox, Cydectin* and other products for livestock and poultry, as well as *Trifexis*, *Interceptor Plus*, *Comfortis*, *Galliprant, Seresto, Advantage, Advantix, Advocate* (collectively referred to as the *Advantage Family)* and other products for pets.

We have a single customer that accounted for 11.0%, 12.9% and 11.9% of revenue for the years ended December 31, 2020, 2019 and 2018, respectively. The product sales resulted in accounts receivable with this customer of $87.4 million and $90.5 million as of December 31, 2020 and 2019, respectively.

We are exposed to the risk of changes in social, political and economic conditions inherent in foreign operations and our results of operations and the value of our foreign assets are affected by fluctuations in foreign currency exchange rates.

Selected geographic area information was as follows:

	2020	2019	2018
Revenue — to unaffiliated customers[1]:			
United States	$ 1,475.6	$ 1,524.7	$ 1,483.2
International	1,797.7	1,546.3	1,583.6
Revenue	$ 3,273.3	$ 3,071.0	$ 3,066.8

	December 31, 2020	December 31, 2019
Long-lived assets[2]:		
United States	$ 955.4	$ 709.8
Germany	280.5	39.7
United Kingdom	198.4	192.6
Other foreign countries	317.0	205.0
Long-lived assets	$ 1,751.3	$ 1,147.1

(1) Revenue is attributed to the countries based on the location of the customer.

(2) Long-lived assets consist of property and equipment, net, and certain noncurrent assets, including right-of-use assets.

Note 19. Retirement Benefits

Pension Plans

There are certain defined benefit pension plans that our employees participate in that are either dedicated to our employees or where the plan assets and liabilities that relate to our employees were legally required to transfer to Elanco at the time of our separation from Lilly. 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 recognized in the consolidated balance sheets at December 31 for our defined benefit pension plans, which were as follows:

	2020	2019
Change in benefit obligation:		
Benefit obligation at beginning of year	$ 224.4	$ 234.8
Service cost	14.4	9.3
Interest cost	1.9	2.2
Additions related to the Bayer Animal Health acquisition	264.6	—
Actuarial loss (gain)	18.2	56.4
Benefits paid	(7.8)	(5.5)
Plan amendments	—	(74.7)
Settlements	(1.4)	—
Foreign currency exchange rate changes and other adjustments	45.6	1.9
Benefit obligation at end of year	559.9	224.4
Change in plan assets:		
Fair value of plan assets at beginning of year	148.7	131.6
Actual return on plan assets	5.5	15.3
Employer contribution	8.9	5.3
Additions related to the Bayer Animal Health acquisition	61.2	—
Benefits paid	(7.8)	(5.5)
Settlements	(1.4)	—
Foreign currency exchange rate changes and other adjustments	19.2	2.0
Fair value of plan assets at end of year	234.3	148.7
Funded status	(325.6)	(75.7)
Unrecognized net actuarial loss	66.8	45.9
Unrecognized prior service cost	(72.9)	(74.1)
Net amount recognized	$ (331.7)	$ (103.9)
Amounts recognized in the consolidated balance sheet consisted of:		
Noncurrent assets	$ 0.4	$ 2.1
Other current liabilities	(1.9)	(0.3)
Accrued retirement benefits	(324.1)	(77.5)
Accumulated other comprehensive income before income taxes	(6.1)	(28.2)
Net amount recognized	$ (331.7)	$ (103.9)

The unrecognized net actuarial loss and unrecognized prior service cost for these pension plans have not yet been recognized in net periodic pension costs and are included in accumulated other comprehensive income (loss) at December 31, 2020.

Pension plan amendment

In September 2019, we signed agreements under which certain defined pension benefits in Switzerland transferred from the previous Lilly pension fund as of December 31, 2019 to a new Elanco pension fund effective January 1, 2020. This resulted in a plan amendment during the period. The plan amendment decreased our pension benefit obligation by approximately $21 million, consisting primarily of a decrease in prior service costs of approximately $75 million, partially offset by a loss of approximately $54 million driven by changes in certain assumptions. The net impact to accumulated other comprehensive income was a gain of approximately $21 million, which will be amortized over the average remaining service period of employees expected to receive benefits under the plans.

We do not expect any plan assets to be returned to us in 2021.

The following represents our weighted-average assumptions related to these pension plans as of December 31:

(Percents)	2020	2019	2018
Discount rate for benefit obligation	0.6 %	0.6 %	1.5 %
Discount rate for net benefit costs	0.6	1.4	1.1
Rate of compensation increase for benefit obligation	3.1	2.3	2.2
Rate of compensation increase for net benefit costs	2.3	2.2	2.1
Expected return on plan assets for net benefit costs	3.2	4.0	4.0

We annually evaluate the expected return on the plan assets in these pension plans. 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.

The following benefit payments, which reflect expected future service, as appropriate, are expected to be paid as follows:

	2021	2022	2023	2024	2025	2026-2030
Benefit payments	$ 15.3	$ 14.4	$ 14.9	$ 15.4	$ 16.6	$ 97.6

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

	2020	2019
Projected benefit obligation	$ 545.2	$ 218.2
Fair value of plan assets	220.2	140.3

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

	2020	2019
Accumulated benefit obligation	$ 521.2	$ 203.9
Fair value of plan assets	220.2	140.3

The total accumulated benefit obligation for these defined benefit pension plans was $533.7 million and $210.1 million at December 31, 2020 and 2019, respectively.

Net pension expense related to these plans included the following components:

	2020	2019	2018
Service cost	$ 14.4	$ 9.3	$ 11.3
Interest cost	1.9	2.2	2.5
Expected return on plan assets	(5.6)	(4.2)	(6.2)
Amortization of prior service cost	(7.9)	(1.7)	0.2
Amortization of net actuarial loss	2.4	1.1	1.9
Recognized settlement loss	0.1	—	—
Other	—	—	0.5
Net pension expense	$ 5.3	$ 6.7	$ 10.2

The following represents the amounts recognized for these plans in other comprehensive income (loss):

	2020	2019	2018
Actuarial gain (loss) arising during period	$ (18.3)	$ (45.6)	$ 28.3
Prior year service cost during the year	—	74.7	—
Amortization of prior service cost included in net loss	(7.9)	(1.7)	0.2
Amortization of net actuarial loss included in net loss	2.4	1.1	1.9
Settlements	0.1	—	—
Foreign currency exchange rate changes and other	1.6	1.0	(1.9)
Total other comprehensive income (loss) during period	$ (22.1)	$ 29.5	$ 28.5

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 in our Switzerland and German pension plans represent approximately 88% of our plan assets for these pension plans. Given the long-term nature of our liabilities, these 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, within 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 in five major categories with a designated percentage invested in each including 5% liquidity, 36% fixed income securities, 32% equity securities, a share of 21% in real estate and 6% in other alternative investments.

The acquired Bayer Animal Health plans are managed separately. The underlying investments are classified in the same categories with designated percentages in each of the following: 72% fixed income securities, 28% equity securities.

Each category is diversified and comprised of the following:

- Liquidity - cash and cash equivalents
- Fixed-income securities - Swiss bonds, global aggregates, global aggregate corporates, global government bonds, emerging market local currencies and emerging markets hard currencies.
- Equity investments - 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 investments - represents primarily 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, or discounted cash flow analysis for all investments except hedge funds and private equity-like investments.

We determine the fair value of investments using the value reported by the partnership, adjusted for known cash flows and significant events through our reporting date. Values provided by the partnerships are primarily based on analysis of and judgments about the underlying investments. Inputs to these valuations include underlying net asset values (NAVs), discounted cash flow valuations, comparable market valuations, and may also include adjustments for currency, credit, liquidity and other risks as applicable. The vast majority of these private partnerships provide us with annual financial statements including their compliance with fair valuation procedures consistent with applicable accounting standards.

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 these pension plan assets as of December 31, 2020 by asset category are as follows:

		Fair Value Measurements Using			
Asset Class	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Investments Valued at NAV[1]
Public equity securities	69.2	66.8	—	—	2.4
Fixed income:					
Developed markets	86.5	85.9	—	—	0.6
Emerging markets	13.3	13.3	—	—	—
Real estate	29.5	25.9	3.6	—	—
Other	35.8	30.7	5.1	—	—
Total	$ 234.3	$ 222.6	$ 8.7	$ —	$ 3.0

(1) Certain investments that are measured at fair value using the 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, 2020.

The fair values of these pension plan assets as of December 31, 2019 by asset category are as follows:

		Fair Value Measurements Using			
Asset Class	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Investments Valued at NAV[1]
Cash and cash equivalents [2]	$ 129.0	$ 129.0	$ —	$ —	$ —
Public equity securities	3.8	1.9	—	—	1.9
Fixed income:					
Developed markets	2.5	2.1	—	—	0.4
Emerging markets	9.1	8.8	0.3	—	—
Other	4.3	0.9	3.4	—	—
Total	$ 148.7	$ 142.7	$ 3.7	$ —	$ 2.3

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

(2) Switzerland plan assets were exiting the Lilly pension plan as of December 31, 2019. As a result, assets were converted to cash and transferred to the new Elanco pension fund effective January 1, 2020.

No material transfers between Level 1, Level 2, or Level 3 occurred during the year ended December 31, 2019.

Contributions of $18.1 million to these pension plans are expected in 2021.

Retiree Health Benefit Plan

There are two retiree health benefit plan where the plan liabilities that relate to our employees were legally required to transfer to Elanco at the time of separation from Lilly. The accrued retirement benefits for these plans were $4.3 million and $4.7 million as of December 31, 2020 and 2019, respectively.

Defined Contribution Plans

Elanco has defined contribution savings plans that include certain employees worldwide. The purpose of these plans is generally to provide additional financial security during retirement by providing employees with an incentive to save. Our contributions to the plans are based on our employee contributions and the level of our match. Expenses related to our employees under the plans totaled $35.2 million, $32.2 million and $20.9 million for the years ended December 31, 2020, 2019, and 2018, respectively. The expense for our 401(k) plan increased in 2019 primarily due to an increase our match and participant headcount.

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 for basic pension benefits to the majority of our employees in Germany. Up to a certain salary level, the benefit obligations are covered by contributions of the Company and the employees to the plan. Contributions made to the multi-employer plan are expensed as incurred and were as follows:

	2020
Bayer-Pensionskasse	$ 1.2
Rheinishche Pensionskasse	0.5
Total	$ 1.7

The Company-specific plan information for the 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 that the Bayer-Pensionskasse or Rheinische Pensionskasse is underfunded, the future contributions to the plan may increase and may be used to fund retirement benefits for employees related to other employers.

The Bayer-Pensionskasse financial statements for the years ended December 31, 2019 and 2018 indicated total assets of $10,380.9 million and $10,234.8 million, respectively; total actuarial present value of accumulated plan benefits of $9,894.5 million and $9,750.7 million, respectively; and total contributions for all participating employers of $137.7 million and $143.9 million, respectively. Our plan contributions in 2020 did not exceed 5% of the total contributions.

The Rheinische-Pensionskasse financial statements for the years ended December 31, 2019 and 2018 indicated total assets of $824.6 million and $732.9 million, respectively; total actuarial present value of accumulated plan benefits of $781.7 million and $694.5 million, respectively; and total contributions for all participating employers of $48.2 million and $46.3 million, respectively. Our plan contributions in 2020 did not exceed 5% of the total contributions.

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.

Treatment of Lilly Plans

Prior to the Separation, our employees participated in defined benefit pension and other postretirement plans sponsored by Lilly, which include participants of Lilly's other business. Such plans were accounted for as multiemployer plans in the combined financial statements and as a result, no asset or liability was recorded by us to recognize the funded status of these plans. We recorded $4.0 million of expense for the year ended December 31, 2018 relating to our employees' participation in Lilly sponsored plans.

Note 20. Earnings (Loss) Per Share

Basic Earnings (Loss) Per Share

As discussed in Note 1, Elanco Parent was formed for the purpose of facilitating the IPO. Lilly held all shares of Elanco Parent from the time of formation until the IPO.

Prior to IPO, there were an aggregate of 293.3 million shares of our common stock held by Lilly (which represents the 100 shares held by Lilly prior to giving effect to the 2,932,900-for-1 stock split that occurred on September 19, 2018). In connection with the completion of the IPO, an additional 72.3 million shares of our common stock were issued. Earnings per share was calculated based on the assumptions that the shares held by Lilly were outstanding for all periods prior to IPO.

We compute basic earnings (loss) per share by dividing net earnings (loss) available to common shareholders by the actual weighted average number of common shares outstanding for the reporting period. For the year ended December 31, 2020, the weighted average number of common shares outstanding used to calculate basic earnings per share includes the impact of approximately 72.9 million shares of common stock issued on August 1, 2020 to Bayer and its subsidiaries for the Bayer Animal Health acquisition. In addition, basic earnings per share reflects the impacts of 25.0 million shares and 14.3 million shares, respectively, issued or deemed issued in connection with our common stock and TEU issuances in the first quarter of 2020. For the year ended December 31, 2019, weighted average number of common shares outstanding used to calculate basic earnings per share includes the impact of approximately 7.3 million shares that were issued during the period in connection with the acquisition of Aratana. See Note 6: Acquisitions and Divestitures and Note 9: Equity for further discussion.

Diluted Earnings (Loss) Per Share

Elanco has variable common stock equivalents relating to certain equity awards in stock-based compensation arrangements and the TEU prepaid stock purchase contracts. Diluted earnings per share reflects the potential dilution that could occur if holders of the unvested equity awards and unsettled TEUs converted their holdings into common stock. The weighted average number of potentially dilutive shares outstanding is calculated using the treasury stock method.

Potential common shares that would have the effect of increasing diluted earnings per share (or reducing loss per share) are considered to be anti-dilutive and as such, these shares are not included in the calculation of diluted earnings per share. During the year ended December 31, 2020, we reported a net loss. Therefore, dilutive common shares are not assumed to have been issued since their effect is anti-dilutive. As a result, basic and diluted weighted average shares are the same, causing diluted net loss per share to be equivalent to basic net loss per share.

Weighted average diluted shares outstanding included common stock equivalents of 1.3 million for 2019. The dilutive impact for 2018 was immaterial.

For the year ended December 31, 2019, approximately 0.1 million shares of potential common shares were excluded from the calculation of diluted earnings per share because their effect was anti-dilutive.

Note 21. Related Party Agreements and Transactions

Elanco Shares Held by Bayer

On August 1, 2020, we completed the acquisition of Bayer Animal Health, which included cash and Elanco stock consideration. Pursuant to the share and asset purchase agreement, Bayer has the right to sell such shares on or after November 1, 2020 through multiple registered offerings. Upon Bayer's written request, Elanco is obligated to use commercially reasonable efforts to file a shelf registration statement covering the resale by Bayer of its Elanco common stock.

In December 2020, Bayer sold approximately 62.7 million shares of its Elanco common stock in an underwritten public offering. Accordingly, as of December 31, 2020, Bayer owns 10.3 million shares, or 2%, of our outstanding common stock and is no longer considered a related party.

While Bayer was not considered a related party as of December 31, 2020, there were various transactions between us and Bayer during the period after the acquisition of Bayer Animal Health in which they were considered a principal owner of Elanco. These transactions primarily related to local country asset purchases and various TSAs, contract manufacturing arrangements, and certain lease agreements to ensure business continuity after the acquisition.

Local Country Asset Purchase Transactions with Bayer Subsequent to the Acquisition of Bayer Animal Health

For regulatory purposes in certain jurisdictions, consideration was required to be paid locally at closing in addition to amounts paid globally for the acquisition. Pursuant to the stock and asset purchase agreement, Bayer provided a refund for payment amounts duplicated in these regions. The total amount paid to and received from Bayer in 2020 for these local country asset purchases was approximately $633 million. Two remaining local country asset purchases will be completed and refunded by Bayer in the first quarter of 2021.

Transactions with Lilly Subsequent to Separation and Related to the Separation

Amounts due from/(due to) Lilly in connection with the Separation and agreed upon services as of December 31 were as follows:

	2020	2019
TSA	$ 6.6	$ 10.5
Other activities	(0.9)	(15.8)
Local country asset purchases	(10.7)	(11.1)
Total payable to Lilly	$ (5.0)	$ (16.4)

As described in Note 1, we completed an IPO in September 2018 and Lilly fully divested all ownership of Elanco in March 2019. In connection with the Separation, we entered into various agreements with Lilly related to the form of our separation and certain ongoing activities that will continue for a period of time. These included, among others, a master separation agreement (MSA), a TSA and a tax matters agreement. In addition, there was a portion of our operations for which the legal transfer of our net assets did not occur prior to the Separation due to certain regulatory requirements in each of these countries.

Transitional Services Agreement (TSA)

Historically, Lilly has provided us significant shared services and resources related to corporate functions such as executive oversight, treasury, legal, finance, human resources, tax, internal audit, financial reporting, information technology and investor relations, which we refer to collectively as the "Lilly Services." Under the terms of the TSA, we are able to use Lilly Services for a fixed term established on a service-by-service basis. We pay Lilly mutually agreed-upon fees for the Lilly Services provided under the TSA, which are based on Lilly's cost (including third-party costs) of providing the Lilly Services through March 31, 2021, and subject to a mark-up of 7% thereafter, with additional inflation-based escalation beginning January 1, 2022. The fees under the TSA became payable for all periods beginning after October 1, 2018.

Separation Activities

Subsequent to our IPO, there continue to be transactions between us and Lilly related primarily to the completion of the local country asset purchases and finalization of assets and liabilities associated with the legal separation from Lilly, combined income tax returns and the impact of the tax matters agreement, historical Lilly retirement benefits, and centralized cash management. The most significant of these activities includes the finalization of the local country valuation of business and the resulting impact on deferred tax assets and the impact of combined tax returns.

Other Activities

We continue to share certain services and back office functions with Lilly, which in certain instances result in Lilly paying costs for Elanco (e.g., utilities, local country operating costs, etc.) that are then passed through to Elanco for

reimbursement. These amounts are included in cash flows from operating activities in our consolidated and combined statements of cash flows. In addition, we operate through a single treasury settlement process and prior to the local country asset purchases (as described below) continued to transact through Lilly's processes in certain instances. As a result of these activities, there were certain amounts of financing that occurred between Lilly and Elanco during the years ended December 31, 2020 and 2019. These amounts are included in cash flows from financing activities in our consolidated and combined statements of cash flows.

Local Country Asset Purchases

The legal transfer of certain of our net assets did not occur prior to the Separation due to certain regulatory requirements in each of these countries. The related assets, liabilities, and results of operations have been reported in our consolidated and combined financial statements, as we are responsible for the business activities conducted by Lilly on our behalf and are subject to the risks and entitled to the benefits generated by these operations and assets under the terms of the MSA. We held restricted cash, and the associated payable to Lilly, at the date of Separation to fund the acquisition of these assets. As of December 31, 2020, the majority of these assets have been legally acquired and the remainder are expected to be purchased during the first half 2021. Restricted cash and Payable to Lilly of $10.7 million are recorded on the consolidated balance sheet for the remainder of the assets expected to be purchased in the first half of 2021.

Transactions with Lilly Prior to Separation

Prior to the IPO, we did not operate as a standalone business and had various relationships with Lilly whereby Lilly provided services to us. The impact on our historical combined financial statements includes the following:

Transfers to/from Lilly, net

As discussed in Note 2: Basis of Presentation, net parent company investment is primarily impacted by contributions from Lilly, which are the result of treasury activity and net funding provided by or distributed to Lilly. For the year ended December 31, 2018, net transfers to Lilly were $226.3 million.

Corporate Overhead and Other Allocations

Prior to full separation, Lilly provided us certain services, including executive oversight, treasury, legal, finance, human resources, tax, internal audit, financial reporting, information technology and investor relations. We provide Lilly certain services related to manufacturing support. Our financial statements reflect an allocation of these costs. When specific identification is not practicable, the remainder have been allocated primarily on a proportional cost method on a basis of revenue or headcount.

The allocations of services from Lilly, prior to IPO, to us were reflected as follows in the combined statements of operations:

	2018 (1)
Cost of sales	$ 21.8
Research and development	2.2
Marketing, selling and administrative	81.2
Total	$ 105.2

(1) Through September 30, 2018

There were no allocations from Lilly to us reflected in the consolidated and combined statement of operations for the years ended December 31, 2020 and 2019.

We provided Lilly certain services related to manufacturing support. Allocations of manufacturing support from us to Lilly were $3.7 million for the year ended December 31, 2018, which reduced the cost of sales in the consolidated and combined statements of operations.

The financial information herein may not necessarily reflect our consolidated financial position, results of operations and cash flows in the future or what they would have been if we had been a separate, standalone entity during the periods presented. Management believes that the methods used to allocate expenses are reasonable.

Stock-based Compensation

As discussed in Note 15: Stock-based Compensation, prior to full separation, our employees participated in Lilly stock-based compensation plans, the costs of which were allocated to us and recorded in cost of sales, research and development, and marketing, selling and administrative expenses in the consolidated and combined statements of operations. The costs of such plans related to our employees were $0.0 million, $5.1 million and $26.0 million for the years ended December 31, 2020, 2019 and 2018, respectively.

Retirement Benefits

As discussed in Note 19: Retirement Benefits, prior to full separation, our employees participated in defined benefit pension and other post retirement plans sponsored by Lilly, the costs and benefits of which were recorded in the consolidated and combined statement of operations in cost of sales, research and development, and marketing, selling and administrative expenses. The benefits of such plans related to our employees were $6.3 million for the year ended December 31, 2018.

Debt

Lilly's third-party debt and the related interest expense were not allocated to us for any of the periods presented as we were not the legal obligor of the debt and Lilly borrowings were not directly attributable to our business.

Note 22. Selected Quarterly Data (unaudited)

2020	Fourth Quarter
Revenue	$ 1,139.7
Cost of sales	596.2
Operating expenses[1]	486.8
Asset impairment, restructuring, and other special charges	167.3
Interest expense, net of capitalized interest	60.4
Loss before income taxes	(318.1)
Income tax expense	4.7
Net loss	(322.8)
Loss per share—basic and diluted	(0.66)

2019	Fourth Quarter
Revenue	$ 787.0
Cost of sales	410.1
Operating expenses[1]	253.2
Asset impairment, restructuring, and other special charges	51.6
Interest expense, net of capitalized interest	18.7
Loss before income taxes	(4.3)
Income tax expense	5.2
Net loss	(9.5)
Loss per share—basic and diluted	(0.03)

(1) Includes research and development and marketing, selling, and administrative expenses.

Numbers may not add up to totals for each year due to rounding.

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

None

ITEM 9A. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, 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 Chief Executive Officer and Chief Financial Officer have concluded that, as of the end of such period our disclosure controls and procedures are effective in recording, processing, summarizing, and reporting, on a timely basis, information required to be disclosed by us in the reports that we file or submit under the Exchange Act, and that information is accumulated and communicated to the Chief Executive Officer and Chief Financial Officer, 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 Chief Executive Officer and Chief Financial Officer, 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).

As of December 31, 2020, we have excluded from the scope of our assessment of internal control over financial reporting the recently acquired operations and related assets of Bayer Animal Health as permitted by guidance provided by the SEC. As of December 31, 2020 and for the period from acquisition through December 31, 2020, the total assets and total revenues of Bayer Animal Health that are excluded from our assessment of internal control over financial reporting represent approximately 10% and 18%, respectively, of the related consolidated total assets and total revenue as of and for the year ended December 31, 2020. Based on this evaluation, our management has concluded that, as of December 31, 2020, our internal control over financial reporting was effective.

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 our consolidated financial statements and the effectiveness of internal controls over financial reporting as of December 31, 2020 as stated in their report which is included herein.

Changes in Internal Control

As of December 31, 2020, management is in the process of evaluating and integrating the internal controls of the acquired Bayer Animal Health business into our existing operations as part of planned integration activities. Other than the controls enhanced or implemented to integrate the Bayer Animal Health business, there has been no change in our internal control over financial reporting during the year ended December 31, 2020, that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting. Further, we have not experienced any material impact to our internal controls over financial reporting despite our accounting, finance, and legal employees working remotely due to the COVID-19 pandemic. We are continually monitoring and assessing COVID-19 on our internal controls to minimize the impact on their design and operating effectiveness.

ITEM 9B. OTHER INFORMATION

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, 2020, 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, 2020, based on the COSO criteria.

As indicated in the accompanying Management's Report on Internal Control over Financial Reporting, management's assessment of and conclusion on the effectiveness of internal control over financial reporting did not include the internal controls of Bayer Animal Health, which is included in the 2020 consolidated and combined financial statements of the Company and constituted 10% of total assets as of December 31, 2020 and 18% of revenues for the year then ended. Our audit of internal control over financial reporting of the Company also did not include an evaluation of the internal control over financial reporting of Bayer Animal Health.

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, 2020 and 2019, the related consolidated and combined statements of operations, comprehensive income (loss), equity and cash flows for each of the three years in the period ended December 31, 2020, and the related notes and our report dated March 1, 2021 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
March 1, 2021

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 "Governance." 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 “Director Compensation,” "Committees of the Board of Directors - Compensation Committee," "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 “Ownership of Company Stock.” 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, 2020 can be found in the Proxy Statement under “Securities Authorized for Issuance Under Equity Compensation Plans” 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 "Transactions with Related Persons." That information is incorporated in this report by reference.

Director Independence

Information relating to director independence can be found in the Proxy Statement under "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, can be found in the Proxy Statement under "Proxy Item No. 2. Proposal to Ratify the Appointment of Principal 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 and combined financial statements of the company and its subsidiaries are found at Item 8:

- Consolidated and Combined Statements of Operations—Years Ended December 31, 2020, 2019, and 2018
- Consolidated and Combined Statements of Comprehensive Income (Loss)—Years Ended December 31, 2020, 2019, and 2018
- Consolidated Balance Sheets—December 31, 2020 and 2019
- Consolidated and Combined Statements of Equity—Years Ended December 31, 2020, 2019, and 2018
- Consolidated and Combined Statements of Cash Flows—Years Ended December 31, 2020, 2019, and 2018
- Notes to Consolidated and Combined Financial Statements

2. Financial Statement Schedules

The consolidated and combined 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	Description
2.1	Agreement and Plan of Merger by and among Elanco Animal Health Incorporated, Elanco Athens Inc. and Aratana Therapeutics, Inc., dated April 26, 2019 (incorporated by reference to Exhibit 2.1 of the Current Report on Form 8-K filed with the SEC on April 26, 2019).
2.2	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).
2.3	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).
2.4	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).
2.5	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).
2.6	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).
2.7	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).
3.1	Amended and Restated Articles of Incorporation of Elanco Animal Health Incorporated, effective September 18, 2018 (incorporated by reference to Exhibit 3.1 of the Current Report on Form 8-K filed with the SEC on September 26, 2018).
3.2	Amended and Restated Bylaws of Elanco Animal Health Incorporated, effective August 8, 2019 (incorporated by reference to Exhibit 3.1 of the Current Report on Form 8-K filed with the SEC on August 9, 2019).
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	Purchase Contract Agreement, dated as of January 27, 2020, between Elanco Animal Health Incorporated and Deutsche Bank Trust Company Americas, as purchase contract agent, as attorney-in-fact for holders of the purchase contracts referred to therein and as trustee under the indenture referred to therein, including the form of unit and form of purchase contract (incorporated by reference to Exhibit 4.1 of Current Report on Form 8-K filed with the SEC on January 27, 2020).
4.6	Description of Securities (incorporated by reference to Exhibit 4.6 of the Annual Report on Form 10-K filed February 28, 2020)

10.1	Master Separation Agreement, dated September 24, 2018, between Eli Lilly and Company and Elanco Animal Health Incorporated (incorporated by reference to Exhibit 10.1 of the Current Report on Form 8-K filed with the SEC on September 26, 2018).
10.2	Transitional Services Agreement, dated September 24, 2018, between Eli Lilly and Company and Elanco Animal Health Incorporated (incorporated by reference to Exhibit 10.2 of the Current Report on Form 8-K filed with the SEC on September 26, 2018).
10.3	Tax Matters Agreement, dated September 24, 2018, between Eli Lilly and Company and Elanco Animal Health Incorporated (incorporated by reference to Exhibit 10.3 of the Current Report on Form 8-K filed with the SEC on September 26, 2018).
10.4	Employee Matters Agreement, dated September 24, 2018, between Eli Lilly and Company and Elanco Animal Health Incorporated (incorporated by reference to Exhibit 10.4 of the Current Report on Form 8-K filed with the SEC on September 26, 2018).
10.5	Toll Manufacturing and Supply Agreement, dated September 24, 2018, between Eli Lilly Export S.A. and Elanco UK AH Limited (incorporated by reference to Exhibit 10.5 of the Current Report on Form 8-K filed with the SEC on September 26, 2018).
10.6	Transitional Trademark License Agreement, dated September 24, 2018, among Eli Lilly and Company, Elanco Animal Health Incorporated and Elanco US Inc. (incorporated by reference to Exhibit 10.7 of the Current Report on Form 8-K filed with the SEC on September 26, 2018).
10.7	Intellectual Property and Technology License Agreement, dated September 24, 2018, among Eli Lilly and Company, Elanco Animal Health Incorporated and Elanco US Inc. (incorporated by reference to Exhibit 10.8 of the Current Report on Form 8-K filed with the SEC on September 26, 2018).
10.8	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).
10.9	2018 Elanco Stock Plan (incorporated by reference to Exhibit 4.3 of Registration Statement on Form S-8 (Registration No. 333-227447) filed with the SEC on September 20, 2018).*
10.10	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)*
10.11	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)*
10.12	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).*
10.13	Form of Elanco Animal Health Incorporated Restricted Stock Unit Awards Agreement (incorporated by reference to Exhibit 10.21 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).*
10.14	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).*

10.15	Retention Bonus Agreement, dated October 18, 2018, by and between Elanco US Inc. and Todd S. Young (incorporated by reference to Exhibit 10.2 to Elanco Animal Health Incorporated's Report on Form 8-K filed with the SEC on October 30, 2018).*
10.16	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).*
10.17	Form of Performance Award Agreement (Incorporated by reference to Exhibit 10.1 to Form 8-K filed with the SEC on February 19, 2019)*
10.18	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)*
10.19	Form of Restricted Stock Unit Award Agreement (incorporated by reference to Exhibit 10.22 to Annual Reporting on Form 10-K filed with the SEC on February 20, 2019)*
10.20	Form of Replacement Performance Award Agreement for Certain Named Executive Officers (incorporated by reference to Exhibit 10.23 to Annual Report on Form 10-K filed with the SEC on February 20, 2019)*
10.21	Form of Replacement Performance Award Agreement for Jeffery N. Simmons (incorporated by reference to Exhibit 10.24 to Annual Report on Form 10-K filed with the SEC on February 20, 2019)*
10.22	Form of Replacement Restricted Stock Unit Award Agreement for Certain Named Executive Officers (incorporated by reference to Exhibit 10.25 to Annual Report on Form 10-K filed with the SEC on February 20, 2019)*
10.23	Elanco Animal Health Incorporated Corporate Bonus Plan (incorporated by reference to Exhibit 10.3 of the Quarterly Report on Form 10-Q filed with the SEC on May 7, 2020).*
10.24	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).*
10.25	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).*
10.26	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).*
10.27	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)
10.28	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)*
10.29	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).*
10.30	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).*
10.31	Elanco Executive Severance Pay Plan and Summary (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).
101	Interactive Data Files.
104	The cover page from the Company's Annual Report on Form 10-K for the year ended December 31, 2020, formatted in Inline XBRL.

*Management contracts or compensatory plans or arrangements

ITEM 16. FORM 10-K SUMMARY

Not applicable.

Signatures

Pursuant to the requirements 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: March 1, 2021 /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:	March 1, 2021
Jeffrey N. Simmons President and Chief Executive Officer (principal executive officer) and Director		
/s/ Todd S. Young	Date:	March 1, 2021
Todd S. Young Executive Vice President, Chief Financial Officer (principal financial officer)		
/s/ James M. Meer	Date:	March 1, 2021
James M. Meer Vice President, Chief Accounting Officer (principal accounting officer)		
/s/ R. David Hoover	Date:	March 1, 2021
R. David Hoover Chairman of the Board		
/s/ Kapila Kapur Anand	Date:	March 1, 2021
Kapila Kapur Anand Director		
/s/ John P. Bilbrey	Date:	March 1, 2021
John P. Bilbrey Director		
/s/ William F. Doyle	Date	March 1, 2021
William F. Doyle Director		

/s/ Scott Ferguson — Date: March 1, 2021
Scott Ferguson
Director

/s/ Art A. Garcia — Date: March 1, 2021
Art A. Garcia
Director

/s/ Michael J. Harrington — Date: March 1, 2021
Michael J. Harrington
Director

/s/ Paul Herendeen — Date: March 1, 2021
Paul Herendeen
Director

/s/ Deborah T. Kochevar — Date: March 1, 2021
Deborah T. Kochevar
Director

/s/ Lawrence E. Kurzius — Date: March 1, 2021
Lawrence E. Kurzius
Director

/s/ Kirk McDonald — Date: March 1, 2021
Kirk McDonald
Director

/s/ Denise Scots-Knight Ph.D. — Date: March 1, 2021
Denise Scots-Knight
Director

EXHIBIT 10.31

Elanco Executive Severance Pay Plan and Summary

Introduction

The Elanco Executive Severance Pay Plan and Summary ("Plan") effective as of _____, 2020, defines those circumstances under which Elanco US Inc. and Lohmann Animal Health International, Inc. (collectively, "Elanco" or the "Company") may provide severance benefits to you in the event your employment with Elanco is terminated under certain circumstances. The Plan supersedes any and all prior severance plans or programs under which you may have been previously covered, except as otherwise noted herein.

This document serves as both the formal plan document and the summary for the Plan. This document explains eligibility, exclusions, benefits and administration. Any questions about the Plan or its operation should be directed to your Human Resources Representative.

The Plan is part of the Elanco US Inc. Health and Welfare Plan, which was established to provide medical, dental, extended disability, life insurance, holiday, vacation, and other benefits for eligible employees. It is the intention of Elanco that the Plan be a welfare benefit plan subject to the requirements of the Employee Retirement Income Security Act of 1974, as amended ("ERISA"). The Plan is not intended to be an "employee pension benefit plan" or "pension plan" as those terms are defined in Section 3(2) of ERISA. Rather, the Plan is intended to constitute the type of arrangement identified as a "severance pay arrangement" within the meaning of Section 3(2)(B)(i) of ERISA, as further elaborated by regulations promulgated by the Secretary of Labor at Title 29, Code of Federal Regulations § 2510.3-2(b). The Plan is intended to be exempt from the reporting and disclosure requirements of Part I of Title I of ERISA, whereby benefits are provided to a select group of management or highly compensated employees, as provided under Title 29, Code of Federal Regulations § 2520-104-24(c). The benefits paid by the Plan are not intended to constitute deferred compensation and, as such, it is intended that the Plan be exempt from Section 409A of the Internal Revenue Code of 1986, as amended (the “Code”).

Elanco supports compliance with federal law in all respects and will not take any action against employees because they have exercised their rights under the law. If you have any complaints of discrimination or questions or concerns about the requirements to receive severance benefits from Elanco, you are encouraged to contact a representative of Elanco’s Human Resources Department or the Equal Employment Opportunity Commission at 101 West Ohio Street, Suite 1900, Indianapolis IN 46204- 4203, (317) 226-7212 or (317) 226-5162 (TTY). An employee has the right, and is encouraged to exercise that right, to report allegations of employment discrimination in the workplace.

Section 1 – Purpose

The purpose of this Plan is to define those circumstances under which Elanco may pay you severance benefits. Elanco and this Plan do not provide severance benefits to you as a matter of right. Whether or not severance benefits will be paid to you depends on you satisfying all conditions set forth in the Plan necessary for you to be eligible for severance benefits, including a determination by Elanco, in its sole and absolute discretion, of whether to offer you any severance benefits hereunder.

Section 2 – Who Is Eligible

Employees of Elanco who are classified by Elanco as an M4_VP - M7 global job level (VP, SVP, EVP, CEO), including executive officers (as defined in Rule 3b-7 under the Exchange Act), or any successor classifications shall be eligible to participate in the Plan and shall be considered an “Eligible Employee” for all purposes hereunder, provided such Eligible Employees meet all of the requirements set forth herein, as determined by Elanco on a case by case basis, and further provided, that the individual does not satisfy and will not satisfy the conditions to receive severance benefits under any other arrangement or agreement between the individual and Elanco. Elanco reserves the right, in its discretion, to cover any

additional positions or individuals under the Plan. Your eligibility to receive a benefit depends on the circumstances surrounding your separation from service with Elanco, and the mandatory requirement that you execute (and do not timely revoke) a written severance agreement and release in a form and upon such terms as provided to you by Elanco, which shall include, but not be limited to, a waiver and release of claims, nondisclosure and non-solicitation provisions ("Severance Agreement and Release"). Notwithstanding anything herein to the contrary, in all cases, the decision to offer severance benefits is within the sole and absolute discretion of Elanco.

Section 3 – Under What Circumstances Will Benefits Be Paid

Subject to the discretion of Elanco, you may receive a severance benefit under the Plan if you are an Eligible Employee (as described in Section 2) upon your separation from service with Elanco for one of the following reasons, and provided you execute (and do not timely revoke) a written Severance Agreement and Release provided to you by Elanco:

• You are discharged, or you resign in lieu of discharge (as determined by the Company in its sole discretion), and your discharge is not due to misconduct, violation of Company possession of firearms policy, violation of Company alcohol, drug or gambling policies, insubordination, or an unscheduled absence of three consecutive workdays without notice, other than due to illness or disability.

• You resign due to disability (as defined in the Company's long-term disability insurance plan), and you are ineligible for disability benefits under the Company's long-term disability insurance plan because you did not satisfy a length-of-service requirement or your disability constituted a prior condition under such long-term disability insurance plan.

- Under certain circumstances, when the office or facility in which you work closes.

- Any other reason the Company determines, in its sole discretion, it is appropriate to be entitled to the payment of a severance benefit.

Section 4 – Under What Circumstances Will Benefits Not Be Paid

Subject to the discretion of Elanco, you will not receive a severance benefit under the Plan if one of the following events occurs, which events include, but are not limited to:

- You voluntarily separate from service with Elanco, and such termination is not a resignation in lieu of discharge.
- You die while employed by the Company.
- Your employment with the Company terminates during or immediately following an unpaid leave of absence that is scheduled to last or has lasted more than 12 months, other than due to illness or disability.
- You do not execute (or you timely revoke) the written Severance Agreement and Release provided to you by the Company.
- You are discharged from the Company due to misconduct, including, but not limited to: (i) dishonesty of a substantial nature in performing services for the Company which is willful and deliberate and committed in bad faith or without reasonable belief the breach or action is in the Company's best interests, (ii) violation of Company possession of firearms policy, (iii) violation of Company alcohol, drug or gambling policies, (iv) insubordination, or (v) unscheduled absence of three consecutive workdays without notice, other than due to illness or disability.

- If, upon your separation from service with the Company, you are eligible to receive an income- replacement benefit provided at the Company's expense. An income-replacement benefit, and any other benefit determined by the Company in its sole discretion, includes any long-term disability or worker's compensation benefit but excludes an old-age benefit under the Social Security system or a benefit under a defined contribution retirement plan sponsored by the Company.

- You are transferred within the Company from one facility maintained by the Company to another facility maintained by the Company.
- You have been offered a position with Elanco or another member of its controlled group (as determined in accordance with applicable rules under Code Section 414(b) or (c)) or a joint venture that includes Elanco or a member of the controlled group.
- Your separation from service with the Company is due to the sale of assets, merger, liquidation, business reorganization, or disposition of the Company, and you are employed by a successor employer on the first business day following the closing of such a transaction. In addition, you will not receive a severance benefit under the Plan upon your subsequent separation from service with the successor employer. Further, the successor employer is under no obligation to provide any severance benefits for your period of service with the Company prior to the sale of assets, merger, liquidation, business reorganization, or disposition of the Company.
- You are willfully malfeasant or commit fraud.
- Your repeated conduct materially interferes with the performance of your duties which materially compromises the integrity or reputation of the Company.
- You are convicted by a court of law, admission of guilt, or entry of a plea of nolo contendere with regard to a felony or other crime of moral turpitude.
- You fail to act or do not abstain from acting, as directed in writing by a member of the Board of Directors of Elanco or a higher-ranking employee of Elanco, where such failure continues after you have been given written notice of such failure and at least five (5) business days thereafter to cure such failure.

Your intentional wrongful act or omission results in the restatement of Elanco's financial statements due to a violation of the Sarbanes-Oxley Act of 2002.

- You materially breach your duty of loyalty to the Company.
- You are eligible to receive a benefit under the Company's change in control severance pay plan or any other Company-sponsored severance plan.

Section 5 – Severance Benefits

A. Severance Pay

- Following separation from service with the Company for one of the qualifying reasons described in Section 3 above, the CEO of Elanco will receive a benefit equal to: (i) two (2) times the amount of their Base Salary at the time of separation from service; plus (ii) two (2) times the amount of their target annual cash incentive bonus for the year of termination or, if there is no target-based annual cash incentive bonus, then the annual cash bonus paid or payable for the most recently completed calendar year; plus (iii) a lump sum payment equal to the Company contribution paid for active employees (and applicable dependents) for medical and dental coverage as was in effect for the Eligible Employee immediately prior to the Eligible Employee's separation from service, in an amount equal to twenty-four (24) months of Company contributions for such medical and dental coverage. Such payments shall be subject to all applicable federal, state, local and other taxes.

Other Executives eligible under this Plan as provided under Section 2 (other than the CEO of Elanco will receive a benefit equal to: (i) one (1) times the amount of their Base Salary at the time of separation from

service; plus (ii) one (1) times the amount of their target annual cash incentive bonus for the year of termination or, if there is no target-based annual cash incentive bonus, then the annual cash bonus paid or payable for the most recently completed calendar year; plus (iii) a lump sum payment equal to the Company contribution paid for active employees (and applicable dependents) for medical and dental coverage as was in effect for the Eligible Employee immediately prior to the Eligible Employee's separation from service, in an amount equal to twelve (12) months of Company contributions for such medical and dental coverage. Such payments shall be subject to all applicable federal, state, local and other taxes.

For purposes of this Section, "Base Salary" shall mean the current base salary or wages paid to the Eligible Employee on an annual basis to be determined as of the Eligible Employee's separation from service. Base Salary shall not include performance, incentive or other bonuses, commissions, Company contributions to Social Security, benefits payable under, or Company contributions to, any retirement or other plan of deferred compensation, or the value of any fringe benefits provided by the Company.

B. Outplacement Services

In addition, you will receive outplacement assistance for up to twelve (12) months following your separation from service through an outplacement assistance firm selected by the Company, in its sole discretion, to facilitate your transition to a new job. Any reimbursements for such outplacement services shall be paid within such 12 month period.

C. Reduction in Force (RIF)/Plant Closing

In the case of a reduction in force (RIF) or plant closing, the Company will communicate a notice period for the RIF or plant closure if required by applicable law. In all cases, the Company reserves the right to pay the Eligible Employee in lieu of the Eligible Employee continuing to be employed for any or all of the notice period. This payment will be equal to the base pay the Eligible Employee would have received if the Eligible Employee had remained employed through the end of the notice period designated by the Company.

If an Eligible Employee chooses voluntarily to leave employment prior to the end of the applicable notice period, the Eligible Employee will be eligible for an additional severance payment equal to the base pay the employee would have received if the employee had remained employed through the end of the notice period designated by the Company.

D. Accrued Rights

You will be entitled to the following payments and benefits for accrued compensation rights at the time of a separation from service, in addition to all other rights provided under the Plan: (i) payment of any accrued but unpaid Base Salary through the date of termination; (ii) payment of any accrued but unpaid annual cash bonus for the most recently completed calendar year prior to the separation from service determined on the basis of the bonus earned under the terms of the applicable bonus plan through the date of termination; (iii) payment of the accrued but unpaid annual cash bonus for the year in effect on the date of the separation from service, determined on the basis of the bonus earned under the terms of the applicable bonus plan through the date of termination or, if greater, the pro-rata amount of the target annual cash bonus for the period of such year through the date of separation from service; and (iv) all benefits and rights accrued under the employee benefit plans, fringe benefit programs and payroll practices of Elanco in accordance with their terms (including, without limitation, employee pension, employee welfare, incentive bonus and stock incentive plans). Payment of the amounts described in clauses (i) through (iii) shall be made to the Eligible Employee within thirty (30) calendar days after separation from service, or as otherwise required by law.

Section 6 – Form and Timing of Benefit Payment

Your severance benefit (other than outplacement services) will be paid to you in a lump sum payment as soon as practicable after your separation from service in accordance with the Company's normal payroll practices and procedures (less any required tax withholdings) during the period beginning on or about the forty-fifth (45th) calendar day and ending on the sixtieth (60th) calendar day following your separation from service with the Company , so long as you have timely executed a written Severance Agreement and Release provided by the Company and the Agreement's revocation period has expired. If the payment period described in the preceding sentence spans two calendar years, the severance benefit will be paid in the second calendar year. The method of payment will be determined by the Company in its sole discretion. If you die after becoming eligible to receive a severance benefit under the Plan but before you receive your full severance benefit, any remaining portion of your severance benefit (other than the provision of outplacement services) will be paid to your designated beneficiary or, if none, to your estate, in a single lump-sum payment.

Section 7 – Source of Funds for Payment of Benefits

All severance benefits provided under the Plan will be paid solely from the general assets of the Company.

No employee or any other person has any right against, right to, or security or other interest in any fund, account, or asset of the Company from which the payment of any severance benefit under the Plan may be made.

Section 8 – Expenses of Plan

All reasonable expenses for administering the Plan will be paid by the Company.

Section 9 - Right to Amend or Terminate Plan/Termination of Benefit Payments

While the Company expects and intends to continue the Plan, it reserves the right, in its sole discretion, to modify, amend, suspend or terminate the Plan, in whole or in part, at any time and for any reason, with or without notice, as it deems appropriate, by written action of Elanco's Board of Directors or most Senior Vice President for Human Resources.

You will cease to participate in the Plan and all benefits will cease upon the earliest of: (i) delivery of all severance benefits pursuant to the terms of the Plan, or (ii) the violation by you of any provisions of this Plan, or of any provisions contained in the Severance Agreement and Release executed by you. This paragraph is in addition to, and not in limitation of, Section 4 of this Plan.

In the event of the dissolution, merger, consolidation or reorganization of the Company, the Plan will terminate unless the Plan is continued by resolution of the board of directors of a successor to the Company.

Section 10 – Administration of the Plan

Elanco is the Plan Administrator for the Plan, as such term is defined in Section 3(16) (A) of ERISA. The Plan Administrator is charged with the interpretation, administration and operation of the Plan. The Plan Administrator may delegate to any person or persons, including a committee, separately or jointly, the authority and responsibility for the overall administration and operation of the Plan, and the authority and responsibility for the day-to-day operation of the Plan.

The Plan Administrator or its delegate, subject to the provisions of the Plan, may adopt such rules and regulations as it deems necessary to carry out the provisions of the Plan.

The Plan Administrator or its delegate shall have the power of full and final determination as to all issues concerning eligibility for benefits under the Plan and interpretation of the Plan and determination of

disputed facts, and such determinations with respect to an employee's rights or benefits will be entitled to the maximum deference permitted by law. The Plan Administrator will make claims determinations in accordance with the claim procedure set forth in the Elanco US Inc. Health and Welfare Plan, which terms are hereby incorporated by reference.

Section 11 – No Contract of Employment

The Plan may not be construed as creating any contract for continued services between Elanco and you, and nothing herein contained gives any individual the right to be retained as an employee.

Section 12 – Governing Law

The Plan will be construed as administered and enforced in accordance with ERISA and, where appropriate, the laws of the State of Indiana.

Section 13 – Section 409A Compliance

The benefits under this Plan are intended to fall within the short-term deferral and/or separation pay exceptions to section 409A of the Internal Revenue Code of 1986, as amended, and the regulations thereunder ("Section 409A") as described in Treasury Regulation Sections 1.409A-1(b)(4) and (9), respectively.

Notwithstanding any other provision of this Plan or other compensation and benefit plans of Elanco, any payments or benefits due under this Plan shall be paid, and this Plan shall be interpreted, in a manner intended to provide that any such payments or benefits shall not be subject to any tax or interest under Section 409A. Notwithstanding anything in this Plan to the contrary, if, at the time of your separation from service with Elanco, you are a "specified employee" (as such term is defined in Section 409A), and the deferral of the commencement of any payment otherwise payable hereunder as a result of such separation from service is necessary to prevent any accelerated or additional tax under Section 409A, then Elanco, as applicable, will defer the payment or commencement of any such payments (without any reduction in such payments ultimately paid or provided) until the date six (6) months following your separation from service (or the earliest date as is permitted under Section 409A), or such payment shall be restructured, to the extent possible, in a manner, as determined by the Plan Administrator, that does not cause such an accelerated or additional tax.

Section 14 – Repayment to Company

If any person receives any payment or benefit not authorized by this Plan, then Elanco, as applicable, shall be entitled to reimbursement of such payment or benefit from any person to whom, or for whom, such payment or benefit was paid.

Section 15 - Effect on At-Will Employment Relationship and on Other Benefits

Neither the Plan nor any of its provisions, alters the at-will employment relationship between you and the Company. In addition, there will not be drawn from the continued provision of any benefit under the Plan any implication of continued employment or of any continued right to accrue vacation days, paid holidays, paid sick days or other similar benefits normally associated with employment for a part of the period during or in respect of which a benefit is payable under the Plan.

Section 16 - Benefits as Consideration for Waivers, Covenants and Releases

The benefits provided under the Plan will constitute consideration for the release you are required to provide to the Company relating to prior employment by the Company. The benefits will also constitute consideration for any waiver by you, whether full or partial, and whether absolute or conditional, of any rights, claims, entitlement to relief or damages, or entitlement to seek imposition upon the Company of penalties, in connection with any contract, express or implied, or under any statute, regulation, rule, order,

or similar promulgation by a governmental or quasi-governmental entity. In addition, the benefits provided under the Plan will constitute consideration for any covenants or agreements contained in the Separation Agreement and Release executed by you in connection with this Plan.

Section 17 - Records, Reporting and Disclosure

The Plan Administrator shall keep all individual and group records relating to Eligible Employees and all other records necessary for the proper operation of the Plan. Such records shall be made available to each Eligible Employee for examination during business hours, except an Eligible Employee will examine only such records as pertain exclusively to the examining Eligible Employee and to the Plan. The Plan Administrator will prepare and will file as required by law or regulation all reports, forms, documents and other items required by ERISA, the Code, and every other relevant statute, each as amended, and all regulations thereunder (except Company, as payer of the benefits, will prepare and distribute to the proper recipients all forms relating to withholding of income or wage taxes, Social Security contributions, and other amounts which may be similarly reportable).

Section 18 – Miscellaneous

A. Nonalienation of Benefits

Except as provided in claims procedure set forth in the Elanco US Inc. Health and Welfare Plan, which terms are hereby incorporated by reference, none of the payments, benefits or rights of any Eligible Employee will be subject to any claim of any creditor, and to the fullest extent permitted by law, all such payments, benefits and rights will be free from attachment, garnishment, trustee's process, or any other legal or equitable process available to any creditor of such Eligible Employee. No Eligible Employee will have the right to alienate, anticipate, commute, pledge, encumber or assign any benefit or any of the payments which they may expect to receive, contingently or otherwise, under the Plan.

Notwithstanding, any benefit under the Plan will be subject to: (i) offset by any claims of the Company against the Eligible Employee; (ii) tax liens imposed thereon; and (c) the terms of any valid court order attaching thereto.

B. Severability of Provisions

If any provision of the Plan is held to be invalid or unenforceable, such invalidity or unenforceability will not affect any other provisions hereof, and the Plan will be construed and enforced as if such provisions had not been included.

C. Heirs, Assigns, and Personal Representatives

Subject to the **Nonalienation of Benefits** section above, the Plan will be binding upon the heirs, executors, administrators, successors and assigns of the parties, including each Eligible Employee, present and future.

D. Headings and Captions

The headings and captions herein are provided for reference and convenience only, will not be considered part of the Plan, and shall not be employed in the construction of the Plan.

E. Gender and Number

Except where clearly indicated otherwise by context, the masculine form of any word shall include the feminine and the neuter, the feminine form shall include the masculine and the neuter, the singular form shall include the plural, and the plural form shall include the singular.

F. Unfunded Plan

The Plan is not funded. No Eligible Employee will have any right to, or interest in, any assets of the Company which may be applied to the payment of a benefit hereunder.

G. Lost Payees

A Benefit under this Plan will be deemed forfeited if the Plan Administrator is unable to locate an Eligible Employee to whom a benefit is otherwise due.

ELANCO US INC.

By: _____

Its:

Date: _____

___, 2020

SUBSIDIARIES OF THE COMPANY
EXHIBIT 21.1

The following is a list of subsidiaries of the company as of December 31, 2020, omitting some subsidiaries which, considered in the aggregate, would not constitute a significant subsidiary.

Subsidiary Name	Jurisdiction
Aratana Therapeutics, Inc.	United States
ChemGen Corporation	Massachusetts
Dista Products Limited	United Kingdom
Elanco (Shanghai) Animal Health Co., Ltd.	China
Elanco (Taiwan) Animal Health Co. Ltd.	Taiwan
Elanco (Thailand) Ltd.	Thailand
Elanco AH Portugal, Unipessoal Lda	Portugal
Elanco Animal Health Holdings BV	Netherlands
Elanco Animal Health (Pty) Ltd.	South Africa
Elanco Animal Health UK Limited	United Kingdom
Elanco Animal Health Panama, S. De R.L.	Panama
Elanco Animal Health Korea, Co., Ltd.	Korea
Elanco Animal Vaccines Limited	United Kingdom
Elanco S.R.L.	Argentina
Elanco Australasia Pty. Ltd.	Australia
Elanco Australia Holding Pty Ltd	Australia
Elanco Bangladesh Limited	Bangladesh
Elanco Belgium BV	Belgium
Elanco Brazil Holdings Ltda	Brazil
Elanco Canada Limited	Canada
Elanco Centre de Recherche Sante Animale SA	Switzerland
Elanco Chile SpA	Chile
Elanco Colombia S.A.S.	Colombia
Elanco Denmark ApS	Denmark
Elanco Denmark ApS -- Norway Branch	Norway
Elanco Denmark ApS -- Sweden Branch	Sweden
Elanco Deutschland GmbH	Germany
Elanco Europe GmbH	Switzerland
Elanco Europe Ltd.	United Kingdom
Elanco Financing (Netherlands) B.V.	Netherlands
Elanco Financing S.A.	Switzerland
Elanco France S.A.S.	France
Elanco GmbH	Germany
Elanco Hayvan Sağlığı Limited Şirketi	Turkey
Elanco India Private Limited	India
Elanco Innovation and Alliance Centre India LLP	India
Elanco International, Inc.	Indiana
Elanco Ireland Limited	Ireland
Elanco Italia S.p.A.	Italy
Elanco Japan K.K .	Japan
Elanco Malaysia Sdn Bhd	Malaysia
Elanco Nederland B.V.	Netherlands
Elanco Netherlands Holding B.V.	Netherlands
Elanco New Zealand	New Zealand
Elanco Philippines Inc.	Philippines
Elanco Polska spółka z ograniczoną odpowiedzialnością	Poland

Elanco Solution Center Polska spółka z ograniczoną odpowiedzialnością	Poland
Elanco Rus Ltd.	Russia
Elanco Salud Animal S.A. de C.V.	Mexico
Elanco Saude Animal Ltda.	Brazil
Elanco Shanghai - Beijing Branch	China
Elanco Spain S.L. - Portugal Branch	Portugal
Elanco Spain, S.L.	Spain
Elanco Tiergesundheit AG -- Algeria Branch	Algeria
Elanco Tiergesundheit AG -- Austria Branch	Austria
Elanco Tiergesundheit AG -- Czech Branch	Czech
Elanco Tiergesundheit AG -- Egypt Representative Office	Egypt
Elanco Tiergesundheit AG -- Hungary Branch	Hungary
Elanco Tiergesundheit AG -- Lebanon Representative Office	Lebanon
Elanco Tiergesundheit AG -- Poland Branch	Poland
Elanco Tiergesundheit AG -- Saudi Arabia Branch	Saudi Arabia
Elanco Tiergesundheit AG – South Africa Branch	South Africa
Elanco Tiergesundheit AG -- Vietnam Representative Office	Vietnam
Elanco Tiergesundheit AG	Switzerland
Elanco Tiergesundheit AG --Tunisia Representative Office	Tunisia
Elanco UK AH Limited	United Kingdom
Elanco US Inc.	Delaware
Elanco Veterina SVN d.o.o.	Slovenia
Elanco Vietnam Company Limited	Vietnam
Immuno-Vet Services (Pty) Ltd.	South Africa
Immunovet Services Zambia Ltd.	South Africa
Ivy Animal Health, Inc.	Delaware
Lohmann Animal Health (Malaysia) Sdn. Bhd	Malaysia
Lohmann Animal Health Beteiligungs GmbH	Germany
Lohmann Animal Health GmbH	Germany
Lohmann Animal Health International Inc.	Maine
Lohmann Animal Health Phils. Corp.	Philippines
Lohmann Animal Health S. A. (Pty) Ltd.	South Africa
Lohmann Asia Holding Co. Ltd.	Thailand
Prevtec do Brasil	Brazil
Prevtec Microbia GmbH	Germany
Prevtec Microbia HK Ltd.	China
Pt. Elanco Animal Health Indonesia	Indonesia
Vericore Limited	United Kingdom
Vet Therapeutics, Inc.	United States
Elanco Hong Kong Limited	Hong Kong
The Representative Office of Elanco Vietnam Company Limited in Hanoi City	Vietnam
The Representative Office of Elanco Vietnam Company Limited in Dong Nai	Vietnam
Elanco (Sichuan) Animal Health Co., Ltd.	China
EIO Insurance Company, Inc.	United States
Bayer HealthCare Animal Health Inc. (Delaware)	United States
Elanco Austria GmbH	Austria
Bayer Animal Health GmbH	Germany
Elanco Hungary Kft.	Hungary
Elanco Global Holdings BV	Netherlands

Elanco Poland	Poland
KVP Pharma+Veterinar Produkte GmbH	Germany

EXHIBIT 23.1

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the Registration Statements (Form S-3 ASR No. 333-235991 and Form S-8 333-227447) of Elanco Animal Health Incorporated and in the related Prospectus of our reports dated March 1, 2021, with respect to the consolidated and combined financial statements of Elanco Animal Health Incorporated, and the effectiveness of internal control over financial reporting of Elanco Animal Health Incorporated, included in this Annual Report (Form 10-K) for the year ended December 31, 2020.

/s/ Ernst & Young LLP

Indianapolis, Indiana

March 1, 2021

EXHIBIT 31.1

CERTIFICATIONS

I, Jeffrey N. Simmons, certify that:

1. I have reviewed this report on Form 10-K of Elanco Animal Health Incorporated;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

c) Evaluated the effectiveness of the registrant’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

d) Disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and

5. The registrant’s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant’s auditors and the audit committee of the registrant’s Board of Directors (or persons performing the equivalent functions):

a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant’s ability to record, process, summarize, and report financial information; and

b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant’s internal control over financial reporting.

Date: March 1, 2021

By: /s/ Jeffrey N. Simmons
Jeffrey N. Simmons
President and Chief Executive Officer

EXHIBIT 31.2

CERTIFICATIONS

I, Todd S. Young, certify that:

1. I have reviewed this report on Form 10-K of Elanco Animal Health Incorporated;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

c) Evaluated the effectiveness of the registrant’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

d) Disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and

5. The registrant’s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant’s auditors and the audit committee of the registrant’s Board of Directors (or persons performing the equivalent functions):

a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant’s ability to record, process, summarize, and report financial information; and

b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant’s internal control over financial reporting.

Date: March 1, 2021

By: /s/ Todd S. Young
Todd S. Young
Executive Vice President and Chief Financial Officer

EXHIBIT 32

Pursuant to section 906 of the Sarbanes-Oxley Act of 2002 (subsections (a) and (b) of section 1350, chapter 63 of title 18, United States Code), each of the undersigned officers of Elanco Animal Health Incorporated, an Indiana corporation (the "Company"), does hereby certify that, to the best of their knowledge:

The Annual Report on Form 10-K for the year ended December 31, 2020 (the "Form 10-K") of the Company fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934 and information contained in the Form 10-K fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 1, 2021

/s/Jeffrey N. Simmons
Jeffrey N. Simmons
President and Chief Executive Officer

Date: March 1, 2021

/s/Todd S. Young
Todd S. Young
Executive Vice President and Chief Financial Officer