Zoetis Inc.
Form 10-K
February 15, 2018
Table of Contents

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
FORM 10-K
(Mark One)

x ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2017
or
o TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from __________ to __________

Commission File Number: 001-35797
Zoetis Inc.
(Exact name of registrant as specified in its charter)

Delaware	46-0696167
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
10 Sylvan Way, Parsippany, New Jersey	07054
(Address of principal executive offices)	(Zip Code)

(973) 822-7000
(Registrant's telephone number, including area code)
Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Name of each exchange on which registered
Common Stock, $0.01 par value per share	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 Securities Act. Yes x 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 x

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 x No ¨

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Website, if any, every Interactive Data File required to be submitted and posted 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 and post such files). Yes x No ¨

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of the registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ¨

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

Large accelerated filer x	Non-accelerated filer ¨

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 is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ¨ No x

The aggregate market value of the voting stock held by nonaffiliates of the registrant as of June 30, 2017, the last business day of the registrant's most recently completed second fiscal quarter, was $30,545 million. The registrant has no non-voting common stock.

The number of shares outstanding of the registrant's common stock as of February 9, 2018 was 485,253,713 shares.

DOCUMENTS INCORPORATED BY REFERENCE:

Portions of the registrant’s Proxy Statement for the 2018 Annual Meeting of Shareholders (hereinafter referred to as the “2018 Proxy Statement”) are incorporated into Part III of this Form 10-K.

Table of Contents

TABLE OF CONTENTS

Table of Contents

PART I

Item 1. Business.

Overview

Zoetis Inc. is a global leader in the discovery, development, manufacture and commercialization of animal health medicines and vaccines, with a focus on both livestock and companion animals. We have a diversified business, commercializing products across eight core species: cattle, swine, poultry, fish and sheep (collectively, livestock) and dogs, cats and horses (collectively, companion animals); and within five major product categories: anti-infectives, vaccines, parasiticides, medicated feed additives and other pharmaceuticals. For more than 60 years, we have been committed to enhancing the health of animals and bringing solutions to our customers who raise and care for them.

We were incorporated in Delaware in July 2012 and prior to that the company was a business unit of Pfizer Inc. (Pfizer). The address of our principal executive offices is 10 Sylvan Way, Parsippany, New Jersey 07054. Unless the context requires otherwise, references to “Zoetis,” “the company,” “we,” “us” or “our” in this Annual Report on Form 10-K for the fiscal year ended December 31, 2017 (2017 Annual Report) refer to Zoetis Inc., a Delaware corporation, and its subsidiaries. In addition, unless the context requires otherwise, references to “Pfizer” in this 2017 Annual Report refer to Pfizer Inc., a Delaware corporation, and its subsidiaries.

Operating Segments

The animal health medicines and vaccines market is characterized by meaningful differences in customer needs across different regions. This is due to a variety of factors, including:

- economic differences, such as standards of living in developed markets as compared to emerging markets;
- cultural differences, such as dietary preferences for different animal proteins, pet ownership preferences and pet care standards;
- epidemiological differences, such as the prevalence of certain bacterial and viral strains and disease dynamics;
- treatment differences, such as utilization of different types of medicines and vaccines, as well as the pace of adoption of new technologies;
- environmental differences, such as seasonality, climate and the availability of arable land and fresh water; and
- regulatory differences, such as standards for product approval and manufacturing.

As a result of these differences, among other things, we organize and operate our business in two segments:

- United States with revenue of $2,620 million, or 49% of total revenue for the year ended December 31, 2017; and
- International with revenue of $2,643 million, or 50% of total revenue for the year ended December 31, 2017.

Within each of these operating segments, we offer a diversified product portfolio for both livestock and companion animal customers so that we can capitalize on local trends and customer needs.

In addition, our Client Supply Services (CSS) organization provides contract manufacturing services to third parties and represented approximately 1% of our total revenue for the year ended December 31, 2017.

Table of Contents

Our 2017 revenue for the United States and key international markets, together with the percentage of revenue attributable to livestock and companion animal products in those markets, is as follows:

(MILLIONS OF DOLLARS)	Revenue	Livestock	Companion Animal
United States	$2,620	47%	53%
Australia	$176	62%	38%
Brazil	$300	80%	20%
Canada	$184	59%	41%
China	$174	67%	33%
France	$121	60%	40%
Germany	$137	50%	50%
Italy	$89	49%	51%
Japan	$138	46%	54%
Mexico	$86	84%	16%
Spain	$93	71%	29%
United Kingdom	$149	43%	57%
Other Developed	$339	66%	34%
Other Emerging	$657	83%	17%

For additional information regarding our performance in each of these operating segments and the impact of foreign exchange rates, see Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations and Item 8. Financial Statements and Supplementary Data:
Notes to Consolidated Financial Statements— Note 18A. Segment, Geographic and Other Revenue Information—Segment Information. Our 2017 reported revenue for each segment, by species, is as follows:

Table of Contents

Products

Over the course of our history, we have focused on developing a diverse portfolio of animal health products, including medicines and vaccines, complemented by biodevices, diagnostics, and genetics. We refer to a single product in all brands, or its dosage forms for all species, as a product line. We have approximately 300 comprehensive product lines, including products for both livestock and companion animals across each of our major product categories.

Our livestock products primarily help prevent or treat diseases and conditions to enable the cost-effective production of safe, high-quality animal protein. Human population growth and increasing standards of living are important long-term growth drivers for our livestock products in three major ways. First, population growth and increasing standards of living drive increased demand for improved nutrition, particularly animal protein. Second, population growth leads to increased natural resource constraints driving a need for enhanced productivity. Finally, as standards of living improve, there is increased focus on food quality and safety. Livestock products represented approximately 57% of our revenue for the year ended December 31, 2017.

Our companion animal products help extend and improve the quality of life for pets; increase convenience and compliance for pet owners; and help veterinarians improve the quality of their care and the efficiency of their businesses. Growth in the companion animal medicines and vaccines sector is driven by economic development, related increases in disposable income and increases in pet ownership and spending on pet care. Companion animals are also living longer, receiving increased medical treatment and benefiting from advances in animal health medicines and vaccines. Companion animal products represented approximately 42% of our revenue for the year ended December 31, 2017.

In addition, our CSS organization provides contract manufacturing services to third parties and represented 1% of our total revenue for the year ended December 31, 2017.

Our major product categories are:

- anti-infectives: products that prevent, kill or slow the growth of bacteria, fungi or protozoa;
- vaccines: biological preparations that help prevent diseases of the respiratory, gastrointestinal and reproductive tracts or induce a specific immune response;
- parasiticides: products that prevent or eliminate external and internal parasites such as fleas, ticks and worms;
- medicated feed additives: products added to animal feed that provide medicines to livestock; and
- other pharmaceutical products: allergy and dermatology, pain and sedation, antiemetic, reproductive, and oncology products.

Our remaining revenue is derived from other product categories, such as nutritionals and agribusiness, as well as products and services in complementary areas, including biodevices, diagnostics and genetics.

As part of our growth strategy, through our research and development (R&D) group, we focus on the discovery and development of new chemical and biological entities, as well as product lifecycle innovation. Historically, a substantial portion of our products and revenue has been the result of product lifecycle innovation where we actively work to broaden the value of existing products by developing claims in additional species, more convenient formulations and combinations, and by expanding usage into more countries. For example, the first product in our ceftiofur line was an anti-infective approved for treating bovine respiratory disease (BRD) in cattle that was administered via intramuscular injection. Through follow-on studies and reformulations, we have expanded the product line into additional cattle claims and administration routes, as well as other species and regions. The ceftiofur product line currently includes the brands Excede®, Excenel®, Naxcel® and Spectramast®.

Examples of our first-in-class and/or best-in-class products that we have launched in recent years and products that we believe may represent platforms for future product lifecycle innovation include (listed alphabetically):

- Apoquel®, the first Janus kinase inhibitor for use in veterinary medicine, was approved for the control of pruritus associated with allergic dermatitis and the control of atopic dermatitis in dogs at least 12 months of age. Since January 2014, we launched Apoquel in all key markets including the United States, Europe, Japan, Brazil, and Australia;
- Cerenia®, the first and only product on the market to prevent vomiting due to motion sickness in dogs, was first launched in Europe in 2006, followed by the United States in 2007; it was approved to prevent vomiting in cats in 2012 in the United States and European countries. In January 2016, it was approved in the United States for intravenous administration in dogs and cats four months of age and older and for the prevention of vomiting caused

by emetogenic or chemotherapeutic agents in dogs four months of age or older;

- Convenia®, the first single-injection anti-infective for common bacterial skin infections in cats and dogs, launched in 2006;
- Cytopoint®, the first canine monoclonal antibody to help reduce the clinical signs such as itching of atopic dermatitis in dogs of any age, licensed in the United States in 2016 and Canada, the European Union and New Zealand in 2017. An injection given once every four to eight weeks, Cytopoint neutralizes interleukin - 31, a protein that has been demonstrated to trigger itching in dogs.
- Fostera® PCV MH was introduced in November 2013 in the United States and approved in the European Union in 2015 and Australia in 2017. It was developed to help protect pigs from porcine circovirus-associated disease (PCVAD) and enzootic pneumonia caused by M. hyopneumoniae (M. hyo). The one-bottle formulation of Fostera PCV MH allows the convenience of a one-dose program or the flexibility of a two-dose program. The Fostera franchise also includes Fostera/Suvaxyn® PRRS, which was approved in the United States in 2015 and in Taiwan, Vietnam and European Union countries in 2017. This vaccine offers protection against both the respiratory and reproductive forms of disease caused by porcine reproductive and respiratory syndrome (PRRS) virus.
- Improvac®/Improvest®/Vivax®, a protein product that works like an immunization, is currently the only product that provides a safe and effective alternative to physical castration to manage unpleasant aromas that can occur when cooking pork; launched in Australia and New Zealand in 2004, in Brazil in 2007, in certain European countries beginning in 2008, and in the United States in 2011;

Table of Contents

- Inforce®3, the first vaccine for cattle that prevents respiratory disease caused by bovine respiratory syncytial virus (BRSV) while also aiding in the prevention of infectious bovine rhinotracheitis (IBR) and parainfluenza 3 (PI 3), launched in 2010;
- Simparica® (sarolaner) Chewables, a monthly chewable tablet for dogs to control fleas and ticks, was approved in the European Union and New Zealand in 2015, the United States, Canada, Australia, and Brazil (Simparic) in 2016, and Japan along with multiple additional European, Latin American and Asia Pacific markets in 2017. Building on this franchise, in 2017, Zoetis received European Commission approval for Stronghold® Plus (selamectin/sarolaner), a topical combination product that treats ticks, fleas, ear mites, lice and gastrointestinal worms and prevents heartworm disease in cats;
- Vanguard® is a market leading vaccine line for dogs intended to help prevent a range of diseases. In recent years, Zoetis has added new and innovative enhancements to its Vanguard line with Vanguard crLyme, Vanguard Rapid Resp Intranasal, Vanguard B Oral, and Vanguard CIV H3N2/H3N8.

We pursue the development of new vaccines for emerging infectious diseases, with an operating philosophy of "first to know and fast to market." Examples of the successful execution of this strategy include the first equine vaccine for West Nile virus in the United States and European Union; the first swine vaccine for pandemic H1N1 influenza virus in the United States; the first fully licensed vaccine to help reduce disease caused by the Georgia 08 variant of infectious bronchitis virus (IBV) in poultry; a conditionally licensed vaccine to help fight porcine epidemic diarrhea virus (PEDv) in the United States, and the first conditionally licensed vaccine to help prevent the H3N2 type of canine influenza that emerged in the United States. Examples also include the first and only vaccine to aid in the prevention of clinical symptoms of the disease caused by Hendra virus in horses, a serious zoonotic disease identified in Australia that can be fatal to horses and people; a conditionally licensed vaccine in the United States for use in poultry as an aid in the prevention of avian influenza virus H5N1; the first centrally-authorized vaccine in the European Union to reduce viremia associated with Schmallenberg virus infection in cattle and sheep; and the first live recombinant marker vaccine in the European Union and United States to prevent mortality and reduce infection caused by Classical Swine Fever in pigs. Additionally, the Pharmaq business of Zoetis is the global leader in vaccines and innovation for health products in aquaculture. In 2017, Pharmaq added to its leading Alpha Ject® vaccine line with Alpha Ject® micro 1 PD vaccine, an efficacious and safe monovalent vaccine against Pancreas Disease (PD), the most economically damaging viral disease for the Norwegian, Scottish and Irish salmon farming industries, proven to be suitable for co-injection with other Pharmaq vaccines.

Our diverse portfolio also includes diagnostics products such as the Witness® and Serelisa® lines of immunodiagnostic kits. In 2017, we expanded both product lines with the launch of Witness Lepto (canine) in the United States and the launch of Witness FeLV FIV Heartworm (feline) globally. We also expanded our Serelisa® laboratory kit line with Serelisa PEDv (swine) for porcine epidemic diarrhea virus and Serelisa BVDv (cattle), which provides additional disease detection capabilities for bovine viral diarrhea virus.

In 2017, our top two selling products, Apoquel® and the ceftiofur line, each contributed approximately 7% of our revenue, and combined with our next two top selling products, Draxxin® and Revolution®, these four contributed approximately 25% of our revenue. Our top ten product lines contributed 39% of our revenue.

Table of Contents

Our product lines and products that represented approximately 1% or more of our revenue in 2017, which comprise 57% of our total revenue, are as follows (listed alphabetically):
Livestock products

Product line / product	Description	Primary species
Anti-infectives		
Ceftiofur injectable line	Broad-spectrum cephalosporin antibiotic active against gram-positive and gram-negative bacteria, including ß-lactamase-producing strains, with some formulations producing a single course of therapy in one injection	Cattle, sheep, swine
Draxxin®	Single-dose low-volume antibiotic for the treatment and prevention of bovine and swine respiratory disease, infectious bovine keratoconjunctivitis and bovine foot rot	Cattle, swine, sheep
Spectramast®	Treatment of subclinical or clinical mastitis in dry or lactating dairy cattle, delivered via intramammary infusion; same active ingredient as the ceftiofur line	Cattle
Terramycin® line	Antibiotic for the treatment of susceptible infections	Cattle, poultry, sheep, swine
Vaccines		
Bovi-Shield® line	Aids in preventing diseases, including infectious bovine rhinotracheitis (IBR), bovine viral diarrhea (BVD) Types 1 and 2, parainfluenza 3 (PI 3), bovine respiratory syncytial virus (BRSV), and leptospirosis caused by Leptospira borgpetersenii, L.canicola, L grippotyphosa, L. hardjo, L. icterohaemorrhagiae, and L. pamona, depending on formulation	Cattle
Improvac / Improvest / Vivax	Reduces boar taint, as an alternative to surgical castration	Swine
Rispoval® line	Aids in preventing three key viruses involved in cattle pneumonia-BRSV, PI 3 virus and BVD-viruses as well as other respiratory diseases, depending on formulation	Cattle
Suvaxyn® / Fostera®	Aids in preventing or controlling disease associated with major pathogens in swine such as porcine circovirus type 2 (PCV2), porcine reproductive and respiratory syndrome virus (PRRSv) and Mycoplasma hyopneumoniae, depending on formulation	Swine
Parasiticides		
Cydectin®	Injectable or pour-on endectocide to treat and control internal and external cattle parasites, including gastrointestinal roundworms, lungworms, cattle grubs, mites and lice	Cattle, sheep
Dectomax®	Injectable or pour-on endectocide, characterized by extended duration of activity, for the treatment and control of internal and external parasite infections	Cattle, swine
Medicated Feed Additives		
Aureomycin®	Provides livestock producers control, treatment and convenience against a wide range of respiratory, enteric and reproductive diseases	Cattle, poultry, sheep, swine
BMD®		Poultry, swine

	Aids in preventing and controlling enteritis; and increases rate of weight gain and improves feed efficiency in poultry and swine	
Lasalocid line	Controls coccidiosis in poultry (Avatec®) and cattle (Bovatec®) and for increased rate of weight gain and improved feed efficiency in cattle	Poultry, cattle
Lincomycin line	Controls necrotic enteritis; treatment of dysentery (bloody scours), control of ileitis and treatment/reduction in severity of mycoplasmal pneumonia	Swine, poultry
Other		
Embrex® devices	Devices for enhancing hatchery operations' efficiency through in ovo detection and vaccination	Poultry
Lutalyse®	For estrus control or in the induction of parturition or abortion	Cattle, swine

Table of Contents

Companion animal products

Product line / product	Description	Primary species
Anti-infectives		
Clavamox® / Synulox®	A broad-spectrum antibiotic and the first and only potentiated penicillin approved for use in dogs and cats	Cats, dogs
Convenia®	Anti-infective for the treatment of common bacterial skin infections that provides a course of treatment in a single injection	Cats, dogs
Vaccines		
Vanguard® L4 (4-way Lepto)	Compatible with the Vanguard line and helps protect against leptospirosis caused by Leptospira canicola, L. grippotyphosa, L. icterohaemorrhagiae and L. pomona	Dogs
Vanguard® line	Aids in preventing canine distemper caused by canine distemper virus; infectious canine hepatitis caused by canine adenovirus type 1; respiratory disease caused by canine adenovirus type 2; canine parainfluenza caused by canine parainfluenza virus; canine parvoviral enteritis caused by canine parvovirus; Lyme disease and subclinical arthritis associated with Borrelia burgdorferi, the causative agent of Lyme disease; and Rapid Resp - a group of three vaccines combating infections in dogs caused by Bordetella bronchiseptica, canine parainfluenza and canine adenovirus; canine influenza vaccines; and an oral vaccine for Bordatella bronchiseptica	Dogs
Parasiticides		
ProHeart®	Prevents heartworm infestation; also for treatment of existing larval and adult hookworm infections	Dogs
Revolution® / Stronghold®	An antiparasitic for protection against fleas, heartworm disease and ear mites in cats and dogs; sarcoptic mites and American dog tick in dogs and roundworms and hookworms for cats	Cats, dogs
Simparica®	A monthly chewable tablet for dogs to control fleas and ticks	Dogs
Other		
Apoquel®	A selective inhibitor of the Janus Kinase 1 enzyme that controls pruritus associated with allergic dermatitis and control of atopic dermatitis in dogs at least 12 months of age	Dogs
Cerenia®	A medication that prevents and treats acute vomiting in dogs, treats acute vomiting in cats and prevents vomiting due to motion sickness in dogs	Cats, dogs
Cytopoint®	An injectable to help reduce the clinical signs such as itching of atopic dermatitis in dogs of any age	Dogs
Rimadyl®	For the relief of pain and inflammation associated with osteoarthritis and for the control of postoperative pain associated with soft tissue and orthopedic surgeries	Dogs

International Operations

We directly market our products in approximately 45 countries across North America, Europe, Africa, Asia, Australia and South America, and our products are sold in more than 100 countries. Operations outside the United States accounted for 50% of our total revenue for the year ended December 31, 2017. Through our efforts to establish an early and direct presence in many emerging markets, such as Brazil, China and Mexico, emerging markets contributed 23% of our revenue for the year ended December 31, 2017.

Our international businesses are subject, in varying degrees, to a number of risks inherent in carrying on business in other countries. These include, among other things, currency fluctuations, capital and exchange control regulations, expropriation and other restrictive government actions. See Item 1A. Risk Factors— Risks related to our international operations.

Sales and Marketing

Our sales organization includes sales representatives and technical and veterinary operations 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.

Our sales representatives visit our customers, including veterinarians and livestock producers, to provide information and to promote and sell our products and services. Our technical and veterinary operations specialists, who generally have advanced veterinary medicine degrees, provide scientific consulting focused on disease management and herd management, training and education on diverse topics, including responsible product use. These direct relationships with customers allow us to understand the needs of our customers. Additionally, our sales representatives and technical and veterinary operations specialists partner with customers to provide training and support in areas of disease awareness and treatment protocols, including through the use of our products. As a result of these relationships, our sales and consulting visits are typically longer, more meaningful and provide us with better access to customer decision makers as compared to human health. As of December 31, 2017, our sales organization consisted of approximately 2,900 employees.

Our livestock and companion animal products are primarily available by prescription through a veterinarian. On a more limited basis, in certain markets, we sell certain products through local agricultural and farming retail outlets, pharmacies and pet stores. We also market our products by advertising to veterinarians, livestock producers and pet owners.

Table of Contents

Customers

We sell our livestock products directly to a diverse set of livestock producers, including beef and dairy farmers as well as pork and poultry operations, and to veterinarians, third-party veterinary distributors and retail outlets that then typically sell the products to livestock producers. We primarily sell our companion animal products to veterinarians or to third-party veterinary distributors that typically then sell our products to veterinarians, and in each case veterinarians then typically sell our products to pet owners. Our two largest customers, both distributors, represented approximately 14% and 7%, respectively, of our revenue for the year ended December 31, 2017, and no other customer represented more than 6% of our revenue for the same period.

Research and Development

Our research and development (R&D) operations are comprised of a dedicated veterinary medicine R&D organization, research alliances and other operations focused on the development, registration and regulatory maintenance of our products. We incurred R&D expense of $382 million in 2017, $376 million in 2016 and $364 million in 2015.

Our R&D efforts are comprised of more than 200 programs and reflect our commitment to develop better solutions. We create new insights for preventing and treating disease, and maximizing healthy performance, that result in the development of new platforms of knowledge which become the basis for continuous innovation. Leveraging internal discoveries, complemented by diverse external research collaborations, results in the delivery of novel vaccine, pharmaceutical and biopharmaceutical products to help our customers face their toughest challenges. While the development of new chemical and biological entities through new product R&D plays a critical role in our growth strategies, a significant share of our R&D investment (including regulatory functions) is focused on product lifecycle innovation. A commitment to continuous innovation, based on customer need, ensures we actively work to broaden the value of existing products by developing claims in additional species, more convenient formulations and combinations, and by expanding usage into more countries. We also create opportunities to optimize solutions through our extensive capabilities in diagnostics and genetics research, ensuring we can help our customers predict, prevent, detect and treat a variety of conditions.

We prioritize our R&D spending on an annual basis with the goal of aligning our research and business objectives, and do not disaggregate our R&D operations by research stage or by therapeutic area for purposes of managing our business. We make our strategic investments in R&D based on four criteria: strategic fit and importance to our current portfolio; technical feasibility of development and manufacture; return on investment; and the needs of customers and the market. A centralized portfolio management function links development plans with financial systems to build a comprehensive view of the status of project progression and spend. This view facilitates our ability to set targets for project timing and goals for investment efficiency. The allocation of our R&D investment between product lifecycle innovation and new product development, in addition to our ability to leverage the discoveries of our existing R&D and other industries, supports a cost-effective, efficient, sustainable and relatively predictable R&D process.

We regularly enter into agreements with external parties that enable us to collaborate on research programs or gain access to substrates and technologies. Some of our external partnerships involve funding from a non-governmental organization or a government grant. We are generally responsible for providing technical direction and supplemental expertise for, as well as investment in, such external partnerships. Depending on the nature of the agreement, we may act as the commercialization partner for discoveries that originate during the period of collaborative research, or we may own or have exclusive rights to any intellectual property that enables the development of proprietary products or models.

As of December 31, 2017, we employed approximately 1,000 employees in our global R&D operations. Our R&D headquarters is located in Kalamazoo, Michigan. We have R&D operations co-located with manufacturing sites in Louvain-la-Neuve, Belgium; Campinas, Brazil; Olot, Spain; Kalamazoo, Michigan; and Lincoln, Nebraska, United States. We co-locate R&D operations with manufacturing sites to facilitate the efficient transfer of production processes from our laboratories to manufacturing. In addition, we maintain R&D operations in Sydney, Australia; Zaventem, Belgium; São Paulo, Brazil; Beijing, China; Navi Mumbai, India; and Durham, North Carolina, United States. We also maintain R&D operations in Farum, Denmark, Suzhou, China; Thanh Binh, Vietnam; Hong Ngu, Vietnam; and Oslo, Norway, related to our acquisitions of Pharmaq and Scandinavian Micro Biodevices. Each site is designed to meet the regulatory requirements for working with chemical or infectious disease agents.

Manufacturing and Supply Chain

Our products are manufactured at both sites operated by us and sites operated by third-party contract manufacturing organizations, which we refer to as CMOs. We have a global manufacturing network of 25 sites.

Table of Contents

Our global manufacturing network is comprised of the following sites:

Site	Location	Site	Location
Campinas	Brazil	Melbourne	Australia
Catania	Italy	Olot	Spain
Charles City	Iowa, U.S.	Oslo	Norway
Chicago Heights	Illinois, U.S.	Overhalla	Norway
Durham	North Carolina, U.S.	Rathdrum[(b)]	Ireland
Eagle Grove	Iowa, U.S.	Salisbury	Maryland, U.S.
Farum	Denmark	San Diego	California, U.S.
Jilin[(a)]	China	Suzhou	China
Kalamazoo	Michigan, U.S.	Tullamore[(c)]	Ireland
Lincoln	Nebraska, U.S.	Wellington	New Zealand
London	Ontario, Canada	White Hall	Illinois, U.S.
Louvain-la-Neuve	Belgium	Willow Island	West Virginia, U.S.
Medolla	Italy		

(a) In September 2017, Zoetis acquired the remaining noncontrolling interest in our China joint venture, Jilin Zoetis Guoyan Animal Health Company, Ltd.

(b) In September 2017, Zoetis completed the purchase of a manufacturing facility in Rathdrum, Ireland. We are investing in this facility and expect it to be ready for commercial production in 2020.

(c) In July 2017, Zoetis acquired a biologic therapeutics company in Ireland. We will be investing in this facility to prepare it for commercial production.

We own all of these sites, with the exception of our facilities in Medolla (Italy), Melbourne (Australia), San Diego, California (U.S.) and Tullamore (Ireland), which are leased sites.

In addition to our global manufacturing network and our CMOs, Pfizer continues to manufacture products for us at four Pfizer sites pursuant to a master manufacturing and supply agreement.

Our global manufacturing and supply chain is supported by a network of CMOs. As of December 31, 2017, this network was comprised of approximately 180 CMOs, including those centrally managed as well as local 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 niche products and technologies; (iii) capacity; and (iv) financial efficiency analyses. Our regional and global manufacturing teams seek to ensure that all of 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, including Six Sigma and Lean capabilities, which are processes intended to improve manufacturing efficiency. We have strong globally managed and coordinated quality control and quality assurance programs in place at our global manufacturing network sites, and we regularly inspect and audit our global manufacturing network and CMO sites. As a result of a review of our global manufacturing and supply network, we have announced plans to exit or sell certain sites and have exited eight manufacturing sites since 2015, including Yantai (China) and Guarulhos (Brazil) in 2017. See Operational Efficiency Program and Supply Network Strategy.

Competition

Although our business is the largest based on revenue in the animal health medicines and vaccines industry, we face competition in the regions in which we compete. Principal drivers of competition vary depending on the particular region, species, product category and individual product, and include new product development, quality, price, service and promotion to veterinary professionals, pet owners and livestock producers.

Our primary competitors include animal health medicines and vaccines companies such as Boehringer Ingelheim Animal Health Inc., the animal health division of Boehringer Ingelheim GmbH, which acquired Merial, former animal health division of Sanofi S.A., in January 2017; Merck Animal Health, the animal health division of Merck & Co., Inc.; Elanco, the animal health division of Eli Lilly and Company; and Bayer Animal Health, the animal health division of Bayer AG. There are also several new start-up companies working in the animal health area. In addition, we compete with hundreds of other producers of animal health products throughout the world.

The level of competition from generic products varies from market to market. For example, the level of generic competition is higher in Europe and certain emerging markets than in the United States. Unlike in the human health market, there is no large, well-capitalized company focused on generic animal health products that exists as a global competitor in the industry. The reasons for this include the relatively smaller average market size of each product opportunity, the importance of direct distribution and education to veterinarians and livestock producers and the primarily self-pay nature of the business. In addition, companion animal health products are often directly prescribed and dispensed by veterinarians.

The importance of quality and safety concerns to pet owners, veterinarians and livestock producers also contributes to animal health brand loyalty. As a result, we believe that significant brand loyalty to products often continues after the loss of patent-based and regulatory exclusivity.

Table of Contents

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 enjoys the protection of approximately 5,200 granted patents and 1,700 pending patent applications, filed in more than 60 countries, with a focus on our major markets, including Australia, Brazil, Canada, China, Europe, Japan and the United States, as well as other countries with strong patent systems. Many of the patents and patent applications in our portfolio are the result of our in-house research and development, while other patents and patent applications in our portfolio were wholly or partially developed by third parties and are licensed to Zoetis. 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. The active ingredient of Draxxin, tulathromycin, is covered by both compound and formulation patents in the United States, Europe, Canada, Australia and other key markets, with terms that expire between May 2019 and January 2021 in the United States, between November 2018 and November 2020 in Europe, and between May 2018 and November 2020 in Canada and Australia. Several patents covering the ceftiofur antibiotic product line (Excede) began expiring in the United States in 2015. However, various formulation and use patents relevant to the product line extend through to 2024. The compound patent for selamectin, the active ingredient in our parasiticide Revolution, expired in 2014. Again, we have process and formulation patents covering this product which expire in important markets in 2018 and 2019, respectively. The patent for the active ingredient of Convenia has expired, however, there are formulation patents relevant to the product line which expire between November 2022 and October 2023. The patent for the active ingredient of Cerenia has expired, however, there are formulation patents relevant to the product line which expire between May 2020 and January 2027. The patent relating to the formulation of Orbeseal expired in December 2017. Zoetis typically enforces all of its patents.

Additionally, many of our vaccine products are based on proprietary master seeds and proprietary or patented adjuvant formulations. We actively seek to protect our proprietary information, including our trade secrets and proprietary know-how, 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.

As a result of our separation from Pfizer, where necessary Pfizer has licensed to us the right to use certain intellectual property rights in the animal health field. We license to Pfizer the right to use certain of our trademarks and substantially all of our other intellectual property rights in the human health field and all other fields outside of animal health. In addition, Pfizer granted us a perpetual license to use certain of Pfizer's product name trademarks.

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 or service. We currently maintain more than 10,000 trademark applications and registrations in major regions, identifying goods and services dedicated to the care of livestock and companion animals.

Operational Efficiency Program and Supply Network Strategy

During 2015, we launched a comprehensive operational efficiency program, which was incremental to the previously announced supply network strategy. These initiatives have focused on reducing complexity in our product portfolios through the elimination of approximately 5,000 product stock keeping units (SKUs), changing our selling approach in certain markets, reducing our presence in certain countries, and planning to sell or exit 10 manufacturing sites over the long term. As of December 31, 2017, we divested or exited three U.S. manufacturing sites, four international manufacturing sites, and our 55 percent ownership share of a Taiwan joint venture, inclusive of its related manufacturing site. We are also continuing to optimize our resource allocation and efficiency by reducing resources associated with non-customer facing activities and operating more efficiently as a result of less internal complexity and more standardization of processes.

As part of these initiatives, we planned to reduce certain positions through divestitures, normal attrition and involuntary terminations by approximately 2,000 to 2,500, subject to consultations with works councils and unions in certain countries. In 2016, the operations of the Guarulhos, Brazil manufacturing site, including approximately 300 employees, were transferred to us from Pfizer, which increased our range of planned reduction in certain positions to 2,300 to 2,800. Including divestitures, as of December 31, 2017, approximately 2,600 positions have been eliminated. The comprehensive operational efficiency program is substantially complete, however in the fourth quarter of 2017, we expanded the supply network strategy initiative which increases our planned reductions in certain positions by 40. We expect these additional reductions related to our supply network strategy to take place over the next twelve months, and the remainder of the reductions from the initial plan to take place through divestitures over the next several years.

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 animal health authority is separate from those governing human medicinal products.

United States

United States Food and Drug Administration (FDA). The regulatory body that is responsible for the regulation of animal health pharmaceuticals in the United States is the Center for Veterinary Medicine (CVM), housed within the FDA. All manufacturers of animal health pharmaceuticals must show their products to be safe, effective and produced by a consistent method of manufacture as defined under the Federal Food, Drug and Cosmetic

Table of Contents

Act. The FDA's basis for approving a 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 Surveillance and Compliance group. Reports of product quality defects, adverse events or unexpected results are produced in accordance with the law. Additionally, we are required to submit all new information for a product, regardless of the source.

United States Department of Agriculture (USDA). The regulatory body in the United States for veterinary vaccines is the USDA. The USDA's Center for Veterinary Biologics is responsible for the regulation of animal health vaccines, including immunotherapeutics. 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 produced in accordance with the agency requirements.

Environmental Protection Agency (EPA). The main regulatory body in the United States for veterinary pesticides is the EPA. The EPA's Office of Pesticide Programs is responsible for the regulation of pesticide products applied to animals. 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 Federal Insecticide, Fungicide, and Rodenticide Act. Within the United States, pesticide products that are approved by the EPA must also be approved by individual state pesticide authorities before distribution in that state. Post-approval monitoring of products is required, with reports provided to the EPA and some state regulatory agencies.

In addition, the U.S. Foreign Corrupt Practices Act (FCPA) prohibits U.S. corporations and their representatives from offering, promising, authorizing or making payments to any foreign government official, government staff member, political party or political candidate in an attempt to obtain or retain business abroad. The scope of the FCPA includes interactions with certain healthcare professionals in many countries. Other countries have enacted similar anti-corruption laws and/or regulations.

Outside the United States

European Union (EU). The European Medicines Agency (EMA) is the centralized regulatory agency of the EU, located in London. The agency is responsible for the scientific evaluation of medicines developed by healthcare companies seeking centralized approval for use in the EU. The agency has a veterinary review section distinct from the medical review section. The Committee for Veterinary Medicinal Products (CVMP) is responsible for scientific and technical review of the submissions for innovative pharmaceuticals, biopharmaceuticals and vaccines. After the CVMP issues a positive opinion on the approvability of a product, the EU commission reviews the opinion and, if they agree with the CVMP, they grant the product market authorization. Once granted by the European Commission, a centralized marketing authorization is valid in all EU and European Economic Area-European Free Trade Association states. Products can also be registered in the EU via a decentralized route under the supervision of the Co-ordination Group for Mutual Recognition and Decentralized Procedures - Veterinary (CMDv). This co-ordination group is composed of one representative per member state from each national regulatory agency, including Norway, Iceland and Liechtenstein. The CMDv reviews submissions of pharmaceuticals and vaccines for authorization of a veterinary product in two or more member states in accordance with the mutual recognition or the decentralized procedure. A series of Regulations, Directives, Guidelines and EU Pharmacopeia Monographs provide the requirements for product approval in the EU. In general, these requirements are similar to those in the United States, requiring demonstrated evidence of, safety, efficacy, and quality/consistency of manufacturing processes.

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 medicated 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 medicated 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 invited to be a Latin

American representative at meetings of the International Cooperation on Harmonisation of Technical Requirements for Registration of Veterinary Medicinal Products (VICH). Several normative instructions issued by MAPA have set regulatory trends in Latin America.

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 canceled and the product taken off the market.

Rest of world. Country-specific regulatory laws 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. With the exception of the EU, most other countries' regulatory agencies will generally refer to the FDA, USDA, EU and other international animal health entities, including the World Organization for Animal Health, Codex Alimentarius, in establishing standards and regulations for veterinary pharmaceuticals and vaccines.

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

Table of Contents

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. We work with them to establish acceptable safe levels of residual product in food-producing animals after treatment. 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 prescription 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 materials for compliance with the local and regional requirements in the markets where we sell animal health products.

Food Safety Inspection Service/generally recognized as safe. The FDA is authorized to determine the safety of substances (including "generally recognized as safe" substances, food additives and color additives), as well as prescribing 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 Cooperation on Harmonisation of Technical Requirements for Registration of Veterinary Medicinal Products (VICH). VICH is a trilateral (EU-Japan-USA) program aimed at harmonizing technical requirements for veterinary product registration. The objectives of the VICH are as follows:

- Establish and implement harmonized technical requirements for the registration of veterinary medicinal products in the VICH regions, which meet high quality, safety and efficacy standards and minimize the use of test animals and costs of product development.
- Provide a basis for wider international harmonization of registration requirements through the VICH Outreach Forum.
- Monitor and maintain existing VICH guidelines, taking particular note of the ICH work program and, where necessary, update these VICH guidelines.
- Ensure efficient processes for maintaining and monitoring consistent interpretation of data requirements following the implementation of VICH guidelines.
- By means of a constructive dialogue between regulatory authorities and industry, provide technical guidance enabling response to significant emerging global issues and science that impact on regulatory requirements within the VICH regions.

Employees

As of December 31, 2017, we had approximately 9,200 employees worldwide, which included approximately 3,950 employees in the United States and approximately 5,250 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 50 union employees in the United States.

Environmental, Health and Safety

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.

Certain environmental laws, such as the U.S. Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended (CERCLA), impose joint and several liability, without regard to fault, for cleanup costs on persons who 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. 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 environmental, health and safety laws and regulations. We are also a party to proceedings in which the primary relief sought is the cost of past and/or future remediation, or remedial measures to mitigate or remediate pollution. In connection with such proceedings, and otherwise, we are investigating and cleaning up environmental contamination from past industrial activity at certain sites, or financing other parties' completion of such activities. As a result, we incurred capital and operational expenditures in 2017 for environmental compliance purposes and for the clean-up of certain past industrial activities as follows:

- environmental-related capital expenditures - approximately $6 million; and
- other environmental-related expenditures - approximately $9 million.

However, we may not have identified all of the potential environmental liabilities relating to our current and former properties, or those liabilities associated with off-site disposal locations. Such liability could have a material adverse effect on our operating results and financial condition. Furthermore, regulatory agencies are showing increasing concern over the impact of animal health products and livestock operations on the environment. This increased regulatory scrutiny may necessitate that additional time and resources be spent to address these concerns in both new and existing products.

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

Table of Contents

in which we are being 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.
While we cannot predict with certainty our future capital expenditures or operating costs for environmental compliance or remediation of contaminated sites, we have no reason to believe that they will have a material adverse effect on our operating results or financial condition.

Available Information

The company's Internet website address is www.zoetis.com. On our website, the company makes available, free of charge, its annual, quarterly and current reports, including amendments to such reports, as soon as reasonably practicable after the company electronically files such material with, or furnishes such material to, the Securities and Exchange Commission (SEC).

Also available on our website is information relating to corporate governance at Zoetis and our Board of Directors, including as follows: our Corporate Governance Principles; Director Qualification Standards; Zoetis Code of Conduct (for all of our employees, including our Chief Executive Officer, Chief Financial Officer, Principal Accounting Officer, and Controller); Code of Business Conduct and Ethics for our Directors; Board Committees and Committee Charters; and ways to communicate by email with our Directors. We will provide any of the foregoing information without charge upon written request to our Corporate Secretary, Zoetis Inc., 10 Sylvan Way, Parsippany, New Jersey 07054. Information relating to shareholder services is also available on our website. We will disclose any future amendments to, or waivers from, provisions of these ethics policies and standards affecting our Chief Executive Officer, Chief Financial Officer, Principal Accounting Officer, and Controller on our website as promptly as practicable, as may be required under applicable SEC and NYSE rules.

We use our website (www.zoetis.com) as a means of disclosing material non-public information and for complying with our disclosure obligations under Regulation Fair Disclosure promulgated by the SEC. These disclosures are included in the “Investors” and “News & Media” sections of our website. Accordingly, investors should monitor these portions of our website, in addition to following our press releases, SEC filings and public conference calls and webcasts.

The information contained on our website does not constitute, and shall not be deemed to constitute, a part of this 2017 Annual Report, or any other report we file with, or furnish to, the SEC. Our references to the URLs for websites are intended to be inactive textual references only.

Item 1A. Risk Factors.

In addition to the other information set forth in this 2017 Annual Report, any of the factors described below could materially adversely affect our operating results, financial condition and liquidity, which could cause the trading price of our securities to decline.

This report contains “forward-looking” statements within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements reflect our current views with respect to, among other things, future events and performance. We generally identify forward-looking statements by words such as “anticipate,” “estimate,” “could,” “expect,” “intend,” “project,” “plan,” “predict,” “believe,” “seek,” “continue,” “outlook,” "objective," "target," “may,” “might,” “will,” “ have,” “likely” or the negative version of these words or comparable words or by using future dates in connection with any discussion of future performance, actions or events. Forward-looking statements are based on beliefs and assumptions made by management using currently available information. These statements are not guarantees of future performance, actions or events.

In particular, forward-looking statements include statements relating to our 2018 financial guidance, future actions, business plans or prospects, prospective products, product approvals or products under development, product supply disruptions, R&D costs, timing and likelihood of success, future operating or financial performance, future results of current and anticipated products and services, strategies, sales efforts, expenses, production efficiencies, production margins, integration of acquired businesses, interest rates, tax rates, changes in tax regimes and laws, foreign exchange rates, growth in emerging markets, the outcome of contingencies, such as legal proceedings, plans related to share repurchases and dividends, our agreements with Pfizer, government regulation and financial results.

Forward-looking statements are subject to risks and uncertainties, many of which are beyond our control, and are potentially inaccurate assumptions. However, there may also be other risks that we are unable to predict at this time. If one or more of these risks or uncertainties materialize, or if management's underlying beliefs and assumptions prove to be incorrect, actual results may differ materially from those contemplated by a forward-looking statement. You should not put undue reliance on forward-looking statements. Forward-looking statements speak only as of the date on which they are made.

We undertake no obligation to publicly update forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law or by the rules and regulations of the SEC. You are advised, however, to consult any further disclosures we make on related subjects in our Form 10-Q and 8-K reports and our other filings with the SEC. We note these factors for investors as permitted by the Private Securities Litigation Reform Act of 1995. You should understand that it is not possible to predict or identify all such factors. Consequently, you should not consider the following to be a complete discussion of all potential risks or uncertainties.

Risks related to our business and industry

Restrictions and bans on the use of and consumer preferences regarding antibacterials in food-producing animals may become more prevalent.

The issue of the potential transfer of increased antibacterial resistance in bacteria from food-producing animals to human pathogens, and the causality of that transfer, continue to be the subject of global scientific and regulatory discussion. Antibacterials refer to small molecules that can be used to treat or prevent bacterial infections and are a sub-categorization of the products that make up our anti-infectives and medicated feed additives portfolios. In some countries, this issue has led to government restrictions and bans on the use of specific antibacterials in some food-producing animals, regardless of the route of administration (in feed or injectable). These restrictions are more prevalent in countries where animal protein is plentiful and governments are willing to take action even when there is scientific uncertainty. Our total revenue attributable to antibacterials for livestock was approximately $1.2 billion for the year ended December 31, 2017.

Table of Contents

For example, in December 2013, the FDA announced final guidance establishing procedures for the voluntary phase-out in the United States over a three-year period of the use of medically important antibacterials in animal feed for growth promotion in food production animals (medically important antibacterials include classes that are prescribed in animal and human health). The guidance provides for continued use of antibacterials in food producing animals for treatment, control and under certain circumstances for prevention of disease, all under the supervision of a veterinarian. The FDA indicated that it took this action to help preserve the efficacy of medically important antibacterials to treat infections in humans. As part of those efforts, stricter regulations governing the administration of medically important antibiotics have recently come into effect. As of January 1, 2017, the use of medically important antibiotics in the water or feed of food production animals now requires written authorization by a licensed veterinarian under the FDA guidance and the related rule known as the Veterinary Feed Directive. As a result of the implementation by livestock producers of the FDA guidance and the Veterinary Feed Directive, we have seen a negative impact on revenue in the U.S. on certain medicated feed additive products for both cattle and swine in 2017. If these regulations continue to negatively affect our U.S. cattle and swine medicated feed additive revenue, our future operating results could be negatively impacted.

In addition, other countries, such as France and Vietnam, have passed restrictions or bans on antibiotic use.

In certain markets, there has been an increase in consumer preference towards proteins produced without the use of antibiotics.

We cannot predict whether antibacterial resistance concerns will result in additional restrictions or bans, expanded regulations, public pressure to discontinue or reduce use of antibacterials in food-producing animals or increased consumer preference for antibiotic-free protein, any of which could materially adversely affect our operating results and financial condition.

Perceived adverse effects on human health linked to the consumption of food derived from animals that utilize our products could cause a decline in the sales of such products.

Our livestock business depends heavily on a healthy and growing livestock industry. If the public perceives a risk to human health from the consumption of the food derived from animals that utilize our products, there may be a decline in the production of such food products and, in turn, demand for our products. For example, livestock 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 livestock 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 livestock 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.

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

Unanticipated safety, quality or efficacy concerns can arise 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 operating results.

In addition, since we depend on positive perceptions of the safety, quality and efficacy of our products, and animal health products generally, by our customers, veterinarians and end-users, any concerns as to the safety, qualify 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 operating results and financial condition, regardless of whether such reports are accurate.

Increased regulation or decreased governmental financial support relating to the raising, processing or consumption of food-producing animals could reduce demand for our livestock products.

Companies in the livestock industries are subject to extensive and increasingly stringent regulations. If livestock producers are adversely affected by new regulations or changes to existing regulations, they may reduce herd sizes or become less profitable and, as a result, they may reduce their use of our products, which may materially adversely affect our operating results and financial condition. Furthermore, new or more stringent regulations could, directly or indirectly, impact the use of one or more of our products. More stringent regulation of the livestock industry or our products could have a material adverse effect on our operating results and financial condition. Also, many food-producing companies, including livestock 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 products.

An outbreak of infectious disease carried by animals could negatively affect the sale and production of our products.

Sales of our livestock products could be materially adversely affected by the outbreak of disease carried by animals, which could lead to the widespread death or precautionary destruction of animals as well as the reduced consumption and demand for animal protein. In addition, outbreaks of disease carried by 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 products due to reduced herd or flock sizes. In recent years, outbreaks of various diseases, including 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 impacted the animal health business. The discovery of additional cases of any of these, or new, diseases may result in additional restrictions on animal proteins, reduced herd sizes, or reduced demand for, animal protein, which may have a material adverse effect on our operating results and financial condition. Also, 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.

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

Veterinarians and livestock 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, livestock 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, these customers and distributors 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 operating results and financial condition.

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 animal health products in particular regions are affected by weather conditions, as usage of our products follows 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.

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

For example, the widespread drought that impacted the United States in 2011, 2012 and in some regions in 2013 was considered the worst in many years, resulting in a reduction in the total cow herd in 2013. Droughts such as this one can lead to a decrease in harvested corn and higher corn prices, which may impact the profitability of livestock producers of cattle, pork and poultry. Higher corn prices may contribute to reductions in herd or flock sizes that may result in reduced spending on animal health products. In addition, droughts can lead to reduced availability of grazing pastures, forcing cattle producers to cull their herds. Fewer heads of cattle could result in reduced demand for our products. A prolonged drought could have a material adverse effect on our operating results and financial condition.

Our business is subject to risk based on global economic conditions.

Macroeconomic, business and financial disruptions could have a material adverse effect on our operating results, financial condition and liquidity. Certain of our customers and suppliers could be affected directly by an economic downturn and could face credit issues or cash flow problems that could give rise to payment delays, increased credit risk, bankruptcies and other financial hardships that could decrease the demand for our products or hinder our ability to collect amounts due from customers. If one or more of our large customers, including distributors, discontinue their relationship with us as a result of economic conditions or otherwise, our operating results and financial condition may be materially adversely affected. In addition, economic concerns may cause some pet owners to forgo or defer visits to veterinary practices or could reduce their willingness to treat pet health conditions or even to continue to own a pet. Furthermore, our exposure to credit and collectability risk is higher in certain international markets and our ability to mitigate such risks may be limited. While we have procedures to monitor and limit exposure to credit and collectability risk, there can be no assurances such procedures will effectively limit such risk and avoid losses.

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

If any of our top products experience issues, such as loss of patent protection, material product liability litigation, new or unexpected side effects, regulatory proceedings, labeling changes, negative publicity, changes to veterinarian or customer preferences, and/or disruptive innovations or the introduction of more effective products, our revenues could be negatively impacted, perhaps significantly. Our top four products, Apoquel, the ceftiofur product line, Draxxin and Revolution, contributed approximately 25% of our revenue in 2017. Any issues with these top products would have a more significant impact to our results of operations.

Modification of U.S. foreign trade policy may harm our U.S. livestock product customers.

Changes in U.S. 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 operating results. A number of our customers, particularly U.S.-based livestock producers, benefit from free trade agreements such as the North American Free Trade Agreement (NAFTA). The current President of the United States has initiated negotiations with Canada and Mexico aimed at re-negotiating the terms of NAFTA. Efforts by the United States to withdraw from or materially modify NAFTA or other international trade agreements to which it is a party could harm

our customers, and as a result, negatively impact our 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 and transportation and other key costs for livestock producers may increase or animal protein prices or sales may decrease. Either of these trends could cause deterioration in the financial condition of our livestock product customers, potentially inhibiting their ability to purchase our products or pay us for products delivered. Our livestock product customers may offset rising costs by reducing spending on our products, including by switching to lower-cost alternatives to our products. In addition, concerns about the financial resources of pet owners also could cause veterinarians to alter their treatment recommendations in favor of lower-cost alternatives to our products. These shifts could result in a decrease in sales of our companion animal products, especially in developed countries where there is a higher rate of pet ownership.
Changes in distribution channels for companion animal products could negatively impact our market share, margins and distribution of our products.
In most markets, companion animal owners typically purchase their animal health products directly from veterinarians. Companion animal owners increasingly have the option to purchase animal health products from sources other than veterinarians, such as Internet-based 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. Companion animal 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 companion animal prescription products through the veterinarian distribution channel, any decrease in visits to veterinarians by companion animal owners could reduce our market share for such

products and materially adversely affect our operating results and financial condition. In addition, companion animal 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 United States, and may be proposed in the United States or abroad in the future, that could impact the distribution channels for our companion animal 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 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 increase our reliance on Internet-based retailers, “big-box” retail stores or other over-the-counter distribution channels to sell our companion animal products. We may be unable to sustain our current margins and we may not be adequately prepared or able to distribute our products if an increased portion of our sales is through these channels. Any of these events could materially adversely affect our operating results and financial condition.

The animal health industry is highly competitive.

The animal health industry is highly competitive. 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. Our competitors include the animal health businesses of large pharmaceutical companies and specialty animal health businesses. There are also several new start-up companies working in the animal health area. 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. In addition to competition from established market participants, new entrants to the animal health medicines and vaccines industry could substantially reduce our market share or render our products obsolete.

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 operating results and financial condition could be materially adversely affected. Competitive pressure could arise from, among other things, safety and efficacy concerns, 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.

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 countries where such patents are obtained. The extent of protection afforded by our patents varies from country to country 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 country. As a result, we may face competition from lower-priced generic alternatives to many of our products. Generic competitors are becoming more aggressive in terms of launching at risk before patent rights expire and, because of their pricing, are an increasing percentage of overall animal health sales in certain regions. For example, several companies have launched generic versions of our Rimadyl chewable product. As a result, sales of our Rimadyl chewable product in the U.S. have continued to decline, decreasing by approximately 8% in 2017 compared to the prior year. If animal health customers increase their use of new or existing generic products, our operating results and financial condition could be materially adversely affected.

Over the next several years, several of our products' patents will expire. The active ingredient of Draxxin, tulathromycin, is covered by both compound and formulation patents in the United States, Europe, Canada, Australia and other key markets, with terms that expire between May 2019 and January 2021 in the United States, between November 2018 and November 2020 in Europe, and between May 2018 and November 2020 in Canada and Australia. Several patents covering the ceftiofur antibiotic product line (Excede) began expiring in the United States in 2015. However, various formulation and use patents relevant to the product line extend through to 2024. The compound patent for selamectin, the active ingredient in our parasiticide Revolution, expired in 2014. Again, we have process and formulation patents covering this product which expire in important markets in 2018 and 2019, respectively. The ceftiofur product line, Draxxin and Revolution, contributed approximately 18% of our revenue in 2017. In addition, the patent for the active ingredient of Convenia® has expired, however, there are formulation patents relevant to the product line which expire between November 2022 and October 2023. The patent for the active ingredient of Cerenia has expired, however, there are formulation patents relevant to the product line which expire between May 2020 and January 2027. A generic version of Cerenia has recently been registered in Europe and is marketed in the Netherlands and France. The patent relating to the formulation of Orbeseal expired in December 2017. Zoetis typically enforces all of its patents.

We may not successfully acquire and integrate other businesses, license rights to technologies or products, form and manage alliances or divest businesses.

We pursue acquisitions, technology licensing arrangements, strategic alliances or divestitures of some of our businesses as part of our business strategy. We may not complete these transactions in a timely manner, on a cost-effective basis or at all. In addition, we may be subject to regulatory constraints or limitations or other unforeseen factors that prevent us from realizing the expected benefits. Even if we are successful in making an acquisition, the products and technologies that are acquired may not be successful or may require significantly greater resources and investments than originally anticipated. We may be unable to integrate acquisitions successfully into our existing business, and we may be unable to achieve expected gross margin improvements or efficiencies. We also could incur or assume significant debt and unknown or contingent liabilities. Our reported results of operations could be negatively affected by acquisition or disposition-related charges, amortization of expenses related to intangibles and charges for impairment of long-term assets. We may be subject to litigation in connection with, or as a result of, acquisitions, dispositions, licenses or other

Table of Contents

alliances, including claims from terminated employees, customers or third parties, and we may be liable for future or existing litigation and claims related to the acquired business, disposition, license or other alliance because either we are not indemnified for such claims or the indemnification is insufficient. These effects could cause us to incur significant expenses and could materially adversely affect our operating results and financial condition.

We may not successfully implement our business strategies.

We are pursuing, and will continue to pursue, strategic initiatives that management considers critical to our long-term success, including, but not limited to, increasing sales in emerging markets; operational revenue growth through new product development and value-added product lifecycle innovation; using cash flow from operations to service debt; and expanding our complementary products and services. 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 cannot predict whether we will succeed in implementing these strategic initiatives. It could take several years to realize the anticipated benefits from these initiatives, if any benefits are achieved at all. Additionally, 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.

Our business could be 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 United States. 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 or other labor problems in the future at our sites. We could experience a disruption of our operations or higher ongoing labor costs, which could have a material adverse effect on our operating results and financial condition, potentially resulting in canceled orders by customers, unanticipated inventory accumulation or shortages and reduced revenue and net income. We may also experience difficulty or delays in implementing changes to our workforce in certain markets. In addition, labor problems at our suppliers or CMOs could have a material adverse effect on our operating results and financial condition.

Loss of our executive officers or other key personnel could disrupt our operations.

We depend on the efforts of our executive officers and certain key personnel. Our executive officers and other key personnel are not currently, and are not expected to be, subject to non-compete provisions. In addition, we generally do not enter into employment agreements with our executive officers and other key personnel. Any unplanned turnover or our failure to develop an adequate succession plan for one or more of our executive officer or other key positions could deplete our institutional knowledge base and erode our competitive advantage. The loss or limited availability of the services of one or more of our executive officers or other key personnel, or our inability to recruit and retain qualified executive officers or other key personnel in the future, could, at least temporarily, have a material adverse effect on our operating results and financial condition.

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

Under accounting principles generally accepted in the United States of America (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, 2017, we had goodwill of $1.5 billion and identifiable intangible assets, less accumulated amortization, of $1.3 billion. Identifiable intangible assets consist primarily of developed technology rights, brands, trademarks, license agreements, patents, acquired customer relationships and in-process R&D.

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 statements of income and write-downs recorded in our consolidated balance sheets could vary if management's conclusions change. Any impairment of goodwill or identifiable intangible assets could have a material adverse effect on our operating results and financial position.

Risks related to research and development

Our R&D, acquisition and licensing efforts may fail to generate new products and product lifecycle innovations.

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. 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 of our markets may not achieve similar success when introduced into new markets. Furthermore, the timing and cost of our R&D may increase, and our R&D may become less predictable. For example, changes in regulations applicable to our industry may make it more time-consuming and/or costly to research, develop and register products.

Products in the animal health industry are sometimes derived from molecules and compounds discovered or developed as part of human health research. We have and expect to continue to enter into collaboration or licensing arrangements with third parties, including Pfizer, to provide us with access to compounds and other technology for purposes of our business. Such agreements are typically complex and require time to negotiate and implement. If we enter into these arrangements, we may not be able to maintain these relationships or establish new ones in the future on acceptable terms or at all. In addition, any collaboration that we enter into may not be successful, and the success may depend on the efforts and actions of our collaborators, which we may not be able to control. If we are unable to access human health-generated molecules and compounds to conduct R&D on cost-effective terms, our ability to develop some types of new products could be limited.

Table of Contents

Disruptive innovations and advances in veterinary medical practices and animal health technologies could negatively affect the market for our products.

The market for our products could be impacted negatively 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 or specially bred disease-resistant animals. In addition, technological breakthroughs by others may obviate our technology and reduce or eliminate the market for our products. Introduction or acceptance of such products or technologies could materially adversely affect our operating results and financial condition.

Our R&D relies on evaluations in animals, which may become subject to bans or additional restrictive regulations.

As an animal health medicines and vaccines business, the evaluation of our existing and new products in animals is required to register our 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 additional 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 operating results and financial condition, could be materially adversely affected. In addition, negative publicity about us or our industry could harm our reputation.

Risks related to manufacturing

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 our products in sufficient quantities. On December 31, 2017, we had a global manufacturing network consisting of 25 manufacturing sites located in 12 countries. We also employ a network of approximately 180 third party CMOs, including a number owned by Pfizer. 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 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;
- 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 adversely affect our operating results and financial condition. For example, our manufacturing site in Medolla, Italy was damaged in an earthquake in May 2012, which resulted in production interruptions at that site. In addition, we experienced challenges in manufacturing Apoquel when it was initially launched in 2015 that impacted our ability to meet customer demand. As a result, we had to place limits on the amounts of this product veterinarians could purchase and delayed the launch of the product in certain markets.

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

The materials used to manufacture our products may be subject to availability constraints and price volatility caused by changes in demand, weather conditions, supply conditions, government regulations, economic climate and other factors. In addition, labor costs may be subject to volatility caused by the supply of labor, governmental regulations, economic climate and other factors. Increases in the demand for, availability or the price of, materials used to manufacture our products and increases in labor costs could increase the costs to manufacture our products. We may not be able to pass all or a material portion of any higher material or labor costs on to our customers, which could materially adversely affect our operating results and financial condition.

In addition, certain third-party suppliers are the sole or exclusive source of certain materials and services necessary for production of our products. We may be unable to meet demand for certain of our products if any of our third-party suppliers cease or interrupt operations, fail to renew contracts with us or otherwise fail to meet their obligations to us.

There may be delays and additional costs due to changes to our existing manufacturing facilities and the construction of new manufacturing plants.

As part of our supply network strategy, we have invested and will continue to invest in improvements to our existing manufacturing facilities and in new manufacturing plants. We are currently investing in two new plants, one in Rathdrum, Ireland for the production of active ingredients for some of our key products and one in Suzhou, China for the research and production of vaccines in China. These types of projects are subject to risks of delay or cost overruns inherent in any large construction project, and will require licensure by various regulatory authorities. Significant cost overruns or delays in completing these projects could have an adverse effect on the Company’s return on investment.

Risks related to legal matters and regulation

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

Our operating results, financial condition and liquidity could be materially adversely affected by unfavorable results in pending or future litigation matters. These matters include, among other things, allegations of violation of United States and foreign competition laws, labor laws, consumer protection laws, and environmental laws and regulations, as well as claims or litigations relating to product liability, intellectual property, securities, breach of contract and tort. 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 United States, attempts have been made to allow damages for emotional distress and pain and suffering in connection with the loss of, or injury to, a companion animal. 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 our being responsible for significant damages. Any of these negative effects resulting from litigation matters could materially adversely affect our operating results and financial condition.

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, livestock 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. For example, Ketamine, the active pharmaceutical ingredient in our Ketaset product (a nonnarcotic agent for anesthetic use in cats), is abused by humans as a hallucinogen. Furthermore, the use of our products for indications other than those indications 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 operating results and financial condition.

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. We are aware of at least one pharmacy in Brazil that may be engaged in the practice of illegally compounding oclacitinib, the active pharmaceutical ingredient in our Apoquel product. 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. Public loss of confidence in the integrity of vaccines and/or pharmaceutical products as a result of counterfeiting, illegally compounding or theft could have a material adverse effect on our product sales, business 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 and sale of our products. In addition, our manufacturing facilities are subject to periodic inspections by regulatory agencies. An inspection may report conditions or practices that indicate possible violations of regulatory requirements. Our failure 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 operating results and financial condition.

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, it may be subject to re-review and may lose its approvals. We have changed, and may in the future change, the locations of where certain of our products are manufactured and, because of these changes, we may be required to obtain new regulatory 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 reapproval is obtained, if ever.

Table of Contents

Furthermore, we cannot predict the nature of future laws, regulations, or changes in tax laws, challenges brought against our incentive tax rulings, and tariffs, nor can we determine the effect that additional laws or regulations or changes in existing laws or regulations could have on our business when and if promulgated, or the impact of changes in the interpretation of these laws and regulations, or of disparate federal, state, local and foreign regulatory schemes. Changes to such laws or regulations may include, among other things, changes to taxation requirements, such as tax-rate changes and changes affecting the taxation by the United States of income earned outside the United States. Changes in applicable federal, state, local and foreign laws and regulations could have a material adverse effect on our operating results and financial condition.

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 under CERCLA 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. See Item 1. Business—Environmental, Health and Safety. 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 and property damage, resulting from the disposal or release of hazardous materials into the environment. Such liability could materially adversely affect our operating results and financial condition. Furthermore, regulatory agencies are showing increasing concern over the impact of animal health products and livestock operations on the environment. This increased regulatory scrutiny may necessitate that additional time and resources be spent to address these concerns in both new and existing products.

A 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 or environmental damage. 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. We cannot assure you 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 will not materially adversely affect our business, results of operations or financial condition.

Risks related to our international operations

A significant portion of our operations are conducted in foreign jurisdictions 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 European Union countries where our products are sold at lower prices into European Union countries where the products are sold at higher prices);
- compliance with a wide variety of laws and regulations, such as the FCPA and similar non-U.S. laws and regulations;
- compliance with foreign labor laws;
-

burdens to comply with multiple and potentially conflicting foreign laws and regulations, including those relating to environmental, health and safety requirements;

- 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 Treasury (OFAC) and the European Union, in relation to our products or the products of farmers and other customers (e.g., restrictions on the importation of agricultural products from the European Union to Russia);
- government limitations on foreign ownership;
- government takeover or nationalization of business;
- changes in tax laws, challenges brought against our incentive tax rulings, and tariffs;
- imposition of anti-dumping and countervailing duties or other trade-related sanctions;
- costs and difficulties in staffing, managing and monitoring international operations;
- longer payment cycles and increased exposure to counterparty risk; and

Table of Contents

- 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 technology. 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 services, 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 operating results and financial condition. 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.

In June 2016, voters in the United Kingdom approved an advisory referendum to withdraw from the European Union, commonly referred to as "Brexit." This referendum has created political and economic uncertainty, particularly in the United Kingdom and the European Union, and this uncertainty may persist for years. A withdrawal could significantly disrupt the free movement of goods, services, and people between the United Kingdom and the European Union, and result in increased legal and regulatory complexities, as well as potential higher costs of conducting business in Europe. The United Kingdom's vote to exit the European Union could also result in similar referendums or votes in other European countries in which we do business. On March 29, 2017, the United Kingdom Prime Minister formally notified the European Council of the United Kingdom’s intention to withdraw from the European Union under Article 50 of the Treaty of Lisbon. The notice begins the two-year negotiation period to establish the withdrawal terms. If no agreement is reached after two years, the United Kingdom’s separation still becomes effective, unless the remaining European Union members unanimously agree to an extension. The uncertainty surrounding the terms of the United Kingdom'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 and adversely affect our business, results of operations, and financial condition.

Finally, there has been recent political instability in Catalonia, which depending on the outcome could impact our R&D and manufacturing operations in Olot, Spain.

Foreign exchange rate fluctuations and potential currency controls affect our results of operations, as reported in our financial statements.

We conduct operations in many areas of the world, involving transactions denominated in a variety of currencies. In 2017, we generated approximately 47% of our revenue in currencies other than the U.S. dollar, principally the euro, Brazilian real and Canadian dollar. We are subject to currency exchange rate risk to the extent that our costs are denominated in currencies other than those in which we earn revenue. In addition, because our financial statements are reported in U.S. dollars, changes in currency exchange rates between the U.S. dollar and other currencies have had, and will continue to have, an impact on our results of operations.

We also face risks arising from currency devaluations and the imposition of cash repatriation restrictions and exchange controls. Currency devaluations result in a diminished value of funds denominated in the currency of the country instituting the devaluation. Cash repatriation restrictions and exchange controls may limit our ability to convert foreign currencies into U.S. dollars or to remit dividends and other payments by our foreign subsidiaries or businesses located in or conducted within a country imposing restrictions or controls. While we currently have no need, and do not intend, to repatriate or convert cash held in countries that have significant restrictions or controls in place, should we need to do so to fund our operations, we may be unable to repatriate or convert such cash, or be unable to do so without incurring substantial costs. We currently have substantial operations in countries that have cash repatriation restrictions or exchange controls in place, including China, and, if we were to need to repatriate or convert such cash, these controls and restrictions may have a material adverse effect on our operating results and financial condition.

In 2015, we recorded a net remeasurement loss of $89 million on bolivar-denominated net monetary assets, primarily related to cash deposits in Venezuela. This loss was recorded as a result of our evaluation of evolving economic conditions in Venezuela, including the devaluation of the Venezuelan bolivar in 2013 and the subsequent changes to Venezuela's foreign currency exchange mechanisms, in addition to our expectation of Venezuela's responses to changes in its economy, and continued volatility.

We may not be able to realize the expected benefits of our investments in emerging markets and are subject to certain risks due to our presence in emerging markets, including political or economic instability and failure to adequately comply with legal and regulatory requirements.

We have been taking steps to increase our presence in emerging markets. Failure to continue to maintain and expand our business in emerging markets could materially adversely affect our operating results and financial condition. Some countries within emerging markets may be especially vulnerable to periods of local, regional or global economic, political or social instability or crisis. For example, our sales in certain emerging markets have suffered from extended periods of disruption due to natural disasters. Furthermore, we have also experienced lower than expected sales in certain emerging markets due to local, regional and global restrictions on banking and commercial activities in those countries. In addition, certain emerging markets have currencies that fluctuate substantially, which may impact our financial performance. For example, in the past, our revenue in certain emerging markets in Latin America has been adversely impacted by currency fluctuations and devaluations.

In addition, certain emerging markets have legal systems that are less developed or familiar to us. Other jurisdictions in which we conduct business may have legal and regulatory regimes that differ materially from United States laws and regulations, are continuously evolving or do not include sufficient judicial or administrative guidance to interpret such laws and regulations. Compliance with diverse legal requirements is costly and time-consuming and requires significant resources. In the event we believe or have reason to believe our employees have or may have violated applicable laws or regulations, we may be subject to investigation costs, potential penalties and other related costs which in turn could negatively affect our reputation and our results of operations.

Table of Contents

For all these and other reasons, doing business within emerging markets carries significant risks.
Risks related to tax matters
The Company could be subject to changes in its tax rates, the adoption of new U.S. or foreign tax legislation or exposure to additional tax liabilities.
The multinational nature of our business subjects us to taxation in the United States and numerous foreign jurisdictions. Due to economic and political conditions, tax rates in various jurisdictions may be subject to significant change. The company's future effective tax rates could be affected by changes in the mix of earnings in countries with differing statutory tax rates, changes in the valuation of deferred tax assets and liabilities, or changes in tax laws or their interpretation.
For example, the European Commission opened formal investigations to examine whether decisions by the tax authorities in certain European countries, including Belgium, comply with European Union rules on state aid. In the case of Belgium, the European Commission concluded on January 11, 2016, that the excess profits ruling violates the European Union's state aid rules. The impact of this conclusion was a net tax charge of approximately $35 million recorded in 2016. This net charge relates to the Belgium government's recovery of benefits for the periods 2013 through 2015 offset by the remeasurement of the company's deferred tax assets and liabilities using the rates expected to be in place at the time of the reversal and without consideration of implementation of any future operational changes, and does not include any benefits associated with a successful appeal of the decision.
In addition, on June 20, 2016, the Member States of the European Union adopted the anti-tax-avoidance directive proposed on January 28, 2016, which is designed to provide uniform implementation of Base Erosion and Profits Shifting measures and other minimum taxation standards across Member States. The Member States are required to implement all components of the directive by January 1, 2020. Once enacted by the Member States, the results of the directive could have an impact on our effective tax rate. In October 2016, the European Union also introduced a proposal to impose a uniform set of rules on taxing corporate profits, known as the Common Consolidated Corporate Tax Base. This proposal is in its early stages but may have an impact to our effective tax rate.
On December 22, 2017, President Trump signed into law the Tax Cuts and Jobs Act (the Tax Act) effective January 1, 2018. Some notable provisions of the Tax Act include a reduction of the corporate income tax rate from 35% to 21%, and a change from a worldwide system with deferral to a territorial tax system, which includes a one-time mandatory deemed repatriation tax, payable over eight years, on certain undistributed earnings of non-U.S. subsidiaries. As of December 31, 2017, the cumulative amount of non-U.S. undistributed earnings was approximately $4.5 billion, which includes an allocation of non-U.S. undistributed earnings as a result of the separation from Pfizer on June 24, 2013. Pursuant to the Staff Accounting Bulletin published by the Securities and Exchange Commission on December 22, 2017, addressing the challenges in accounting for the effects of the Tax Act in the period of enactment, companies must report provisional amounts for those specific income tax effects of the Tax Act for which the accounting is incomplete but a reasonable estimate can be determined. Those provisional amounts will be subject to adjustment during a measurement period of up to one year from the enactment date. The company is currently in the process of evaluating the full impact of this new legislation on its consolidated financial statements, and in the fourth quarter of 2017 has recorded a provisional net charge of $212 million related to the one-time mandatory deemed repatriation tax, partially offset by the remeasurement of the deferred tax assets and liabilities, as of the date of enactment, due to the reduction in the U.S. federal corporate tax rate. At this time, we are properly reflecting the provision for taxes on income using all current enacted global tax laws in every jurisdiction in which we operate.
On March 29, 2017, United Kingdom (UK) Prime Minister Theresa May formally notified the European Council of the UK's intention to withdraw from the European Union, commonly referred to as "Brexit", under Article 50 of the Treaty of Lisbon. The notice begins the two-year negotiation period to establish the withdrawal terms. If no agreement is reached after two years, the UK's separation still becomes effective, unless the remaining European Union members unanimously agree to an extension. At this time, the impact of Brexit to our effective tax rate is uncertain.
In addition, our effective tax rate is subject to potential risks that various taxing authorities may challenge the pricing of our cross-border arrangements and subject us to additional tax, adversely impacting our effective tax rate and our tax liability. The company is also subject to the examination of its tax returns and other tax matters by the Internal Revenue Service and other tax authorities and governmental bodies. The company regularly assesses the likelihood of

an adverse outcome resulting from these examinations to determine the adequacy of its provision for taxes. There can be no assurance as to the outcome of these examinations. If the company's effective tax rates were to increase, particularly in the United States or other material foreign jurisdictions, or if the ultimate determination of the company's taxes owed is for an amount in excess of amounts previously accrued, the company's operating results, cash flows and financial condition could be adversely affected.

Risks related to intellectual property

The alleged intellectual property rights of third parties may negatively affect our business.

A third party may sue us or otherwise make a claim, alleging infringement or other violation of the third-party's patents, trademarks, trade dress, copyrights, trade secrets, domain names or other intellectual property rights. If we do not prevail in this type of dispute, 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 action are often substantial and could materially adversely affect our operating results and financial condition, even if we successfully defend such action. The intellectual property positions of animal health medicines and vaccines businesses frequently involve complex legal and factual questions, and an issued patent does not provide the right to practice the patented technology or develop, manufacture or commercialize the patented product. We cannot guarantee that a competitor or other third party does not have or will not obtain rights to intellectual property that, in the absence of a license, 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, which may harm our operating results and financial condition.

If our intellectual property rights are challenged or circumvented, competitors may be able to take advantage of our research and development efforts.

Our long-term success largely depends on our ability to market technologically competitive products. We rely and expect to continue to rely on a combination of intellectual property, including patent, trademark, trade dress, copyright, trade secret, data protection, and domain name protection laws, 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, or 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 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 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. We may be subject to challenges by third parties regarding our intellectual property, including claims regarding validity, enforceability, scope and effective term. The validity, enforceability, scope and effective term of patents can be highly uncertain and often involve complex legal and factual questions and proceedings. 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. 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 expire or are terminated, our operating results and financial condition could be materially adversely affected.

Patent law reform in the United States and other countries may also weaken our ability to enforce our patent rights, or make such enforcement financially unattractive. For instance, U.S. court decisions in the recent years have led to U.S. Patent and Trademark Office Guidelines regarding inventions in the field of products isolated from nature and diagnostic methods which may influence future patenting strategy in these areas. A similar court decision in Australia was issued recently with regard to the patentability of nucleic acids. Such reforms could result in increased costs to protect our intellectual property and/or limit our ability to patent 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 operating results and financial condition.

Likewise, in the United States and other countries, we currently hold issued trademark registrations and have trademark applications pending, any of which may be the subject of a governmental or third-party objection, which could prevent the maintenance or issuance of the same and thus create the potential need to rebrand or re-label a product. As our products mature, our reliance on our trademarks to differentiate us from our competitors increases and as a result, if we are unable to prevent third parties from adopting, registering or using trademarks and trade dress that infringe, dilute or otherwise violate our trademark rights, our business could be materially adversely affected.

Many of our vaccine products and other products are based on or incorporate proprietary information, including proprietary master seeds and proprietary or patented adjuvant formulations. We actively seek to protect our proprietary information, including our trade secrets and proprietary know-how, by requiring our employees, consultants, other advisors and other third parties to execute proprietary information and confidentiality agreements upon the commencement of their employment, engagement or other relationship. Despite these efforts and precautions, we may be unable to prevent a third party from copying or otherwise obtaining and using our trade secrets or our other intellectual property without authorization and legal remedies may not adequately compensate us for the damages caused by such unauthorized use. Further, others may independently and lawfully develop substantially similar or identical products that circumvent our intellectual property by means of alternative designs or

processes or otherwise.
The misappropriation and infringement of our intellectual property, particularly in foreign countries where the laws may not protect our proprietary rights as fully as in the United States, may occur even when we take steps to prevent it. We are currently, and expect to be in the future, party to patent lawsuits and other intellectual property rights claims that are expensive and time consuming, and if resolved adversely, could have a significant impact on our business and financial condition. In the future, we may not be able to enforce intellectual property that relates to our products for various reasons, including licensor restrictions and other restrictions imposed by third parties, or the cost of enforcing our intellectual property may outweigh the value of doing so; either of which could have a material adverse impact on our business and financial condition.
Risks related to information technology
We depend on sophisticated information technology and infrastructure.
We rely on the efficient and uninterrupted operation of complex information technology systems to manage our operations, to process, transmit and store electronic and financial information, and to comply with regulatory, legal and tax requirements. We also depend on our information technology infrastructure for digital marketing activities and for electronic communications among our personnel, customers and suppliers around the world. System failures or outages could compromise our ability to perform these functions in a timely manner, which could harm our ability to conduct business, hurt our relationships with our customers, or delay our financial reporting. Such failures could materially adversely affect our operating results and financial condition.
In addition, we depend on third parties and applications on virtualized (cloud) infrastructure to operate and support our information systems. These third parties include large established vendors, as well as many small, privately owned companies. Failure by these providers to adequately support our operations or a change in control or insolvency of these providers could have an adverse effect on our business, which in turn may materially adversely affect our operating results and financial condition.

Table of Contents

Assuming we are able to implement new systems successfully, all information systems, despite implementation of security measures, are vulnerable to disability, failures or unauthorized access. If our information systems were to fail or be breached, such failure or breach could materially adversely affect our ability to perform critical business functions and sensitive and confidential data could be compromised.

We may be unable to successfully manage our online ordering sites.

In many markets around the world, such as the United States and Brazil, we provide online ordering sites to customers, often relying on third parties to host and support the application. The operation of our online business depends on our ability to maintain the efficient and uninterrupted operation of our online order-taking and fulfillment operations. Risks associated with our online business include: disruptions in telephone or internet service or power outages; failures of the information systems that support our website, including inadequate system capacity, computer viruses, human error, changes in programming, security breaches, system upgrades or migration of these services to new systems; reliance on third parties for computer hardware and software as well as delivery of merchandise to our customers; rapid technology changes; credit card fraud; natural disasters or adverse weather conditions; power and network outages; changes in applicable federal and state regulations; liability for online content; and consumer privacy concerns. Problems in any one or more of these areas could have a material adverse effect on our operating results and financial condition and could damage our reputation.

We may be unable to adequately protect our information technology systems from cyber-attacks, breaches of security or misappropriation of data, which could result in the disclosure of confidential information, damage our reputation, and subject us to significant financial and legal exposure.

Our reputation as a global leader in animal health and our reliance on complex information systems make us inherently vulnerable to malicious cyber intrusion and attack. Cyber-attacks are increasing in their frequency, sophistication and intensity, and have become increasingly difficult to detect. Cyber-attacks could include wrongful conduct by hostile foreign governments, industrial espionage, the deployment of harmful malware, ransomware, denial-of-service attacks, and other means to threaten data confidentiality, integrity and availability. In addition, despite our efforts to protect sensitive, confidential or personal data or information, we may be vulnerable to material security breaches, theft, misplaced or lost data, programming errors, employee errors and/or malfeasance that could potentially lead to the compromise of sensitive, confidential or personal data or information, improper use of our systems or networks, unauthorized access, use, disclosure, modification or destruction of information (including confidential business information, trade secrets and corporate strategic plans), defective products, production downtimes and operational disruptions.

Like other global companies, we have experienced threats to our data and information technology systems. To date, those threats have not had a material impact on our business operations or financial condition. However, although we devote resources to protect our information technology systems, we expect cyber-attacks to continue, and there can be no assurance that our efforts will prevent information security breaches that would result in business, legal or reputational harm to us, or would have a material adverse effect on our operating results and financial condition.

If hackers or cyberthieves gain improper access to our technology systems, networks, or infrastructure, they may be able to access, steal, publish, delete, misappropriate, modify or otherwise disrupt access to confidential data. Moreover, additional harm to customers could be perpetrated by third parties who are given access to the confidential data. A network disruption (including one resulting from a cyberattack) could cause an interruption or degradation of service as well as permit access, theft, publishing, deletion, misappropriation, or modification to or of confidential data. Due to the evolving techniques used in cyberattacks to disrupt or gain unauthorized access to technology networks, we may not be able to anticipate or prevent such disruption or unauthorized access.

The costs imposed on us as a result of a cyberattack or network disruption could be significant. Among others, such costs could include increased expenditures on cyber security measures, litigation, fines, and sanctions, lost revenues from business interruption, and damage to the public’s perception regarding our ability to keep our information secure. As a result, a cyberattack or network disruption could have a material adverse effect on our business, financial condition, and operating results.

We may be unable to adequately protect our stakeholders' privacy or we may fail to comply with privacy laws.

The protection of customer, employee, supplier and company data is critical and the regulatory environment surrounding information security, storage, use, processing, disclosure and privacy is demanding, with the frequent imposition of new and changing requirements. In addition, our customers, employees and suppliers expect that we will adequately protect their personal information. Any actual or perceived 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, including the EU General Data Protection Regulation (GDPR), could result in lost sales, remediation costs, and legal liability including severe penalties, regulatory action and reputational harm. For example, the EU's GDPR becomes effective May 25, 2018 and requires companies to meet new and enhanced requirements regarding the handling of personal data, including its use, protection and the rights of data subjects to request correction or deletion of their personal data. Failure to meet GDPR requirements could result in penalties of up to 4% of worldwide revenue.

Despite our considerable efforts and investments in technology to secure our computer network, security could be compromised, confidential information could be misappropriated or system disruptions could occur. Failure to comply with the security requirements or rectify a security issue may result in fines and the imposition of restrictions on our ability to accept payment by credit or debit cards. In addition, the payment card industry (PCI) is controlled by a limited number of vendors that have the ability to impose changes in PCI's fee structure and operational requirements on us without negotiation. Such changes in fees and operational requirements may result in our failure to comply with PCI security standards, as well as significant unanticipated expenses. Such failures could materially adversely affect our operating results and financial condition.

Risks related to our indebtedness

We have substantial indebtedness.

We have a significant amount of indebtedness, which could materially adversely affect our operating results, financial condition and liquidity. As of December 31, 2017, we had approximately $5.0 billion of total unsecured indebtedness outstanding. In addition, we have entered into an agreement

Table of Contents

for a five-year revolving credit facility and a commercial paper program each with a capacity of up to $1.0 billion. While we currently do not have any amounts drawn under the credit facility nor any commercial paper issued under the commercial paper program, we may incur indebtedness under these arrangements in the future.

We may incur substantial additional debt from time to time to finance working capital, capital expenditures, investments or acquisitions, or for other purposes. If we do so, the risks related to our high level of debt could intensify. Specifically, 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;
- 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;
- 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;
- placing us at a competitive disadvantage to other, less leveraged competitors;
- impacting our effective tax rate; and
- increasing our cost of borrowing.

In addition, the instruments governing our indebtedness contain restrictive covenants that will limit our ability to engage in activities that may be in our long-term best interest. For example, our credit facility contains a financial covenant requiring us to not exceed a maximum total leverage ratio and covenants that, among other things, limit or restrict our and our subsidiaries' ability, subject to certain exceptions, to incur liens, merge, consolidate or sell, transfer or lease assets, transact with affiliates and incur priority indebtedness. Our failure to comply with such covenants could result in an event of default which, if not cured or waived, could result in the acceleration of all our debt.

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 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 operating results, financial condition and liquidity and our ability to satisfy our obligations under our indebtedness or pay dividends on our common stock.

We may not have the funds necessary to finance the change of control offer required by the indenture governing our senior notes.
Upon the occurrence of a change of control of Zoetis and a downgrade below investment grade by Moody's Investor Services, Inc. and Standard & Poor's Rating Services, we will be required to offer to repurchase all of our outstanding senior notes. However, we may not have sufficient funds available at the time of the change of control to finance the required change of control offer or restrictions in our then-existing debt instruments will not allow such repurchases. Our failure to purchase the senior notes as required under the indenture would result in a default under the indenture, which could have material adverse consequences for us and the holders of the senior notes.
Our credit ratings may not reflect all risks of an investment in our senior notes.
The credit ratings assigned to our senior notes are limited in scope, and do not address all material risks relating to an investment in our senior notes, but rather reflect only the view of each rating agency at the time the rating is issued. There can be no assurance that such credit ratings will remain in effect for any given period of time or that a rating will not be lowered, suspended or withdrawn entirely by the applicable rating agencies, if, in such rating agency's judgment, circumstances so warrant. Credit ratings are not a recommendation to buy, sell or hold any security. Each agency's rating should be evaluated independently of any other agency's rating. Actual or anticipated changes or downgrades in our credit ratings, including any announcement that our ratings are under further review for a downgrade, could affect the market prices of our securities and increase our borrowing costs.

Table of Contents

Risks related to our relationship with Pfizer

Certain of our directors may have actual or potential conflicts of interest because of their positions with Pfizer.

Certain of our directors are employed or have been employed by Pfizer or may own Pfizer common stock, options to purchase Pfizer common stock or other Pfizer equity awards. Certain of these holdings may be individually significant to these directors as compared with such director's total assets. These directors' positions at Pfizer and the ownership of any Pfizer equity or equity awards may create, or may create the appearance of, conflicts of interest when these directors are faced with decisions that could have different implications for Pfizer than for us.

To preserve the tax-free treatment to Pfizer and/or its stockholders of the Exchange Offer and certain related transactions, we may not be able to engage in certain transactions.

On May 22, 2013, Pfizer announced an exchange offer (the Exchange Offer) whereby Pfizer shareholders could exchange a portion of Pfizer common stock for Zoetis common stock. The Exchange Offer was completed on June 24, 2013, resulting in the full separation of Zoetis and the disposal of Pfizer's entire ownership and voting interest in Zoetis. To preserve the tax-free treatment to Pfizer and/or its stockholders of the Exchange Offer and certain related transactions, under the tax matters agreement, we are restricted from taking any action that prevents such transactions from being tax-free for U.S. federal, state, local and foreign income tax purposes. These restrictions may limit our ability to engage in certain transactions, including taking certain actions with respect to our 3.250% Senior Notes due 2023.

Pfizer's rights as licensor under the patent and know-how license could limit our ability to develop and commercialize certain products.

Under the patent and know-how license agreement (Pfizer as licensor) (the Patent and Know-How License Agreement), Pfizer licenses to us certain of its intellectual property. If we fail to comply with our obligations under this license agreement and Pfizer 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, in circumstances where Pfizer has an interest in the licensed intellectual property in connection with its human health development programs, our rights to use the licensed intellectual property are restricted and/or, in limited instances, subject to Pfizer's right to terminate such license at will. 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.

We are dependent on Pfizer to prosecute, maintain and enforce certain intellectual property.

Under the Patent and Know-How License Agreement, Pfizer is responsible for filing, prosecuting and maintaining patents that Pfizer licenses to us. In the animal health field, Pfizer has the first right, and in some cases the sole right, to enforce such licensed patents, and in the human health field, subject to certain exceptions, Pfizer has the sole right to enforce the licensed patents. If Pfizer fails to fulfill its obligations or chooses to not enforce the licensed patents under this agreement, we may not be able to prevent competitors from making, using and selling competitive products, which could have an adverse effect on our business.

If there is a later determination that the Exchange Offer or certain related transactions are taxable for U.S. federal income tax purposes because the facts, assumptions, representations or undertakings underlying the IRS private letter ruling and/or any tax opinion are incorrect or for any other reason, we could incur significant liabilities.

Pfizer has received a private letter ruling from the IRS substantially to the effect that, among other things, the Exchange Offer will qualify as a transaction that is tax-free for U.S. federal income tax purposes under Sections 355 and 368(a)(1)(D) of the U.S. Internal Revenue Code of 1986 (the Code). Completion by Pfizer of the Exchange Offer was conditioned on, among other things, the continuing application of Pfizer's private letter ruling from the IRS and the receipt of an opinion of tax counsel, to the effect that, among other things, the Exchange Offer will qualify as a transaction that is tax-free for U.S. federal income tax purposes under Sections 355 and 368(a)(1)(D) of the Code. The ruling and the opinion rely on certain facts, assumptions, representations and undertakings from Pfizer and us regarding the past and future conduct of the companies' respective businesses and other matters. If any of these facts, assumptions, representations or undertakings are incorrect or not otherwise satisfied, Pfizer and its stockholders may not be able to rely on the ruling or the opinion of tax counsel and could be subject to significant tax liabilities.

Notwithstanding the private letter ruling and opinion of tax counsel, the IRS could determine on audit that the

Exchange Offer or certain related transactions are taxable if it determines that any of these facts, assumptions, representations or undertakings are not correct or have been violated or if it disagrees with the conclusions in the opinion that are not covered by the private letter ruling, or for other reasons, including as a result of certain significant changes in the stock ownership of Pfizer or us after the Exchange Offer. If the Exchange Offer or certain related transactions are determined to be taxable for U.S. federal income tax purposes, we could incur significant liabilities under applicable law or under the tax matters agreement.

Risks related to our common stock

The price of our common stock may fluctuate substantially, and you could lose all or part of your investment in Zoetis common stock as a result.

Our common stock has a limited trading history and there may be wide fluctuations in the market value of our common stock as a result of many factors. From our IPO through December 31, 2017, the sales price of our common stock as reported by the NYSE has ranged from a low sales price of $28.14 on April 15, 2014 to a high sales price of $73.58 on December 19, 2017. Some factors that may cause the market price of our common stock to fluctuate, in addition to the other risks mentioned in this section and in our 2017 Annual Report, are:

- our operating performance and the performance of our competitors;
- our or our competitors' press releases, other public announcements and filings with the SEC regarding new products or services, enhancements, significant contracts, acquisitions or strategic investments;
- changes in earnings estimates or recommendations by securities analysts, if any, who cover our common stock;
- changes in our investor base;
- failures to meet external expectations or management guidance;

Table of Contents

- fluctuations in our financial results or the financial results of companies perceived to be similar to us;
- changes in our capital structure or dividend policy, future issuances of securities, sales of large blocks of common stock by our stockholders or the incurrence of additional debt;
- reputational issues;
- changes in general economic and market conditions in any of the regions in which we conduct our business;
- the arrival or departure of key personnel;
- the actions of speculators and financial arbitrageurs (such as hedge funds);
- changes in applicable laws, rules or regulations and other dynamics; and
- other developments or changes affecting us, our industry or our competitors.

In addition, if the market for stocks in our industry or industries related to our industry, or the stock market in general, experiences a loss of investor confidence, the trading price of our common stock could decline for reasons unrelated to our business, financial condition and results of operations. If any of the foregoing occurs, it could cause our stock price to fall and may expose us to lawsuits that, even if unsuccessful, could be costly to defend and a distraction to management.

While we currently pay a quarterly cash dividend to our common stockholders, we may change our dividend policy at any time.

On December 11, 2017, our Board of Directors declared the 2018 first quarter dividend of $0.126 per share to be paid on March 1, 2018, to holders of record on January 19, 2018; and on February 13, 2018, our Board of Directors declared the 2018 second quarter dividend of $0.126 per share to be paid on June 1, 2018, to holders of record on April 20, 2018. Although we currently pay a quarterly cash dividend to our common stockholders, we have no obligation to do so, and our dividend policy may change at any time without notice to our stockholders. Returns on stockholders' investments will primarily depend on the appreciation, if any, in the price of our common stock. We anticipate that we will retain most of our future earnings, if any, for use in the development and expansion of our business, repayment of indebtedness and for general corporate purposes. The declaration and payment of dividends is at the discretion of our Board of Directors in accordance with applicable law after taking into account various factors, including our financial condition, operating results, current and anticipated cash needs, cash flows available in the United States, impact on our effective tax rate, indebtedness, legal requirements and other factors that our Board of Directors deems relevant.

Provisions in our restated certificate of incorporation, amended and restated by-laws, and Delaware law may prevent or delay an acquisition of us, which could decrease the trading price of our common stock.

Our amended and restated certificate of incorporation, which we refer to as “our certificate of incorporation,” and our amended and restated by-laws, which we refer to as “our by-laws,” contain provisions that are intended to deter coercive takeover practices and inadequate takeover bids and to encourage prospective acquirers to negotiate with our Board of Directors rather than to attempt a hostile takeover. These provisions include:

- a Board of Directors that is divided into three classes with staggered terms;
- rules regarding how our stockholders may present proposals or nominate directors for election at stockholder meetings;
- the right of our Board of Directors to issue preferred stock without stockholder approval; and
- limitations on the right of stockholders to remove directors.

In addition, Delaware law also imposes some restrictions on mergers and other business combinations between us and any holder of 15% or more of our outstanding common stock. These provisions apply even if the offer may be considered beneficial by some stockholders and could delay or prevent an acquisition that our Board of Directors determines is not in our and our stockholders' best interests.

Item 1B. Unresolved Staff Comments.

None.

Item 2. Properties.

We have 146 owned and leased properties, amounting to approximately 10.2 million square feet, around the world for sales and marketing, customer service, regulatory compliance, R&D, manufacturing and distribution, and administrative support functions. In many locations, operations are co-located to achieve synergies and operational efficiencies. Our largest R&D facility is our owned U.S. research and development site located in Kalamazoo, Michigan, which represents approximately 1.5 million square feet. None of our other non-manufacturing sites are more than 0.2 million square feet. The largest manufacturing site in our global manufacturing network is our manufacturing site located in Kalamazoo, Michigan, which represents approximately 0.6 million square feet. No other site in our global manufacturing network is more than 0.6 million square feet. In addition, our global manufacturing network will continue to be supplemented by approximately 180 CMOs.

Our corporate headquarters are located at 10 Sylvan Way, Parsippany, New Jersey 07054. Our operations extend internationally to approximately 60 countries. Under the transitional services agreement we entered into with Pfizer, Pfizer granted us continued access to certain of its premises occupied by our employees prior to the IPO. We currently lease space from Pfizer in 7 different locations globally, mainly in Europe.

We believe that our existing properties, as supplemented by sites operated by CMOs, including Pfizer, and access to Pfizer facilities provided under the transitional services agreement are adequate for our current requirements and for our operations in the foreseeable future.

Table of Contents

Item 3. Legal Proceedings.

We are from time to time subject to claims and litigation arising in the ordinary course of business. These claims and litigation may include, among other things, allegations of violation of U.S. and foreign competition law, labor laws, 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. We operate in multiple jurisdictions and, as a result, a claim in one jurisdiction may lead to claims or regulatory penalties in other jurisdictions. We intend to defend vigorously against any pending or future claims and litigation.

At this time, in the opinion of management, the likelihood is remote that the impact of such proceedings, either individually or in the aggregate, would have a material adverse effect on our consolidated results of operations, financial condition or cash flows. However, one or more unfavorable outcomes in any claim or litigation against us could have a material adverse effect for the period in which they are resolved. In addition, regardless of their merits or their ultimate outcomes, such matters are costly, divert management's attention and may materially adversely affect our reputation, even if resolved in our favor.

Certain legal proceedings in which we are involved are discussed in Notes to Consolidated Financial Statements— Note 17. Commitments and Contingencies, and are incorporated by reference from such discussion.

Item 4. Mine Safety Disclosures.

Not applicable.

Table of Contents

PART II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities.

Our shares of common stock have been listed on the NYSE (symbol ZTS) since February 1, 2013. Prior to that time, there was no public market for our stock.

The following table sets forth the high and low sales price of our common stock for each quarter presented below:

	High	Low
2016		
First Quarter	$48.35	$38.26
Second Quarter	$49.10	$45.01
Third Quarter	$52.64	$46.84
Fourth Quarter	$54.15	$46.86
2017		
First Quarter	$56.50	$52.00
Second Quarter	$63.85	$52.25
Third Quarter	$65.83	$59.50
Fourth Quarter	$73.58	$63.03

As of February 9, 2018, there were 485,253,713 shares of our common stock outstanding, held by 1,889 shareholders of record.

Additional information relating to our common stock is included in this Annual Report on Form 10-K in Notes to Consolidated Financial Statements— Note 15. Stockholders' Equity.

Purchases of Equity Securities by the Issuer

On November 18, 2014, we announced that our Board of Directors authorized the repurchase of up to $500 million of our outstanding common stock. This program was substantially completed as of December 31, 2016. On December 6, 2016, we announced that our Board of Directors authorized the repurchase of an additional $1.5 billion of our outstanding common stock. These programs do not have a stated expiration date. Purchases of Zoetis shares may be made at the discretion of management, depending on market conditions and business needs. We repurchase shares pursuant to Rules 10b5-1 and 10b-18 under the Securities Exchange Act of 1934, as amended, through repurchase agreements established with several brokers.

Issuer purchases of equity securities for the three months ended December 31, 2017 were as follows:

	Issuer Purchases of Equity Securities			
	Total Number of Shares Purchased[(a)]	Average Price Paid Per Share	Total Number of Shares Purchased as Part of Publicly Announced Programs	Approximate Dollar Value of Shares that May Yet Be Purchased Under Plans or Programs
October 2 - October 29, 2017	630,182	$64.62	626,898	$1,084,681,628
October 30 - November 30, 2017	599,007	$68.38	598,493	$1,043,755,651
December 1 - December 31, 2017	605,653	$72.02	604,762	$1,000,123,816
Total	1,834,842	$68.29	1,830,153	$1,000,123,816

(a) The company repurchased 4,689 shares during the three-month period ended December 31, 2017, that were not part of the publicly announced share repurchase authorization. These shares were purchased from employees to satisfy tax withholding requirements on the vesting of restricted shares from equity-based awards.

Dividend Policy, Declaration and Payment

During the years ended December 31, 2017 and 2016, we paid the following quarterly cash dividends per share on our common stock:

	2017	2016
First Quarter	$0.105	$0.095
Second Quarter	$0.105	$0.095
Third Quarter	$0.105	$0.095
Fourth Quarter	$0.105	$0.095

On December 11, 2017, our Board of Directors declared the 2018 first quarter dividend of $0.126 per share to be paid on March 1, 2018, to holders of record on January 19, 2018. On February 13, 2018, our Board of Directors declared the 2018 second quarter dividend of $0.126 per share to be paid on June 1, 2018, to holders of record on April 20, 2018.

Table of Contents

The declaration and payment of dividends to holders of our common stock will be at the discretion of our Board of Directors in accordance with applicable law after taking into account various factors, including our financial condition, operating results, current and anticipated cash needs, cash flows available in the United States, impact on our effective tax rate, indebtedness, legal requirements and other factors that our Board of Directors deems relevant. In addition, the instruments governing our indebtedness may limit our ability to pay dividends. Therefore, no assurance is given that we will pay any dividends to our common stockholders or as to the amount of any such dividends if our Board of Directors determines to do so.

Because we are a holding company, our ability to pay cash dividends on our common stock will depend on the receipt of dividends or other distributions from certain of our subsidiaries.

Stock Performance Graph[a]

The graph below compares the cumulative total shareholder return on an investment in our common stock, the S&P 500 Index and the S&P 500 Pharmaceuticals Index for the period from our initial public offering through the year ended December 31, 2017. The shareholder return shown on the graph is not necessarily indicative of future performance, and we do not make or endorse any predictions as to future shareholder returns.

The graph assumes the investment of $100 on February 1, 2013, in our common stock, the S&P 500 Index and the S&P 500 Pharmaceuticals Index and assumes dividends, if any, are reinvested.

COMPARISON OF CUMULATIVE TOTAL RETURN

Among Zoetis Inc., the S&P 500 Index and the S&P 500 Pharmaceuticals Index

	February 1, 2013	June 30, 2013	December 31, 2013	June 29, 2014	December 31, 2014	June 28, 2015	December 31, 2015	July 3, 2016	December 31, 2016	July 2, 2017	December 31, 2017
Zoetis Inc.	$100	$99.81	$106.07	$105.56	$140.84	$159.73	$157.98	$157.42	$177.95	$208.55	$241.21
S&P 500	$100	$107.14	$124.61	$133.55	$141.67	$146.06	$143.63	$149.46	$160.81	$175.83	$195.92
S&P 500 Pharmaceuticals Index	$100	$109.67	$125.16	$140.83	$152.97	$166.53	$161.82	$169.39	$159.29	$175.62	$179.31

[a] This section is not “soliciting material,” is not deemed “filed” with the SEC and is not to be incorporated by reference in any filing of Zoetis under the Securities Act of 1933, as amended, or the Exchange Act whether made before or after the date hereof and irrespective of any general incorporation language contained in any such filing.

Table of Contents

Item 6. Selected Financial Data.

The following table sets forth our selected historical consolidated and combined financial data for the periods indicated.

The selected consolidated statements of income data for the years ended December 31, 2017, 2016 and 2015, and the selected consolidated balance sheet data as of December 31, 2017 and 2016 presented below have been derived from our audited consolidated financial statements included in Item 8. Financial Statements and Supplementary Data. The selected historical consolidated statements of income data for the years ended December 31, 2014 and 2013, and the selected historical consolidated balance sheet data as of December 31, 2015, 2014 and 2013 presented below has been derived from our audited financial statements not included in this 2017 Annual Report.

You should read the selected historical consolidated and combined financial data set forth below in conjunction with Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations and our consolidated financial statements and notes thereto included in Item 8. Financial Statements and Supplementary Data.

	Year Ended December 31,[a]				
(MILLIONS, EXCEPT PER SHARE AMOUNTS)	2017	2016	2015	2014	2013
Statement of income data:					
Revenue	$ 5,307	$ 4,888	$ 4,765	$ 4,785	$ 4,561
Net income attributable to Zoetis	864	821	339	583	504
Balance sheet data:					
Total assets	$ 8,586	$ 7,649	$ 7,913	$ 6,588	$ 6,536
Long-term obligations	4,953	4,468	4,463	3,624	3,620
Other data (unaudited):					
Adjusted net income[b]	$ 1,185	$ 975	$ 889	$ 790	$ 709
Earnings per share attributable to Zoetis Inc. stockholders:					
Basic	$ 1.76	$ 1.66	$ 0.68	$ 1.16	$ 1.01
Diluted	$ 1.75	$ 1.65	$ 0.68	$ 1.16	$ 1.01
Dividends declared per common share	$ 0.441	$ 0.390	$ 0.344	$ 0.299	$ 0.267
Weighted average shares outstanding (in thousands):					
Basic	489,918	495,715	499,707	501,055	500,002
Diluted	493,161	498,225	502,019	502,025	500,317

Certain amounts may reflect rounding adjustments.

(a) Starting in 2015, includes the acquisitions of Pharmaq and certain assets from Abbott Animal Health.

(b) Adjusted net income (a non-GAAP financial measure) is defined as reported net income attributable to Zoetis excluding purchase accounting adjustments, acquisition-related costs and certain significant items. Management uses adjusted net income, among other factors, to set performance goals and to measure the performance of the overall company, as described in Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations—Adjusted net income. We believe that investors' understanding of our performance is enhanced by disclosing this performance measure. Reconciliations of U.S. GAAP reported net income attributable to Zoetis to non-GAAP adjusted net income for the years ended December 31, 2017, 2016 and 2015 are provided in Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations—Adjusted net income. The adjusted net income measure is not, and should not be viewed as, a substitute for U.S. GAAP reported net income attributable to Zoetis.

Table of Contents

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

Introduction

Our management's discussion and analysis of financial condition and results of operations (MD&A) is provided to assist readers in understanding our performance, as reflected in the results of our operations, our financial condition and our cash flows. This MD&A should be read in conjunction with our consolidated financial statements and notes to consolidated financial statements included in Item 8. Financial Statements and Supplementary Data. The discussion in this MD&A contains forward-looking statements that involve substantial risks and uncertainties. Our future results could differ materially from historical performance and from those anticipated in the forward-looking statements as a result of various factors such as those discussed in Item 1A. Risk Factors and Forward-looking statements and factors that may affect future results sections of this MD&A.

Overview of our business

We are a global leader in the discovery, development, manufacture and commercialization of animal health medicines and vaccines, with a focus on both livestock and companion animals. For more than 60 years we have been committed to enhancing the health of animals and bringing solutions to our customers who raise and care for them.

We manage our operations through two geographic operating segments: the United States (U.S.) and International. Within each of these operating segments, we offer a diversified product portfolio for both livestock and companion animal customers in order to capitalize on local and regional trends and customer needs. See Notes to Consolidated Financial Statements—Note 18. Segment, Geographic and Other Revenue Information.

We directly market our products to veterinarians and livestock producers located in approximately 45 countries across North America, Europe, Africa, Asia, Australia and South America, and are a market leader in nearly all of the major regions in which we operate. Through our efforts to establish an early and direct presence in many emerging markets, such as Brazil, China and Mexico, we believe we are the largest animal health medicines and vaccines business as measured by revenue across emerging markets as a whole. 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.

We believe our investments in one of the industry's largest sales organizations, including our extensive network of technical and veterinary operations specialists, our high-quality manufacturing and reliability of supply, and our long track record of developing products that meet customer needs, has led to enduring and valued relationships with our customers. Our research and development (R&D) efforts enable us to deliver innovative products to address unmet needs and evolve our product lines so they remain relevant for our customers. Additionally, our management team's focus on improving operational and cost efficiencies increases the likelihood of achieving our core growth strategies and enhancing long-term value for our shareholders.

A summary of our 2017 performance compared with the comparable 2016 and 2015 periods follows:

	Years Ended December 31,			% Change	
(MILLIONS OF DOLLARS)	2017	2016	2015	17/16	16/15
Revenue	$5,307	$4,888	$4,765	9	3
Net income attributable to Zoetis	864	821	339	5	*
Adjusted net income[(a)]	1,185	975	889	22	10

* Calculation not meaningful.

(a) Adjusted net income is a non-GAAP financial measure. See the Adjusted net income section of this MD&A for more information.

Our operating environment

Industry

The animal health industry, which focuses on both livestock and companion animals, is a growing industry that impacts billions of people worldwide. The primary livestock species for the production of animal protein are cattle (both beef and dairy), swine, poultry, fish and sheep. Livestock health and production are essential to meeting the growing demand for animal protein of a global population. Factors influencing growth in demand for livestock medicines and vaccines include:

- human population growth and increasing standards of living, particularly in many emerging markets;
- increasing demand for improved nutrition, particularly animal protein;
- natural resource constraints, such as scarcity of arable land, fresh water and increased competition for cultivated land, resulting in fewer resources that will be available to meet this increased demand for animal protein;
- increasing urbanization; and
- increased focus on food safety and food security.

The primary companion animal species are dogs, cats and horses. Factors influencing growth in demand for companion animal medicines and vaccines include:

- economic development and related increases in disposable income, particularly in many emerging markets;
- increasing pet ownership; and

Table of Contents

- companion animals living longer, increasing medical treatment of companion animals and advances in companion animal medicines and vaccines.

Product development initiatives

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. We believe we are an industry leader in animal health R&D, with a track record of generating new products and product lifecycle innovation. The majority of our R&D programs focus on product lifecycle innovation, which is defined as R&D programs that leverage existing animal health products by adding new species or claims, achieving approvals in new markets or creating new combinations and reformulations.

Perceptions of product quality, safety and reliability

We believe that animal health customers value high-quality manufacturing and reliability of supply. The importance of quality and safety concerns to pet owners, veterinarians and livestock producers also contributes to animal health brand loyalty, which we believe often continues after the loss of patent-based and regulatory exclusivity. We depend on positive perceptions of the safety and quality of our products by our customers, veterinarians and end-users.

In addition, negative beliefs about animal health products generally could impact demand for our products. For example, the issue of the potential transfer of increased antibacterial resistance in bacteria from food-producing animals to human pathogens, and the causality of that transfer, continue to be the subject of global scientific and regulatory discussion. Antibacterials refer to small molecules that can be used to treat or prevent bacterial infections and are a sub-categorization of the products that make up our anti-infectives and medicated feed additives portfolios. In some countries, this issue has led to government restrictions and bans on the use of specific antibacterials in some food-producing animals, regardless of the route of administration (in feed or injectable). These restrictions are more prevalent in countries where animal protein is plentiful and governments are willing to take action even when there is scientific uncertainty. Our total revenue attributable to antibacterials for livestock was approximately $1.2 billion for the year ended December 31, 2017.

We cannot predict whether antibacterial resistance concerns will result in additional restrictions or bans, expanded regulations, public pressure to discontinue or reduce use of antibacterials in food-producing animals or increased consumer preference for antibiotic-free protein.

The overall economic environment

In addition to industry-specific factors, we, like other businesses, face challenges related to global economic conditions. Growth in both the livestock and companion animal sectors is driven by overall economic development and related growth, particularly in many emerging markets. In recent years, certain of our customers and suppliers have been affected directly by economic downturns, which decreased the demand for our products and, in some cases, hindered our ability to collect amounts due from customers.

The cost of medicines and vaccines to our livestock producer customers is small relative to other production costs, including feed, and the use of these products is intended to improve livestock producers' economic outcomes. As a result, demand for our products has historically been more stable than demand for other production inputs. Similarly, industry sources have reported that pet owners indicated a preference for reducing spending on other aspects of their lifestyle, including entertainment, clothing and household goods, before reducing spending on pet care. While these factors have mitigated the impact of recent downturns in the global economy, further economic challenges could increase cost sensitivity among our customers, which may result in reduced demand for our products, which could have a material adverse effect on our operating results and financial condition.

Competition

The animal health industry is competitive. Although our business is the largest by revenue in the animal health medicines and vaccines industry, we face competition in the regions in which we operate. 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 to veterinary professionals, pet owners and livestock producers. Our competitors include the animal health businesses of large pharmaceutical companies and specialty animal health businesses. In recent years, there has been an increase in consolidation in the animal health industry. There are also several new start-up companies working in the animal health area. In addition to competition from established market participants, there could be new entrants to the animal health medicines and vaccines industry in the future. In certain markets, we also compete with companies that produce generic products, but the level of competition from generic products varies from market to market. For example, the level of generic competition is higher in Europe and certain emerging markets than in the United States.

Weather conditions and the availability of natural resources

The animal health industry and demand for many of our animal health products in a particular region are affected by weather conditions, as usage of our products follows 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.

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.

Furthermore, livestock 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 and livestock producers may purchase less of our products.

For example, drought conditions could negatively impact, among other things, the supply of corn and the availability of grazing pastures. A decrease in harvested corn results in higher corn prices, which could negatively impact the profitability of livestock producers of cattle, pork and poultry. Higher corn prices and reduced availability of grazing pastures contribute to reductions in herd or flock sizes that in turn result in less spending on animal health products. As such, a prolonged drought could have a material adverse impact on our operating results and financial condition. Factors

influencing the magnitude and timing of effects of a drought on our performance include, but may not be limited to, weather patterns and herd management decisions.
Disease outbreaks
Sales of our livestock products could be adversely affected by the outbreak of disease carried by animals. Outbreaks of disease 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 products. Also, 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. Alternatively, sales of products that treat specific disease outbreaks may increase.
Manufacturing and supply
In order to sell our products, we must be able to produce and ship our products in sufficient quantities. 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 in delays, inventory shortages, unanticipated costs, product recalls, product liability and/or regulatory action. In addition, a number of factors could cause production interruptions that could result in launch delays, inventory shortages, recalls, unanticipated costs or issues with our agreements under which we supply third parties. 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 increase the potential for capacity imbalances.
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 100 countries and, as a result, our revenue is influenced by changes in foreign exchange rates. For the year ended December 31, 2017, approximately 47% of our revenue was denominated in foreign currencies. We seek to manage our foreign exchange risk, in part, through operational means, including managing same-currency revenue in relation to same-currency costs and same-currency assets in relation to same-currency liabilities. As we operate in multiple foreign currencies, including the Australian dollar, Brazilian real, Canadian dollar, Chinese yuan, euro, U.K. pound and other currencies, changes in those currencies relative to the U.S. dollar will impact our revenue, cost of goods and expenses, and consequently, net income. Exchange rate fluctuations may also have an impact beyond our reported financial results and directly impact operations. These fluctuations may affect the ability to buy and sell our goods and services between markets impacted by significant exchange rate variances. For the year ended December 31, 2017, approximately 53% of our total revenue was in U.S. dollars. Our year-over-year revenue growth was favorably impacted by 1% from changes in foreign currency values relative to the U.S. dollar.
In 2015, we recorded a net remeasurement loss of $89 million on bolivar-denominated net monetary assets, primarily related to cash deposits in Venezuela. This loss was recorded as a result of our evaluation of evolving economic conditions in Venezuela, including the devaluation of the Venezuelan bolivar in 2013 and the subsequent changes to Venezuela's foreign currency exchange mechanisms, in addition to our expectation of Venezuela's responses to changes in its economy, and continued volatility.
Operational efficiency program and supply network strategy
During 2015, we launched a comprehensive operational efficiency program, which was incremental to the previously announced supply network strategy. These initiatives have focused on reducing complexity in our product portfolios through the elimination of approximately 5,000 product stock keeping units (SKUs), changing our selling approach in certain markets, reducing our presence in certain countries, and planning to sell or exit 10 manufacturing sites over a long term period. As of December 31, 2017, we divested or exited three U.S. manufacturing sites, four international manufacturing sites, and our 55 percent ownership share of a Taiwan joint venture, inclusive of its related manufacturing site. We are also continuing to optimize our resource allocation and efficiency by reducing resources associated with non-customer facing activities and operating more efficiently as a result of less internal complexity and more standardization of processes.

As part of these initiatives, we planned to reduce certain positions through divestitures, normal attrition and involuntary terminations by approximately 2,000 to 2,500, subject to consultations with works councils and unions in certain countries. In 2016, the operations of the Guarulhos, Brazil manufacturing site, including approximately 300 employees, were transferred to us from Pfizer, which increased our range of planned reduction in certain positions to 2,300 to 2,800. Including divestitures, as of December 31, 2017, approximately 2,600 positions have been eliminated and the comprehensive operational efficiency program is substantially complete, however in the fourth quarter of 2017, we expanded the supply network strategy initiative which increases our planned reductions in certain positions by 40. We expect these additional reductions related to our supply network strategy to take place over the next twelve months, and the remainder of the reductions from the initial plan to take place through divestitures over the next several years.

For additional information, see Notes to Consolidated Financial Statements— Note 4B. Acquisitions and Divestitures: Divestitures and Note 5. Restructuring Charges and Other Costs Associated with Acquisitions and Cost-Reduction/Productivity Initiatives.

Our growth strategies

We seek to enhance the health of animals and to bring solutions to our customers who raise and care for them. We have a global presence in both developed and emerging markets and we intend to grow our business by pursuing the following core strategies:

- leverage our direct local presence and strong customer relationships—Through our direct selling commercial model, we can deepen our understanding of our customers' businesses and can encourage the adoption of more sophisticated animal health products;

Table of Contents

- further penetrate emerging markets—We seek to maximize our presence where economic development is driving increased demand for animal protein and increased demand for and spending on companion animals;
- pursue new product research and development and value-added product lifecycle innovation to extend our product portfolio—New product R&D and product lifecycle innovation enable us to deliver products to address unmet needs and evolve our product lines so they remain relevant for our customers. We leverage our strong direct presence in many regions and cost-effectively develop new products;
- remain the partner of choice for access to new products and technologies—We support cutting-edge research and secure the right to develop and commercialize new products and technologies;
- continue to provide high-quality products and improve manufacturing production margins—We believe our manufacturing and supply chain provides us with a global platform for continued expansion, including in emerging markets, and that our quality and reliability differentiate us from our competitors; and
- expand into complementary businesses to become a more complete, trusted partner in providing solutions—We believe we have the potential to generate incremental and complementary revenue, in the areas of diagnostics, genetics, devices, dairy data management, e-learning and professional consulting, which could also enhance the loyalty of our customer base and may lead to increased product sales.

Components of revenue and costs and expenses

Our revenue, costs and expenses are reported for the year ended December 31 for each year presented, except for operations outside the United States, for which the financial information is included in our consolidated financial statements for the fiscal year ended November 30 for each year presented.

Revenue

Our revenue is primarily derived from our diversified product portfolio of medicines and vaccines used to treat and protect livestock and companion animals. Generally, our products are promoted to veterinarians and livestock producers by our sales organization which includes sales representatives and technical and veterinary operations specialists, and then sold directly by us or through distributors. The depth of our product portfolio enables us to address the varying needs of customers in different species and geographies. In 2017, our top two selling products, Apoquel and the ceftiofur line, each contributed approximately 7% of our revenue, and combined with our next two top selling products, Draxxin and Revolution, these four contributed approximately 25% of our revenue. Our top ten product lines contributed 39% of our revenue. For additional information regarding our products, including descriptions of our product lines that each represented approximately 1% or more of our revenue in 2017, see Item 1. Business—Products.

Costs and expenses

Costs of sales consist primarily of cost of materials, facilities and other infrastructure used to manufacture our medicine and vaccine products and royalty expenses associated with the intellectual property of our products, when relevant.

Selling, general and administrative (SG&A) expenses consist of, among other things, the internal and external costs of marketing, promotion, advertising and shipping and handling as well as certain costs related to business technology, facilities, legal, finance, human resources, business development, public affairs and procurement.

Research and development (R&D) expenses consist primarily of project costs specific to new product R&D and product lifecycle innovation, overhead costs associated with R&D operations and investments that support local market clinical trials for approved indications and expenses related to regulatory approvals for our products. We do not disaggregate R&D expenses by research stage or by therapeutic area for purposes of managing our business.

Amortization of intangible assets consists primarily of the amortization expense for identifiable finite-lived intangible assets that have been acquired through business combinations. These assets consist of, but are not limited to, developed technology, brands and trademarks.

Restructuring charges and certain acquisition-related costs consist of all restructuring charges (those associated with acquisition activity and those associated with cost reduction/productivity initiatives), as well as costs associated with acquiring and integrating businesses. Restructuring charges are associated with employees, assets and activities that will not continue in the company. Acquisition-related costs are associated with acquiring and integrating acquired businesses, such as Pharmaq Holding AS and Abbott Animal Health (AAH) both acquired in 2015, and may include

transaction costs and expenditures for consulting and the integration of systems and processes.
Other (income)/deductions—net consist primarily of various items including net (gains)/losses on asset disposals, royalty-related income, foreign exchange translation (gains)/losses and certain asset impairment charges.
Significant accounting policies and application of critical accounting estimates
In presenting our financial statements in conformity with U.S. GAAP, we are required to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue, costs and expenses and related disclosures. For a description of our significant accounting policies, see Notes to Consolidated Financial Statements— Note 3. Significant Accounting Policies.
We believe that the following accounting policies are critical to an understanding of our consolidated financial statements as they require the application of the most difficult, subjective and complex judgments and, therefore, could have the greatest impact on our financial statements: (i) fair value; (ii) revenue; (iii) asset impairment reviews; and (iv) contingencies.

Table of Contents

Below are some of our more critical accounting estimates. See also Notes to Consolidated Financial Statements— Note 3. Significant Accounting Policies— Estimates and Assumptions for a discussion about the risks associated with estimates and assumptions.

Fair value

For a discussion about the application of fair value to our long-term debt and financial instruments, see Notes to Consolidated Financial Statements—Note 9. Financial Instruments.

For a discussion about the application of fair value to our business combinations, see Notes to Consolidated Financial Statements— Note 3. Significant Accounting Policies: Fair Value.

For a discussion about the application of fair value to our asset impairment reviews, see Asset impairment reviews below.

Revenue

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

- for sales returns, we perform calculations in each market that incorporate the following, as appropriate: local returns policies and practices; returns as a percentage of revenue; an understanding of the reasons for past returns; estimated shelf life by product; an estimate of the amount of time between shipment and return or lag time; and any other factors that could impact the estimate of future returns, product recalls, discontinuation of products or a changing competitive environment; and
- for revenue incentives, we use our historical experience with similar incentives programs to estimate the impact of such programs on revenue.

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. For further information about the risks associated with estimates and assumptions, see Notes to Consolidated Financial Statements— Note 3. Significant Accounting Policies: Estimates and Assumptions.

Asset impairment reviews

We review all of our long-lived assets for impairment indicators throughout the year and we perform detailed testing whenever impairment indicators are present. In addition, we perform impairment testing for goodwill and indefinite-lived intangible assets at least annually. When necessary, we record charges for impairments of long-lived assets for the amount by which the fair value is less than the carrying value of these assets.

Our impairment review processes are described below and in Notes to Consolidated Financial Statements— Note 3. Significant Accounting Policies: Amortization of Intangible Assets, Depreciation and Certain Long-Lived Assets and, for deferred tax assets, in Note 3. Significant Accounting Policies: Deferred Tax Assets and Liabilities and Income Tax Contingencies.

Examples of events or circumstances that may be indicative of impairment include:

- a significant adverse change in the extent or manner in which an asset is used. For example, restrictions imposed by the regulatory authorities could affect our ability to manufacture or sell a product, and
- a projection or forecast that demonstrates losses or reduced profits associated with an asset. This could result, for example, from the introduction of a competitor’s product that results in a significant loss of market share or the inability to achieve the previously projected revenue growth, or from the lack of acceptance of a product by customers.

Our impairment reviews of most of our long-lived assets depend on the determination of fair value, as defined by U.S. GAAP, and these judgments can materially impact our results of operations. A single estimate of fair value can result from a complex series of judgments about future events and uncertainties and can rely on estimates and assumptions. For information about the risks associated with estimates and assumptions, see Notes to Consolidated Financial Statements—Note 3. Significant Accounting Policies: Estimates and Assumptions.

Intangible assets other than goodwill

We test indefinite-lived intangible assets for impairment at least annually, or more frequently if impairment indicators exist, by first assessing qualitative factors to determine whether it is more likely than not that the fair value of the indefinite-lived intangible asset is less than its carrying amount. If we conclude it is more likely than not that the fair value is less than the carrying amount, a quantitative test that compares the fair value of the indefinite-lived intangible asset with its carrying value is performed. If the fair value is less than the carrying amount, an impairment loss is recognized.

As a result of our overall intangible asset impairment reviews, we recorded the following impairments of identifiable intangible assets other than goodwill, in Restructuring charges and certain acquisition-related costs and Other (income)/deductions—net, as applicable:

- In 2017, we did not have any significant intangible asset impairment charges.
- In 2016, the intangible asset impairment charges reflect approximately $1 million of finite-lived trademarks related to a canine pain management product that is no longer marketed.

Table of Contents

- In 2015, the intangible asset impairment charges reflect (i) approximately $27 million of developed technology rights due to product rationalization decisions associated with our operational efficiency initiative; and (ii) approximately $2 million of acquired in-process research and development (IPR&D) assets related to the termination of a canine oncology project.

When we are required to determine the fair value of intangible assets other than goodwill, we use an income approach, specifically the multi-period excess earnings method, also known as the discounted cash flow method. We start with a forecast of all the expected net cash flows associated with the asset, which includes the application of a terminal value for indefinite-lived assets, and then we apply an asset-specific discount rate to arrive at a net present value amount. Some of the more significant estimates and assumptions inherent in this approach include: the amount and timing of the projected net cash flows, which includes the expected impact of competitive, legal and/or regulatory forces on the projections, the impact of technological risk associated with IPR&D assets, as well as the selection of a long-term growth rate; the discount rate, which seeks to reflect the risks inherent in the projected cash flows; foreign currency fluctuations; and the tax rate, which seeks to incorporate the geographic diversity of the projected cash flows.

While all identifiable intangible assets can be impacted by events and thus lead to impairment, in general, identifiable intangible assets that are at the highest risk of impairment include IPR&D assets (approximately $224 million as of December 31, 2017). IPR&D assets are higher-risk assets because R&D is an inherently risky activity.

For a description of our accounting policy, see Notes to Consolidated Financial Statements—Note 3. Significant Accounting Policies: Amortization of Intangible Assets, Depreciation and Certain Long-Lived Assets.

Goodwill

Goodwill represents the excess of the consideration transferred over the fair value of net assets of businesses purchased and is assigned to reporting units. We test goodwill for impairment on at least an annual basis, or more frequently if impairment indicators exist, either by assessing qualitative factors to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount or by performing a quantitative assessment.

Factors considered in the qualitative assessment include general macroeconomic conditions, conditions specific to the industry and market, cost factors which could have a significant effect on earnings or cash flows, the overall financial performance of the reporting unit and whether there have been sustained declines in our share price. Additionally, we evaluate the extent to which the fair value exceeded the carrying value of the reporting unit at the date of the last quantitative assessment performed.

When performing a quantitative assessment to test for goodwill impairment we utilize the income approach, which is forward-looking, and relies primarily on internal forecasts. Within the income approach, the method that we use is the discounted cash flow method. We start with a forecast of all the expected net cash flows associated with the reporting unit, which includes the application of a terminal value, and then apply a reporting unit-specific discount rate to arrive at a net present value. Some of the more significant estimates and assumptions inherent in this approach include: the amount and timing of the projected net cash flows, which includes the expected impact of technological risk and competitive, legal and/or regulatory forces on the projections, as well as the selection of a long-term growth rate; the discount rate, which seeks to reflect the various risks inherent in the projected cash flows; and the tax rate, which seeks to incorporate the geographic diversity of the projected cash flows.

In 2017, we performed both qualitative and select quantitative impairment assessments as of October 1, 2017, which did not result in the impairment of goodwill associated with any of our reporting units.

In 2016, we performed a qualitative impairment assessment as of October 2, 2016, determined that is it not more likely than not that the fair value of our reporting units are less than the carrying amount, and therefore concluded that a quantitative fair value test was not required.

For all of our reporting units, there are a number of future events and factors that may impact future results and that could potentially have an impact on the outcome of subsequent goodwill impairment testing. For a list of these factors, see Forward-looking statements and factors that may affect future results.

For a description of our accounting policy, see Notes to Consolidated Financial Statements— Note 3. Significant Accounting Policies: Amortization of Intangible Assets, Depreciation and Certain Long-Lived Assets.

Contingencies

For a discussion about income tax contingencies, see Notes to Consolidated Financial Statements— Note 8D. Tax Matters: Tax Contingencies.

For a discussion about legal contingencies, guarantees and indemnifications, see Notes to Consolidated Financial Statement— Note 17. Commitments and Contingencies.

Analysis of the consolidated statements of income

The following discussion and analysis of our consolidated statements of income should be read along with our consolidated financial statements, and the notes thereto.

(MILLIONS OF DOLLARS)	Year Ended December 31, 2017	2016	2015	% Change 17/16	16/15
Revenue	$5,307	$4,888	$4,765	9	3
Costs and expenses:					
Cost of sales[(a)]	1,775	1,666	1,738	7	(4)
% of revenue	33 %	34 %	36 %		
Selling, general and administrative expenses[(a)]	1,334	1,364	1,532	(2)	(11)
% of revenue	25 %	28 %	32 %		
Research and development expenses[(a)]	382	376	364	2	3
% of revenue	7 %	8 %	8 %		
Amortization of intangible assets[(a)]	91	85	61	7	39
Restructuring charges and certain acquisition-related costs	19	5	320	*	(98)
Interest expense, net of capitalized interest	175	166	124	5	34
Other (income)/deductions—net	6	(2)	81	*	*
Income before provision for taxes on income	1,525	1,228	545	24	*
% of revenue	29 %	25 %	11 %		
Provision for taxes on income	663	409	206	62	99
Effective tax rate	43.5 %	33.3 %	37.8 %		
Net income before allocation to noncontrolling interests	862	819	339	5	*
Less: Net income attributable to noncontrolling interests	(2)	(2)	—	—	*
Net income attributable to Zoetis	$864	$821	$339	5	*
% of revenue	16 %	17 %	7 %		

* Calculation not meaningful.

Certain amounts and percentages may reflect rounding adjustments.

(a) Amortization expense related to finite-lived acquired intangible assets that contribute to our ability to sell, manufacture, research, market and distribute products, compounds and intellectual property is included in Amortization of intangible assets as these intangible assets benefit multiple business functions. Amortization expense related to finite-lived acquired intangible assets that are associated with a single function is included in Cost of sales, Selling, general and administrative expenses or Research and development expenses, as appropriate.

Revenue

Total revenue by operating segment was as follows:

(MILLIONS OF DOLLARS)	Year Ended December 31, 2017	2016	2015	% Change 17/16	16/15
U.S.	$2,620	$2,447	$2,328	7	5
International	2,643	2,390	2,386	11	—
Total operating segments	5,263	4,837	4,714	9	3
Contract manufacturing	44	51	51	(14)	—
Total Revenue	$5,307	$4,888	$4,765	9	3

Certain amounts and percentages may reflect rounding adjustments.

On a global basis, the mix of revenue between livestock and companion animal products was as follows:

(MILLIONS OF DOLLARS)	Year Ended December 31, 2017	2016	2015	% Change 17/16	16/15
Livestock	$3,037	$2,881	$2,958	5	(3)
Companion animal	2,226	1,956	1,756	14	11
Contract manufacturing	44	51	51	(14)	—
Total Revenue	$5,307	$4,888	$4,765	9	3

Certain amounts and percentages may reflect rounding adjustments.

Table of Contents

2017 vs. 2016

Total revenue increased by $419 million in 2017, compared with 2016 reflecting operational revenue growth of $406 million, or 8%. Operational revenue growth (a non-GAAP financial measure) is defined as revenue growth excluding the impact of foreign exchange. Operational revenue growth was comprised primarily of the following:

- increased sales of our dermatology portfolio and new product launches, which contributed approximately 7%; and
- growth of our in-line products, which contributed approximately 2%, of which volume comprised 1% and price comprised 1%,

partially offset by:

- product rationalizations as part of the operational efficiency initiative, which resulted in a decline of approximately 1%.

Foreign exchange increased our reported revenue growth by approximately 1%.

2016 vs. 2015

Total revenue increased by $123 million in 2016, compared with 2015, reflecting operational revenue growth of $250 million, or 5%. Operational revenue growth was comprised primarily of the following:

- increased sales of Apoquel® and new product launches, which contributed approximately 5%;
- growth of our in-line products, which contributed approximately 3%, of which price comprised 2% and volume comprised 1%; and
- recent acquisitions, primarily Pharmaq and the acquisition of certain assets of Abbott Animal Health, which contributed approximately 2%,

partially offset by:

- our product and market rationalization as part of the operational efficiency initiative, which resulted in a decline of approximately 5%.

Foreign exchange reduced our reported revenue growth by approximately 2%.

Costs and Expenses

Cost of sales

	Year Ended December 31,			% Change	
(MILLIONS OF DOLLARS)	2017	2016	2015	17/16	16/15
Cost of sales	$1,775	$1,666	$1,738	7	(4)
% of revenue	33%	34%	36%		

Certain amounts and percentages may reflect rounding adjustments.

2017 vs. 2016

Cost of sales increased $109 million, or 7%, in 2017 compared with 2016, primarily as a result of:

- an increase in sales volume;
- an increase in manufacturing and supply costs; and
- unfavorable foreign exchange,

partially offset by:

- a decrease in inventory obsolescence, scrap and other charges;
- the nonrecurrence of charges reflecting fair value adjustments to inventory related to the acquisition of Pharmaq; and
- favorable product mix.

2016 vs. 2015

Cost of sales decreased $72 million, or 4%, in 2016 compared with 2015, primarily as a result of:

- favorable product mix;
- favorable foreign exchange;
- a reduction in the amount of costs related to becoming an independent public company;
- lower global manufacturing and supply costs; and
- business model changes in Venezuela,

partially offset by:

- the inclusion of the cost of products for Pharmaq, as well as charges reflecting fair value adjustments to inventory related to the acquisition of Pharmaq;
- an increase in sales volume; and
- an increase in inventory obsolescence, scrap and other charges.

Table of Contents

Selling, general and administrative expenses

	Year Ended December 31,			% Change	
(MILLIONS OF DOLLARS)	2017	2016	2015	17/16	16/15
Selling, general and administrative expenses	$1,334	$1,364	$1,532	(2)	(11)
% of revenue	25 %	28 %	32 %		

Certain amounts and percentages may reflect rounding adjustments.

2017 vs. 2016

SG&A expenses decreased $30 million, or 2%, in 2017 compared with 2016, primarily as a result of:

- the nonrecurrence of additional costs related to becoming an independent public company;
- a reduction in marketing and general and administrative expense driven by our operational efficiency initiative; and
- a reduction in consulting charges relating to our operational efficiency initiative,

partially offset by:

- higher advertising and promotional spending associated with new products and Apoquel®.

2016 vs. 2015

SG&A expenses decreased $168 million, or 11%, in 2016 compared with 2015, primarily as a result of:

- a reduction in marketing and general and administrative expense driven by our operational efficiency initiative;
- a reduction in the amount of additional costs related to becoming an independent public company;
- favorable foreign exchange; and
- a reduction in consulting charges relating to our operational efficiency initiative,

partially offset by:

- higher advertising and promotional spending associated with new products;
- the inclusion of Pharmaq; and
- an increase in depreciation associated with the implementation of our enterprise resource planning system.

Research and development expenses

	Year Ended December 31,			% Change	
(MILLIONS OF DOLLARS)	2017	2016	2015	17/16	16/15
Research and development expenses	$382	$376	$364	2	3
% of revenue	7 %	8 %	8 %		

Certain amounts and percentages may reflect rounding adjustments.

2017 vs. 2016

R&D expenses increased $6 million, or 2%, in 2017 compared with 2016, primarily as a result of:

- the inclusion of a veterinary diagnostics business acquired in 2016 and an Irish biologic therapeutics company in 2017,

partially offset by:

- a reduction in spending driven by our operational efficiency initiative.

2016 vs. 2015

R&D expenses increased $12 million, or 3%, in 2016 compared with 2015, primarily as a result of:

- higher development expenses for late-stage projects; and
- the inclusion of Pharmaq;

partially offset by:

- a reduction in spending driven by our operational efficiency initiative.

Table of Contents

Amortization of intangible assets

	Year Ended December 31,			% Change	
(MILLIONS OF DOLLARS)	2017	2016	2015	17/16	16/15
Amortization of intangible assets	$91	$ 85	$ 61	7	39

Certain amounts and percentages may reflect rounding adjustments.

2017 vs. 2016

Amortization of intangible assets increased $6 million