

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D. C. 20549
FORM 10-K

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

For the fiscal year ended December 31, 2018

Commission file number 1-44



ARCHER-DANIELS-MIDLAND COMPANY
(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of
incorporation or organization)

41-0129150

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

**77 West Wacker Drive, Suite 4600
Chicago, Illinois**

(Address of principal executive offices)

60601

(Zip Code)

312-634-8100

(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, no par value

New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act: **None**

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☒
No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act. Yes ☐ No ☒

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

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

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of 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 definition of "large accelerated filer", "accelerated filer", "smaller reporting company", and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large Accelerated Filer ☒

Accelerated Filer ☐

Non-accelerated Filer ☐

Smaller Reporting Company ☐

Emerging Growth Company ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

State the aggregate market value of the voting and non-voting common equity held by non-affiliates computed by reference to the price at which the common equity was last sold, or the average bid and asked price of such common equity, as of the last business day of the registrant's most recently completed second fiscal quarter.

Common Stock, no par value— \$25.5 billion
(Based on the closing sale price of Common Stock as reported on the New York Stock Exchange
as of June 29, 2018)

Indicate the number of shares outstanding of each of the registrant's classes of common stock, as of the latest practicable date.

Common Stock, no par value— 560,088,795 shares
(February 14, 2019)

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the proxy statement for the annual meeting of stockholders to be held May 2, 2019 , are incorporated by reference into Part III of this Form 10-K.

SAFE HARBOR STATEMENT

This Form 10-K contains forward-looking information that is subject to certain risks and uncertainties that could cause actual results to differ materially from those projected, expressed, or implied by such forward-looking information. In some cases, you can identify forward-looking statements by our use of words such as "may", "will", "should", "anticipates", "believes", "expects", "plans", "future", "intends", "could", "estimate", "predict", "potential" or "contingent", the negative of these terms or other similar expressions. The Company's actual results could differ materially from those discussed or implied herein. Factors that could cause or contribute to such differences include, but are not limited to, those discussed in this Form 10-K for the year ended December 31, 2018 . Among these risks are legislative acts; changes in the prices of food, feed, and other commodities, including gasoline; and macroeconomic conditions in various parts of the world. To the extent permitted under applicable law, the Company assumes no obligation to update any forward-looking statements as a result of new information or future events.

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PART I

Item 1. BUSINESS

Company Overview

Archer-Daniels-Midland Company (the Company) was incorporated in Delaware in 1923, successor to the Daniels Linseed Co. founded in 1902. The Company is one of the world's leading producers of food and beverage ingredients, and other products made from a variety of agricultural products. The Company's products include natural flavors and colors, health and nutrition products, vegetable oil, corn sweeteners, flour, animal feed, and biofuels. The Company has an extensive global grain elevator and transportation network to procure, store, clean, and transport agricultural commodities, such as oilseeds, corn, wheat, milo, oats, and barley, as well as products derived from those inputs. The Company has significant investments in joint ventures. The Company expects to benefit from these investments, which typically aim to expand or enhance the Company's market for its products or offer other benefits including, but not limited to, geographic or product line expansion.

The Company's vision is to be the most admired global agribusiness and nutrition company while creating value and growing responsibly. The Company's growth strategy is spread across its five key growth platforms: Taste, Nutrition, Animal Nutrition, Health and Wellness, and Carbohydrates. The Company desires to execute this vision and these strategies by conducting its business in accordance with its core values of operating with integrity, treating others with respect, achieving excellence, being resourceful, displaying teamwork, and being responsible.

As the world population grows, so does demand for quality foods, feed ingredients for livestock, alternative fuels, and environmentally friendly alternatives to traditional chemicals. As one of the world's leading agricultural and food ingredient processors, the Company plays a pivotal role in meeting all of these needs in sustainable ways. The Company produces the food ingredients, biofuels, and other products that manufacturers around the world use to provide wholesome food and a better life to millions of people around the globe.

Segment Descriptions

The Company's operations are organized, managed, and classified into four reportable business segments: Origination, Oilseeds, Carbohydrate Solutions, and Nutrition. Each of these segments is organized based upon the nature of products and services offered. The Company's remaining operations are not reportable business segments, as defined by the applicable accounting standard, and are classified as Other. Financial information with respect to the Company's reportable business segments is set forth in Note 17 of "Notes to Consolidated Financial Statements" included in Item 8 herein, "Financial Statements and Supplementary Data" (Item 8).

Effective January 1, 2018, the Company changed its segment reporting to reflect changes in its operating structure. The Company's new segments are Origination (formerly Agricultural Services), Oilseeds (formerly Oilseeds Processing), Carbohydrate Solutions (formerly Corn Processing), and Nutrition (formerly Wild Flavors and Specialty Ingredients). The European origination business previously reported in Oilseeds is now managed by leaders in Origination to better coordinate continental trading activities. Carbohydrate Solutions now includes the results of ADM Milling, which were previously reported in Origination. In addition, the Company also moved the segment reporting of its renewable chemicals business from Carbohydrate Solutions to Oilseeds effective July 1, 2018. Nutrition now includes the results of Animal Nutrition and certain product lines previously reported in Carbohydrate Solutions as well as certain product lines previously reported in Oilseeds.

Origination

The Origination segment utilizes its extensive global grain elevator and transportation networks and port operations to buy, store, clean, and transport agricultural commodities, such as oilseeds, corn, wheat, milo, oats, rice, and barley, and resells these commodities primarily as food and feed ingredients and as raw materials for the agricultural processing industry. The Origination segment also includes international agricultural commodities merchandising and handling activities managed through a global trade desk based in Rolle, Switzerland. The Origination segment's grain sourcing, handling, and transportation network provides reliable and efficient services to the Company's customers and agricultural processing operations. The Origination segment's transportation network capabilities include barge, ocean-going vessel, truck, rail, and container freight services. The Origination segment also includes the activities related to structured trade finance, the import and distribution of agricultural feed products, and the Company's share of the results of its Pacifcor joint venture.

Item 1. BUSINESS (Continued)

The Company has a 32.2% interest in Pacifcor (formerly Kalama Export Company LLC). Pacifcor owns and operates a grain export elevator in Kalama, Washington and a grain export elevator in Portland, Oregon.

Oilseeds

The Oilseeds segment includes global activities related to the origination, merchandising, crushing, and further processing of oilseeds such as soybeans and soft seeds (cottonseed, sunflower seed, canola, rapeseed, and flaxseed) into vegetable oils and protein meals. Oilseeds products produced and marketed by the Company include ingredients for the food, feed, energy, and industrial products industries. Crude vegetable oils produced by the segment's crushing activities are sold "as is" or are further processed by refining, blending, bleaching, and deodorizing into salad oils. Salad oils are sold "as is" or are further processed by hydrogenating and/or interesterifying into margarine, shortening, and other food products. Partially refined oils are used to produce biodiesel and glycols or are sold to other manufacturers for use in chemicals, paints, and other industrial products. Oilseed protein meals are principally sold to third parties to be used as ingredients in commercial livestock and poultry feeds. In South America, the Oilseeds segment includes origination and merchandising activities as adjuncts to its oilseeds processing assets. These activities include a network of grain elevators, port facilities, and transportation assets used to buy, store, clean, and transport grains and oilseeds. The Oilseeds segment is a major supplier of peanuts, tree nuts, and peanut-derived ingredients to both the U.S. and export markets. In North America, cottonseed flour is produced and sold primarily to the pharmaceutical industry and cotton cellulose pulp is manufactured and sold to the chemical, paper, and other industrial markets. The Oilseeds segment also includes the Company's share of the results of its equity investment in Wilmar International Limited (Wilmar) and its share of the results of its Stratas Foods LLC, Edible Oils Limited, and Olenex Sarl (Olenex) joint ventures. In June 2018, the Company invested in SoyVen, a 50% joint venture with Cargill, to provide soybean meal and oil for customers in Egypt. In July 2018, the Company completed the sale of its oilseeds operations in Bolivia to Inversiones Piuranas S.A. In December 2018, the Company completed the acquisition of certain soybean origination, crushing, refining, and bottling assets from Brazil-based Algar Agro.

The Company has a 24.9% equity interest in Wilmar, a Singapore publicly listed company. Wilmar is a leading agribusiness group in Asia engaged in the businesses of oil palm cultivation, oilseeds crushing, edible oils refining, packaged oils and foods, sugar milling and refining, specialty fats, oleo chemicals, biodiesel and fertilizers manufacturing, and grains processing.

Stratas Foods LLC, a joint venture between the Company and ACH Jupiter, LLC, a subsidiary of Associated British Foods, procures, packages, and sells edible oils in North America. The Company has a 50% ownership interest in this joint venture.

The Company has a 50% interest in Edible Oils Limited, a joint venture between the Company and Princes Limited to procure, package, and sell edible oils in the United Kingdom. The Company also formed a joint venture with Princes Limited in Poland to procure, package, and sell edible oils in Poland, the Czech Republic, Slovakia, Hungary, and Austria.

Olenex Sarl (Olenex), a joint venture between the Company and Wilmar, produces and sells a comprehensive portfolio of edible oils and fats to customers around the globe. In addition, Olenex markets refined oils and fats from the Company's plants in the Czech Republic, Germany, the Netherlands, Poland, and the U.K. The Company has a 37.5% ownership interest in this joint venture.

The Company is a major supplier of agricultural commodity raw materials to Wilmar, Stratas Foods LLC, Edible Oils Limited, SoyVen, and Olenex.

Item 1. BUSINESS (Continued)

Carbohydrate Solutions

The Company's Carbohydrate Solutions segment is engaged in corn and wheat wet and dry milling and other activities. The Carbohydrate Solutions segment converts corn and wheat into sweeteners, corn and wheat starches, wheat flour, and bioproducts. Its products include ingredients used in the food and beverage industry including sweeteners, starch, syrup, glucose, flour, and dextrose. Dextrose and starch are used by the Carbohydrate Solutions segment as feedstocks for its bioproducts operations. By fermentation of dextrose, the Carbohydrate Solutions segment produces alcohol and other food and animal feed ingredients. Ethyl alcohol is produced by the Company for industrial use as ethanol or as beverage grade. Ethanol, in gasoline, increases octane and is used as an extender and oxygenate. Corn gluten feed and meal, as well as distillers' grains, are produced for use as animal feed ingredients. Corn germ, a by-product of the wet milling process, is further processed into vegetable oil and protein meal. Other Carbohydrate Solutions products include citric acids which are used in various food and industrial products. This segment also includes the Company's share of the results of its equity investments in Hungrana Ltd., Almidones Mexicanos S.A., and Red Star Yeast Company, LLC. In June 2018, the Company completed the acquisition of a 50% equity stake in the starches and sweeteners business of Russian-based Aston Foods and Food Ingredients.

Hungrana Ltd., in which the Company owns a 50% interest, operates a wet corn milling plant in Hungary.

Almidones Mexicanos S.A., in which the Company has a 50% interest, operates a wet corn milling plant in Mexico.

Red Star Yeast Company, LLC, a joint venture in which the Company has a 40% interest, produces and sells fresh and dry yeast in the United States and Canada.

Nutrition

The Nutrition segment engages in the manufacturing, sale, and distribution of specialty products including natural flavor ingredients, flavor systems, natural colors, proteins, emulsifiers, soluble fiber, polyols, hydrocolloids, natural health and nutrition products, and other specialty food and feed ingredients. The Nutrition segment includes the activities related to the procurement, processing, and distribution of edible beans. The Nutrition segment also includes activities related to the processing and distribution of formula feeds and animal health and nutrition products and the manufacture of contract and private label pet treats and foods. In August 2018, the Company completed the acquisition of Probiotics International Limited, a British-based provider of probiotic supplements for human, pet, and production-animal uses, and Rodelle Inc., a premium originator, processor and supplier of vanilla products. In January 2019, the Company completed the acquisition of Neovia, a French-based global provider of value-added animal nutrition solutions, with 72 production facilities and a presence in 25 countries.

Other

Other includes the Company's remaining operations, primarily its financial business units, related to futures commission and insurance activities.

ADM Investor Services, Inc., a wholly owned subsidiary of the Company, is a registered futures commission merchant and a clearing member of all principal commodities exchanges in the U.S. ADM Investor Services International, Limited, a member of several derivative and commodity exchanges and clearing houses in Europe, ADMIS Hong Kong Limited, and ADMIS Singapore Pte. Limited are wholly owned subsidiaries of the Company offering brokerage services in Europe and Asia.

Insurance activities include Agrinational Insurance Company (Agrinational) and its subsidiaries. Agrinational, a wholly owned subsidiary of the Company, provides insurance coverage for certain property, casualty, marine, credit, and other miscellaneous risks of the Company. Agrinational also participates in certain third-party reinsurance arrangements and retained a portion of the crop insurance risk written by ADM Crop Risk Services, a wholly owned subsidiary engaged in the selling and servicing of crop insurance policies to farmers, which was sold on May 1, 2017 to Validus Holdings, a global group of insurance and reinsurance companies.

Corporate

Compagnie Industrielle et Financiere des Produits Amylaces SA (Luxembourg) and affiliates (CIP), a joint venture in which the Company has a 43.7% interest, targets investments in food, feed ingredients, and bioproducts businesses.

Item 1. BUSINESS (Continued)***Methods of Distribution***

The Company's products are distributed mainly in bulk from processing plants or storage facilities directly to customers' facilities. The Company has developed a comprehensive transportation capability to efficiently move both commodities and processed products virtually anywhere in the world. The Company owns or leases a significant portion of the trucks, trailers, railroad tank and hopper cars, river barges, towboats, and ocean-going vessels used to transport the Company's products to its customers.

Concentration of Revenues by Product

The following products accounted for 10% or more of revenues for the following periods:

	% of Revenues		
	Year Ended December 31		
	2018	2017	2016
Soybeans	16%	17%	17%
Soybean Meal	14%	13%	13%
Corn	12%	10%	10%

Status of New Products

The Company continues to expand the size and global reach of its business through the development of new products. Acquisitions, especially in the Nutrition segment, expand the Company's ability to serve customers' evolving needs through its offering of natural flavor and ingredient products. The Company does not expect any individual new product to have a significant impact on the Company's revenues in 2019.

Source and Availability of Raw Materials

A significant majority of the Company's raw materials are agricultural commodities. In addition, the Company sources specific fruits, vegetables, and nuts for extracts to make flavors and colors. In any single year, the availability and price of these commodities are subject to factors such as changes in weather conditions, plantings, government programs and policies, competition, changes in global demand, changes in standards of living, and global production of similar and competitive crops. The Company's raw materials are procured from thousands of growers, grain elevators, and wholesale merchants in North America, South America, EMEA, Asia, and Australia, pursuant primarily to short-term (less than one year) agreements or on a spot basis. The Company is not dependent upon any particular grower, elevator, or merchant as a source for its raw materials.

Patents, Trademarks, and Licenses

The Company owns patents, trademarks, and licenses with a net book value of \$269 million as of December 31, 2018. The Company does not consider any segment of its business to be dependent upon any single or group of patents, trademarks or licenses.

Seasonality, Working Capital Needs, and Significant Customers

Since the Company is widely diversified in global agribusiness markets, there are no material seasonal fluctuations in overall global processing volumes and the sale and distribution of its products and services. There is a degree of seasonality in the growing cycles, procurement, and transportation of the Company's principal raw materials: oilseeds, corn, wheat, and other grains.

The prices of agricultural commodities, which may fluctuate significantly and change quickly, directly affect the Company's working capital requirements. Because the Company has a higher portion of its operations in the northern hemisphere, principally North America and Europe, relative to the southern hemisphere, primarily South America, inventory levels typically peak after the northern hemisphere fall harvest and are generally lower during the northern hemisphere summer months. Working capital requirements have historically trended with inventory levels. No material part of the Company's business is dependent upon a single customer or very few customers. The Company has seasonal financing arrangements with farmers in certain countries around the world. Typically, advances on these financing arrangements occur during the planting season and are repaid at harvest.

Item 1. BUSINESS (Continued)

Competition

The Company has significant competition in the markets in which it operates based principally on price, foreign exchange rates, quality, global supply, and alternative products, some of which are made from different raw materials than those utilized by the Company. Given the commodity-based nature of many of its businesses, the Company, on an ongoing basis, focuses on managing unit costs and improving efficiency through technology improvements, productivity enhancements, and regular evaluation of the Company's asset portfolio.

Research and Development

Research and development expense during the year ended December 31, 2018, net of reimbursements of government grants, was \$141 million.

The Company's laboratories and technical centers around the world enhance its ability to interact with customers globally, not only to provide flavors, but also to support the sales of other food ingredients. The acquisition of Wild Flavors in October 2014 approximately doubled the number of scientists and technicians in research and development. Since that time, additional laboratories have been added, including food & beverages applications laboratories in Fort Collins, Colorado and Bergamo, Italy as well as expanded laboratories in Decatur, Illinois and Shanghai, China. In April 2018, the Company also opened its new enzyme development laboratory in Davis, California to advance the research and development of feed enzyme as well as enzymes for internal use.

The Company expanded its human health and nutrition portfolio in February 2017 with the acquisition of a controlling interest in Biopolis SL (Biopolis), a leading provider of probiotics and genomic services. Biopolis provides genomic sequencing capabilities for the Company's customers as well as for its internal use. Biopolis also has high through-put biological functionality testing capabilities that can be used to discover new probiotics and nutraceuticals. In January 2018, the Company announced a joint development agreement with Vland Biotech to develop and commercialize enzymes for animal feed. In August 2018, the Company further expanded its probiotics business with the acquisition of Probiotics International Limited.

ADM Ventures, which was launched by the Company in October 2016, continues to select high-potential, new product development projects from within its business units. The first internal venture funded project, a new sweetener, has been fully commercialized and is being sold in the United States by our Carbohydrate Solutions team. ADM Ventures has also made equity investments in three promising early-stage start-up companies and is looking at several others in which the Company may choose to invest.

The Company is continuing to invest in research to develop a broad range of sustainable materials with an objective to produce key intermediate materials that serve as a platform for producing a variety of sustainable packaging products. Conversion technologies include utilizing expertise in both fermentation and catalysis. The Company's current portfolio includes products that are in the early development phase and those that are close to pilot plant demonstration. The Company's project with DuPont to develop sustainable packaging solutions with improved barrier properties has progressed to a pilot production facility that opened in April 2018. This facility provides samples for customers as well as engineering data for a full-scale plant.

Environmental Compliance

During the year ended December 31, 2018, the Company spent \$42 million specifically to improve equipment, facilities, and programs for pollution control and compliance with the requirements of various environmental agencies.

There have been no material effects upon the earnings and competitive position of the Company resulting from compliance with applicable laws or regulations enacted or adopted relating to the protection of the environment.

A number of jurisdictions where the Company has operations have implemented or are in the process of implementing carbon pricing programs or regulations to reduce greenhouse gas emissions including, but not limited to, the U.S., Canada, Mexico, the E.U. and its member states, and China. The Company's operations located in countries with effective and applicable carbon pricing and regulatory programs currently meet their obligations in this regard with no significant impact on the earnings and competitive position of the Company. The Company's business could be affected in the future by additional global, regional, national, and local regulation, pricing of greenhouse gas emissions or other climate change legislation, regulation or agreements. It is difficult at this time to estimate the likelihood of passage, or predict the potential impact, of any additional legislation, regulations or

Item 1. BUSINESS (Continued)

agreements. Potential consequences of new obligations could include increased energy, transportation, raw material, and administrative costs, and may require the Company to make additional investments in its facilities and equipment.

Number of Employees

The number of full-time employees of the Company was approximately 31,600 at December 31, 2018 and 31,300 at December 31, 2017 . The net increase in the number of full-time employees is primarily related to acquisitions net of divestitures.

Available Information

The Company's website is <http://www.adm.com>. The Company makes available, free of charge, through its website, the Company's annual reports on Form 10-K; quarterly reports on Form 10-Q; current reports on Form 8-K; directors' and officers' Forms 3, 4, and 5; and amendments to those reports, if any, as soon as reasonably practicable after electronically filing such materials with, or furnishing them to, the Securities and Exchange Commission (SEC).

In addition, the Company makes available, through its website, the Company's Code of Conduct, Corporate Governance Guidelines, and the written charters of the Audit, Compensation/Succession, Nominating/Corporate Governance, and Executive Committees.

References to the Company's website address in this report are provided as a convenience and do not constitute, or should not be viewed as, an incorporation by reference of the information contained on, or available through, the website. Therefore, such information should not be considered part of this report.

The SEC maintains a website which contains reports, proxy and information statements, and other information regarding issuers that file information electronically with the SEC. The SEC's website is <http://www.sec.gov>.

Item 1A. RISK FACTORS

The Company faces risks in the normal course of business and through global, regional, and local events that could have an adverse impact on its reputation, operations, and financial performance.

Management directs a Company-wide Enterprise Risk Management (ERM) Program, with oversight from the Company's Board of Directors. The Company's Audit Committee has the delegated risk management oversight responsibility and receives updates on the risk management processes and key risk factors on a quarterly basis.

The Company, through its business unit, functional, and corporate teams, continually updates, assesses, monitors, and mitigates these and other business and compliance risks in accordance with the ERM Program and as monitored by the ERM Program team and Chief Risk Officer.

The risk factors that follow are the main risks that the ERM program focuses on to protect and enhance shareholder value through intentional risk mitigation plans based on management-defined risk limits.

Item 1A. RISK FACTORS (Continued)

The availability and prices of the agricultural commodities and agricultural commodity products the Company procures, transports, stores, processes, and merchandises can be affected by climate change, weather conditions, disease, government programs, competition, and various other factors beyond the Company's control and could adversely affect the Company's operating results.

The availability and prices of agricultural commodities are subject to wide fluctuations, including impacts from factors outside the Company's control such as changes in weather and climate, crop disease, plantings, government programs and policies, competition, and changes in global demand. The Company uses a global network of procurement, processing, and transportation assets, as well as robust communications between global commodity merchandiser teams, to continually assess price and basis opportunities. Management-established limits (including a corporate wide value-at-risk metric), with robust internal reporting, help to optimize results versus the Company's strategic plans. Additionally, the Company depends globally on agricultural producers to ensure an adequate supply of the agricultural commodities.

Reduced supply of agricultural commodities could adversely affect the Company's profitability by increasing the cost of raw materials and/or limiting the Company's ability to procure, transport, store, process, and merchandise agricultural commodities in an efficient manner. For example, a drought in Argentina in 2017 and 2018 reduced the availability of corn and soybean inventories while prices increased. High and volatile commodity prices can place more pressures on short-term working capital funding. Conversely, if supplies are abundant and crop production globally outpaces demand for more than one or two crop cycles, price volatility is somewhat diminished. This could result in reduced operating results due to the lack of supply chain dislocations and reduced market spread and basis opportunities.

Advances in technology, such as seed and crop protection, farming techniques, or speed of information flow, may reduce the significance of dislocations and arbitrage opportunities in the agricultural global markets, which may reduce the earnings potential of agricultural merchandisers and processors such as the Company.

The Company has significant competition in the markets in which it operates.

The Company faces significant competition in each of its businesses and has numerous competitors, who can be different depending upon each of the business segments in which it participates. The Company competes for the acquisition of inputs such as agricultural commodities, transportation services, and other materials and supplies, as well as for workforce and talent. Competition impacts the Company's ability to generate and increase its gross profit as a result of the following factors: Pricing of the Company's products is partly dependent upon industry processing capacity, which is impacted by competitor actions to bring idled capacity on-line, build new production capacity or execute aggressive consolidation; many of the products bought and sold by the Company are global commodities or are derived from global commodities that are highly price competitive and, in many cases, subject to substitution; significant changes in exchange rates of foreign currencies versus the U.S. dollar, particularly the currencies of major crop growing countries, could also make goods and products of these countries more competitive than U.S. products; improved yields in different crop growing regions may reduce the reliance on origination territories in which the Company has a significant presence; and continued merger and acquisition activities resulting in further consolidations could result in greater cost competitiveness and global scale of certain players in the industry, especially when acquirers are state-owned and/or backed by public funds and have profit and return objectives that may differ from publicly traded enterprises. To compete effectively, the Company focuses on improving efficiency in its production and distribution operations, developing and maintaining appropriate market presence, maintaining a high level of product safety and quality, and working with customers to develop new products and tailored solutions.

Fluctuations in energy prices could adversely affect the Company's operating results.

The Company's operating costs and the selling prices of certain finished products are sensitive to changes in energy prices. The Company's processing plants are powered principally by electricity, natural gas, and coal. The Company's transportation operations are dependent upon diesel fuel and other petroleum-based products. Significant increases in the cost of these items, including any consequences of regulation or taxation of greenhouse gases, could adversely affect the Company's production costs and operating results.

Item 1A. RISK FACTORS (Continued)

The Company has certain finished products, such as ethanol and biodiesel, which are closely related to, or may be substituted for, petroleum products, or in the case of ethanol, blended into gasoline to increase octane content. Therefore, the selling prices of ethanol and biodiesel can be impacted by the selling prices of gasoline, diesel fuel, and other octane enhancers. A significant decrease in the price of gasoline, diesel fuel, or other octane enhancers could result in a significant decrease in the selling price of the Company's ethanol and biodiesel. The Company uses derivative contracts as anticipatory hedges for both purchases of commodity inputs and sales of energy-based products in order to protect itself in the near term against these price trends and to protect and maximize processing margins.

The Company is subject to economic downturns and regional economic volatilities, which could adversely affect the Company's operating results.

The Company conducts its business and has substantial assets located in many countries and geographic areas. While 55 percent of the Company's processing plants and 61 percent of its procurement facilities are located in the United States, the Company also has significant operations in both developed areas (such as Western Europe, Canada, and Brazil) and emerging market areas. One of the Company's strategies is to expand the global reach of its core model, which may include expanding or developing its business in emerging market areas. Both developed and emerging market areas are subject to impacts of economic downturns, including decreased demand for the Company's products, and reduced availability of credit, or declining credit quality of the Company's suppliers, customers, and other counterparties. In addition, emerging market areas could be subject to more volatile operating conditions including, but not limited to, logistics limitations or delays, labor-related challenges, limitations or regulations affecting trade flows, local currency concerns, and other economic and political instability. Political fiscal instability could generate intrusive regulations in emerging markets, potentially creating unanticipated assessments of taxes, fees, increased risks of corruption, etc. Economic downturns and volatile market conditions could adversely affect the Company's operating results and ability to execute its long-term business strategies. The Company mitigates this risk in many ways, including country risk and exposure analysis, government relations and tax compliance activities, and robust ethics compliance training requirements.

The Company is subject to numerous laws, regulations, and mandates globally which could adversely affect the Company's operating results and forward strategy.

The Company does business globally, connecting crops and markets in more than 170 countries, and is required to comply with laws and regulations administered by the United States federal government as well as state, local, and non-U.S. governmental authorities in areas including: Accounting and income taxes, anti-corruption, anti-bribery, global trade, trade sanctions, environmental, product safety, and handling and production of regulated substances. The Company frequently faces challenges from U.S. and foreign tax authorities regarding the amount of taxes due. These challenges include questions regarding the timing and amount of deductions and the allocation of income among various tax jurisdictions. Any failure to comply with applicable laws and regulations or appropriately resolve these challenges could subject the Company to administrative, civil, and criminal remedies, including fines, penalties, disgorgement, injunctions, and recalls of its products, and damage to its reputation. Resolution of some of these tax disputes could take many years and interest and penalties may be accruing in the meantime, thereby significantly increasing the notional amount of the exposures.

The production of the Company's products use materials which can create emissions of certain regulated substances, including greenhouse gas emissions. The Company has programs and policies in place (e.g., Corporate Sustainability Program, No-Deforestation Policy, Environmental Policy, etc.) to help ensure compliance with laws and regulations, as any failure to comply can have serious consequences, including civil, administrative, and criminal penalties as well as a negative impact on the Company's reputation, business, cash flows, and results of operations.

In addition, changes to regulations or implementation of additional regulations - for example, the imposition of regulatory restrictions on greenhouse gases or regulatory modernization of food safety laws - may require the Company to modify existing processing facilities and/or processes which could significantly increase operating costs and adversely affect operating results.

Item 1A. RISK FACTORS (Continued)

Government policies, mandates, and regulations specifically affecting the agricultural sector and related industries; regulatory policies or matters that affect a variety of businesses; taxation policies; and political instability could adversely affect the Company's operating results.

Agricultural production and trade flows are subject to government policies, mandates, regulations, and trade agreements, including taxes, tariffs, duties, subsidies, incentives, foreign exchange rates, and import and export restrictions, including policies related to genetically modified organisms, traceability standards, product safety and labeling, renewable fuels, and low carbon fuel mandates. These policies can influence the planting of certain crops; the location and size of crop production; whether unprocessed or processed commodity products are traded; the volume and types of imports and exports; the availability and competitiveness of feedstocks as raw materials; the viability and volume of production of certain of the Company's products; and industry profitability. For example, changes in government policies or regulations of ethanol and biodiesel including, but not limited to, changes in the Renewable Fuel Standard program under the Energy Independence and Security Act of 2007 in the United States, can have an impact on the Company's operating results. International trade regulations can adversely affect agricultural commodity trade flows by limiting or disrupting trade between countries or regions. Regulations of financial markets and instruments, including the Dodd-Frank Act, Consumer Protection Act, and the European Market Infrastructure Regulation, create uncertainty and may lead to additional risks and costs, and could adversely affect the Company's futures commission merchant business and its agricultural commodity risk management practices. Future government policies may adversely affect the supply of, demand for, and prices of the Company's products; adversely affect the Company's ability to deploy adequate hedging programs; restrict the Company's ability to do business in its existing and target markets; and adversely affect the Company's revenues and operating results.

The Company's operating results could be affected by political instability and by changes in monetary, fiscal, trade, and environmental policies, laws, regulations, and acquisition approvals, creating risks including, but not limited to: Changes in a country's or region's economic or political conditions, local labor conditions and regulations, and safety and environmental regulations; reduced protection of intellectual property rights; changes in the regulatory or legal environment; restrictions on currency exchange activities; currency exchange fluctuations; burdensome taxes and tariffs; enforceability of legal agreements and judgments; adverse tax, administrative agency or judicial outcomes; and regulation or taxation of greenhouse gases. International risks and uncertainties, including changing social and economic conditions as well as terrorism, political hostilities, and war, could limit the Company's ability to transact business in these markets. There has been a recent increase in populism and nationalism in various countries around the world and the concept and benefits of free trade are being challenged. The Company has benefited from the free flow of agricultural and food and feed ingredient products from the U.S. and other sources to markets around the world. Increases in tariff and restrictive trade activities around the world (e.g., the China trade tariffs, Iran sanctions) could negatively impact the Company's ability to enter certain markets or the price of products may become less competitive in those markets.

The Company's strategy involves expanding the volume and diversity of crops it merchandises and processes, expanding the global reach of its core model, and expanding its value-added product portfolio. Government policies including, but not limited to, antitrust and competition law, trade restrictions, food safety regulations, sustainability requirements, and traceability, can impact the Company's ability to execute this strategy successfully.

The Company is subject to industry-specific risks which could adversely affect the Company's operating results.

The Company is subject to risks which include, but are not limited to, product safety or quality; shifting consumer preferences; federal, state, and local regulations on manufacturing or labeling; socially acceptable farming practices; environmental, health, and safety regulations; and customer product liability claims. The liability which could result from certain of these risks may not always be covered by, or could exceed liability insurance related to product liability and food safety matters maintained by the Company. The Company has a particularly strong capability and culture around occupational health and safety and food safety; however, risks to the Company's reputation may exist due to potential negative publicity caused by product liability, food safety, occupational health and safety, and environmental matters.

Certain of the Company's merchandised commodities and finished products are used as ingredients in livestock and poultry feed. The Company is subject to risks associated with economic, product quality, feed safety or other factors which may adversely affect the livestock and poultry businesses, including the outbreak of disease in livestock and poultry, which could adversely affect demand for the Company's products used as ingredients in feed. In addition, as the Company increases its investment in flavors and ingredients businesses, it is exposed to increased risks related to rapidly changing consumer preferences and the impacts these changes could have on the success of certain of the Company's customers.

Item 1A. RISK FACTORS (Continued)

The Company is exposed to potential business disruption including, but not limited to, disruption of transportation services, supply of non-commodity raw materials used in its processing operations, and other impacts resulting from acts of terrorism or war, natural disasters, severe weather conditions, and accidents which could adversely affect the Company's operating results.

The Company's operations rely on dependable and efficient transportation services the disruption of which could result in difficulties supplying materials to the Company's facilities and impair the Company's ability to deliver products to its customers in a timely manner. The Company relies on access to navigable rivers and waterways in order to fulfill its transportation obligations more effectively. In addition, if certain non-agricultural commodity raw materials, such as water or certain chemicals used in the Company's processing operations, are not available, the Company's business could be disrupted. Any major lack of available water for use in certain of the Company's processing operations could have a material adverse impact on operating results. Certain factors which may impact the availability of non-agricultural commodity raw materials are out of the Company's control including, but not limited to, disruptions resulting from weather, economic conditions, manufacturing delays or disruptions at suppliers, shortage of materials, interruption of energy supply, and unavailable or poor supplier credit conditions.

The assets and operations of the Company could be subject to extensive property damage and business disruption from various events which include, but are not limited to, acts of terrorism (for example, purposeful adulteration of the Company's products), war, natural disasters, severe weather conditions, accidents, explosions, and fires. The Company is continuing to enhance and deploy additional food safety and security procedures and controls to appropriately mitigate the risks of any adulteration of the Company's products in the supply chain and finished products in production and distribution networks. In addition, the Company conforms to management systems, such as International Organization for Standardization (ISO) or other recognized global standards.

The Company's business is capital-intensive in nature and the Company relies on cash generated from its operations and external financing to fund its growth and ongoing capital needs. Limitations on access to external financing could adversely affect the Company's operating results.

The Company requires significant capital, including continuing access to credit markets, to operate its current business and fund its growth strategy. The Company's working capital requirements, including margin requirements on open positions on futures exchanges, are directly affected by the price of agricultural commodities, which may fluctuate significantly and change quickly. The Company also requires substantial capital to maintain and upgrade its extensive network of storage facilities, processing plants, refineries, mills, ports, transportation assets, and other facilities to keep pace with competitive developments, technological advances, regulations, and changing safety standards in the industry. Moreover, the expansion of the Company's business and pursuit of acquisitions or other business opportunities may require significant amounts of capital. Access to credit markets and pricing of the Company's capital is dependent upon maintaining sufficient credit ratings from credit rating agencies. Sufficient credit ratings allow the Company to access cost competitive tier one commercial paper markets. If the Company is unable to maintain sufficiently high credit ratings, access to these commercial paper and other debt markets and costs of borrowings could be adversely affected. If the Company is unable to generate sufficient cash flow or maintain access to adequate external financing, including as a result of significant disruptions in the global credit markets, it could restrict the Company's current operations and its growth opportunities. The Company manages this risk with constant monitoring of credit/liquidity metrics, cash forecasting, and routine communications with credit rating agencies on risk management practices.

The Company's risk management strategies may not be effective.

The Company has a Chief Risk Officer who regularly reports to the Board of Directors on the myriad of risks facing the Company and the Company's strategies for mitigating the risks. In particular, the Company's business is affected by fluctuations in agricultural commodity cash prices and derivative prices, transportation costs, energy prices, interest rates, foreign currency exchange rates, and equity markets. The Company monitors position limits and counterparty risks and engages in other strategies and controls to manage these risks. The Company regularly reports its aggregate commodity risk exposures to the Board of Directors through the ERM process. The Company has an established commodity merchandising governance process to ensure proper position reporting and monitoring, limit approvals, and execute training on trade compliance, commodity regulatory reporting controls, and other policies. The Company's monitoring efforts may not be successful at detecting a significant risk exposure. If these controls and strategies are not successful in mitigating the Company's exposure to these fluctuations, it could adversely affect the Company's operating results.

Item 1A. RISK FACTORS (Continued)

The Company has limited control over and may not realize the expected benefits of its equity investments and joint ventures.

The Company has \$5.3 billion invested in or advanced to joint ventures and investments over which the Company has limited control as to the governance and management activities. Net sales to unconsolidated affiliates during the year ended December 31, 2018 was \$6.8 billion. Risks related to these investments may include: The financial strength of the investment partner; loss of revenues and cash flows to the investment partner and related gross profit; the inability to implement beneficial management strategies, including risk management and compliance monitoring, with respect to the investment's activities; and the risk that the Company may not be able to resolve disputes with the partner. The Company may encounter unanticipated operating issues, financial results, or compliance and reputational risks related to these investments. The Company mitigates this risk using controls and policies related to joint venture formation, governance (including board of directors' representation), merger and acquisition integration management, and harmonization of joint venture policies with the Company's policies and controls.

The Company's information technology (IT) systems, processes, and sites may suffer interruptions, security breaches, or failures which may affect the Company's ability to conduct its business.

The Company's operations rely on certain key IT systems, some of which are dependent on services provided by third parties, to provide critical data connectivity, information, and services for internal and external users. These interactions include, but are not limited to: Ordering and managing materials from suppliers; risk management activities; converting raw materials to finished products; inventory management; shipping products to customers; processing transactions; summarizing and reporting results of operations; human resources benefits and payroll management; and complying with regulatory, legal or tax requirements. The Company is also in the process of implementing a new enterprise resource planning (ERP) system on a worldwide basis as part of its ongoing business transformation program, which is expected to improve the efficiency and effectiveness of certain financial and business transaction processes and the underlying systems environment. Increased IT security and social engineering threats and more sophisticated computer crime, including advanced persistent threats, pose a potential risk to the security of the Company's IT systems, networks, and services, as well as the confidentiality, availability, and integrity of the Company's third party data. The Company is subject to a variety of laws and regulations in the United States and other jurisdictions regarding privacy, data protection, and data security, including those related to the collection, storage, handling, use, disclosure, transfer, and security of personal data. Compliance with and interpretation of data privacy regulations, including the European Union General Data Protection Regulation implemented in 2018, continues to evolve and any violation could subject the Company to legal claims, regulatory penalties, and damage to its reputation. The Company has put in place security measures to prevent, detect, and mitigate cyber-based attacks, and has instituted control procedures for cyber security incident responses and disaster recovery plans for its critical systems. In addition, the Company monitors this risk on an ongoing basis to detect and correct any breaches, and reports metrics on the quality of the Company's data security efforts and control environment to the highest level of management and to the Board of Directors. However, if the Company's IT systems are breached, damaged, or cease to function properly due to any number of causes, such as catastrophic events, power outages, security breaches, or cyber-based attacks, and the Company's disaster recovery plans do not effectively mitigate the risks on a timely basis, the Company may suffer significant interruptions in its ability to manage its operations, loss of valuable data, actual or threatened legal actions, and damage to its reputation, which may adversely impact the Company's revenues, operating results, and financial condition.

The Company may fail to realize the benefits or experience delays in the execution of its growth strategy, encompassing organic and inorganic initiatives, outside the U.S. and in businesses where the Company does not currently have a large presence.

As the Company executes its growth strategy, through both organic and inorganic growth, it may encounter risks which could result in increased costs, decreased revenues, and delayed synergies. Recent investments outside the U.S. include Neovia, certain assets of Brazil-based Algar Agro, Protexin, and Rodelle, Inc. Growth in new geographies outside the U.S. can expose the Company to volatile economic, political, and regulatory risks that may negatively impact its operations and ability to achieve its growth strategy. Expanding businesses where the Company has limited presence may expose the Company to risks related to the inability to identify an appropriate partner or target and favorable terms, inability to retain/hire strategic talent, or integration risks that may require significant management resources that would have otherwise been available for ongoing growth or operational initiatives. Acquisitions may involve unanticipated delays, costs, and other problems. Due diligence performed prior to the acquisition may not identify a material liability or issue that could impact the Company's reputation or adversely affect results of operations resulting in a reduction of the anticipated acquisition benefits. Additionally, acquisitions may involve integration risks such as: internal control effectiveness, system integration risks, the risk of impairment charges related to goodwill and other intangibles, ability to retain acquired employees, and other unanticipated risks.

Item 1B. UNRESOLVED STAFF COMMENTS

The Company has no unresolved staff comments.

Item 2. PROPERTIES

The Company owns or leases, under operating leases, the following processing plants and procurement facilities:

	Processing Plants			Procurement Facilities		
	Owned	Leased	Total	Owned	Leased	Total
U.S.	144	4	148	226	50	276
International	109	14	123	90	84	174
	253	18	271	316	134	450

The Company's operations are such that most products are efficiently processed near the source of raw materials. Consequently, the Company has many plants strategically located in agricultural commodity producing areas. The annual volume of commodities processed will vary depending upon availability of raw materials and demand for finished products. The Company also owns approximately 200 warehouses and terminals primarily used as bulk storage facilities and 46 innovation centers. Warehouses, terminals, corporate, and sales offices are not included in the tables above. Processing plants and procurement facilities owned or leased by unconsolidated joint ventures are also not included in the tables above.

To enhance the efficiency of transporting large quantities of raw materials and finished products between the Company's procurement facilities and processing plants and also the final delivery of products to its customers around the world, the Company owns approximately 1,800 barges, 12,000 rail cars, 360 trucks, 1,200 trailers, 100 boats, and 10 oceangoing vessels; and leases, under operating leases, approximately 610 barges, 16,400 rail cars, 240 trucks, 190 trailers, 4 boats, and 12 oceangoing vessels.

	Origination Processing Plants	
	Merchandising & Handling	
	Owned	Leased
North America		
U.S.*	1	—
Total	1	—
Daily capacity		
Metric tons (in 1,000's)	1	—
Grand Total	1	—
Total daily capacity		
Metric tons (in 1,000's)	1	—

*The U.S. plant is located in California.

Item 2. PROPERTIES (Continued)

		Origination Procurement Facilities	
		Merchandising & Handling	
		Owned	Leased
North America			
U.S.*		142	11
Canada		1	—
Dominican Republic		1	—
Total		144	11
Daily/Storage capacity			
Metric tons (in 1,000's)		12,273	531
South America			
Argentina		3	1
Colombia		—	9
Ecuador		—	2
Total		3	12
Daily/Storage capacity			
Metric tons (in 1,000's)		389	506
Europe			
Germany		2	—
Ireland		1	1
Poland		1	—
Romania		11	4
Ukraine		7	—
Total		22	5
Daily/Storage capacity			
Metric tons (in 1,000's)		1,227	78
Grand Total		169	28
Total daily/storage capacity			
Metric tons (in 1,000's)		13,889	1,115

*The U.S. procurement facilities are located in Arkansas, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, Oklahoma, South Dakota, Tennessee, Texas, and Wisconsin.

Item 2. PROPERTIES (Continued)

		Oilseeds Processing Plants							
		Owned				Leased			
		Crushing & Origination	Refining, Packaging, Biodiesel & Other	Asia	Total	Crushing & Origination	Refining, Packaging, Biodiesel & Other	Asia	Total
North America									
U.S.*		23	34	—	57	—	2	—	2
Canada		3	4	—	7	—	—	—	—
Mexico		1	—	—	1	—	—	—	—
Total		27	38	—	65	—	2	—	2
Daily capacity									
Metric tons (in 1,000's)		62	24	—	86	—	—	—	—
South America									
Argentina		—	1	—	1	—	—	—	—
Brazil		7	12	—	19	1	—	—	1
Paraguay		1	—	—	1	—	—	—	—
Peru		—	1	—	1	—	—	—	—
Total		8	14	—	22	1	—	—	1
Daily capacity									
Metric tons (in 1,000's)		19	9	—	28	1	—	—	1
Europe									
Belgium		—	1	—	1	—	—	—	—
Czech Republic		1	1	—	2	—	—	—	—
Germany		4	8	—	12	—	—	—	—
Netherlands		1	1	—	2	—	—	—	—
Poland		2	5	—	7	—	—	—	—
Ukraine		1	—	—	1	—	—	—	—
United Kingdom		1	3	—	4	—	—	—	—
Total		10	19	—	29	—	—	—	—
Daily capacity									
Metric tons (in 1,000's)		36	15	—	51	—	—	—	—
Asia									
India		—	—	2	2	—	—	1	1
Total		—	—	2	2	—	—	1	1
Daily capacity									
Metric tons (in 1,000's)		—	—	1	1	—	—	1	1
Africa									
South Africa		—	3	—	3	—	1	—	1
Total		—	3	—	3	—	1	—	1
Daily capacity									
Metric tons (in 1,000's)		—	2	—	2	—	—	—	—
Grand Total		45	74	2	121	1	3	1	5
Total daily capacity									
Metric tons (in 1,000's)		117	50	1	168	1	—	1	2

*The U.S. plants in the table above are located in Alabama, California, Georgia, Illinois, Indiana, Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Carolina, Tennessee, and Texas.

Item 2. PROPERTIES (Continued)

Oilseeds Procurement Facilities							
	Owned			Leased			
	Crushing & Origination	Refining, Packaging, Biodiesel, & Other	Total	Crushing & Origination	Refining, Packaging, Biodiesel, & Other	Asia	Total
North America							
U.S.*	3	59	62	—	38	—	38
Canada	5	—	5	—	—	—	—
Total	8	59	67	—	38	—	38
Daily/Storage capacity							
Metric tons (in 1,000's)	263	253	516	—	123	—	123
South America							
Brazil	38	—	38	—	—	—	—
Paraguay	13	—	13	2	—	—	2
Peru	—	—	—	2	—	—	2
Uruguay	1	—	1	6	—	—	6
Total	52	—	52	10	—	—	10
Daily/Storage capacity							
Metric tons (in 1,000's)	2,150	—	2,150	343	—	—	343
Europe							
Germany	1	—	1	—	—	—	—
Netherlands	1	—	1	—	—	—	—
Poland	4	—	4	—	—	—	—
United Kingdom	—	—	—	3	—	—	3
Total	6	—	6	3	—	—	3
Daily/Storage capacity							
Metric tons (in 1,000's)	428	—	428	4	—	—	4
Asia							
India	—	—	—	—	—	48	48
Total	—	—	—	—	—	48	48
Storage capacity							
Metric tons (in 1,000's)	—	—	—	—	—	72	72
Grand Total	66	59	125	13	38	48	99
Total daily/storage capacity							
Metric tons (in 1,000's)	2,841	253	3,094	347	123	72	542

*The U.S. procurement facilities are located in Alabama, Arkansas, Florida, Georgia, Iowa, Michigan, Mississippi, North Carolina, Oklahoma, South Carolina, and Texas.

Item 2. PROPERTIES (Continued)

		Carbohydrate Solutions Processing Plants			
		Owned			Leased
		Starches & Sweeteners	Bioproducts	Total	Starches & Sweeteners
North America					
U.S.*		35	3	38	—
Canada		8	—	8	—
Barbados		1	—	1	—
Belize		1	—	1	—
Grenada		1	—	1	—
Jamaica		2	—	2	—
Total		48	3	51	—
Daily capacity					
Metric tons (in 1,000's)		71	24	95	—
Europe					
United Kingdom		3	—	3	4
Bulgaria		1	—	1	—
France		1	—	1	—
Turkey		1	—	1	—
Total		6	—	6	4
Daily capacity					
Metric tons (in 1,000's)		5	—	5	1
Asia					
China		1	—	1	—
Total		1	—	1	—
Daily capacity					
Metric tons (in 1,000's)		—	—	—	—
Africa					
Morocco		1	—	1	—
Total		1	—	1	—
Daily capacity					
Metric tons (in 1,000's)		—	—	—	—
Grand Total		56	3	59	4
Total daily capacity					
Metric tons (in 1,000's)		76	24	100	1

*The U.S. processing plants are located in California, Illinois, Indiana, Iowa, Kansas, Minnesota, Missouri, Nebraska, New York, North Carolina, Oklahoma, Pennsylvania, Tennessee, Texas, Washington, and Wisconsin.

Item 2. PROPERTIES (Continued)

		Carbohydrate Solutions Procurement Facilities					
		Owned			Leased		
		Starches & Sweeteners	Bioproducts	Total	Starches & Sweeteners	Bioproducts	Total
North America							
U.S.*		3	—	3	1	—	1
Canada		—	—	—	2	—	2
Total		3	—	3	3	—	3
Daily/Storage capacity							
Metric tons (in 1,000's)		194	—	194	154	—	154
Europe							
United Kingdom		—	—	—	4	—	4
Total		—	—	—	4	—	4
Daily/Storage capacity							
Metric tons (in 1,000's)		—	—	—	19	—	19
Grand Total		3	—	3	7	—	7
Total daily/storage capacity							
Metric tons (in 1,000's)		194	—	194	173	—	173

*The U.S. procurement facilities are located in Minnesota and Washington.

Item 2. PROPERTIES (Continued)

		Nutrition Processing Plants					
		Owned			Leased		
		WFSI	Animal Nutrition	Total	WFSI	Animal Nutrition	Total
North America							
U.S.*		23	25	48	1	1	2
Canada		1	3	4	—	—	—
Puerto Rico		—	2	2	—	1	1
Trinidad & Tobago		—	1	1	—	—	—
Total		24	31	55	1	2	3
Annual capacity							
Metric tons (in 1,000's)		601	1,809	2,410	31	11	42
South America							
Brazil		1	—	1	1	—	1
Total		1	—	1	1	—	1
Annual capacity							
Metric tons (in 1,000's)		43	—	43	3	—	3
Europe							
Germany		4	—	4	2	—	2
France		1	—	1	—	—	—
Netherlands		1	—	1	1	—	1
Poland		1	—	1	—	—	—
Spain		2	—	2	—	—	—
Turkey		—	—	—	1	—	1
United Kingdom		1	—	1	—	—	—
Total		10	—	10	4	—	4
Annual capacity							
Metric tons (in 1,000's)		308	—	308	758	—	758
Asia							
China		1	5	6	—	—	—
India		—	—	—	1	—	1
Total		1	5	6	1	—	1
Annual capacity							
Metric tons (in 1,000's)		26	381	407	—	—	—
Grand Total		36	36	72	7	2	9
Total annual capacity							
Metric tons (in 1,000's)		978	2,190	3,168	792	11	803

*The U.S. processing plants are located in Colorado, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Missouri, Nebraska, New Jersey, North Dakota, Ohio, Pennsylvania, Texas, and Washington.

Item 2. PROPERTIES (Continued)

		Nutrition Procurement Facilities		
		Owned		
	North America	WFSI	Animal Nutrition	Total
U.S.*		19	—	19
Total		19	—	19
Daily/Storage capacity				
Metric tons (in 1,000's)		267	—	267
Grand Total		19	—	19
Total daily/storage capacity				
Metric tons (in 1,000's)		267	—	267

*The U.S. procurement facilities are located in Idaho, Michigan, Minnesota, North Dakota, and Wyoming.

Item 3. LEGAL PROCEEDINGS

The Company is routinely involved in a number of actual or threatened legal actions, including those involving alleged personal injuries, employment law, product liability, intellectual property, environmental issues, alleged tax liability (see Note 13 in Item 8 for information on income tax matters), and class actions. The Company also routinely receives inquiries from regulators and other government authorities relating to various aspects of its business, and at any given time, the Company has matters at various stages of resolution with the applicable government authorities. The outcomes of these matters are not within the Company's complete control and may not be known for prolonged periods of time. In some actions, claimants seek damages, as well as other relief, including injunctive relief, that could require significant expenditures or result in lost revenues. In accordance with applicable accounting standards, the Company records a liability in its consolidated financial statements for material loss contingencies when a loss is known or considered probable and the amount can be reasonably estimated. If the reasonable estimate of a known or probable loss is a range, and no amount within the range is a better estimate than any other, the minimum amount of the range is accrued. If a material loss contingency is reasonably possible but not known or probable, and can be reasonably estimated, the estimated loss or range of loss is disclosed in the notes to the consolidated financial statements. When determining the estimated loss or range of loss, significant judgment is required to estimate the amount and timing of a loss to be recorded. Estimates of probable losses resulting from litigation and governmental proceedings involving the Company are inherently difficult to predict, particularly when the matters are in early procedural stages, with incomplete facts or legal discovery; involve unsubstantiated or indeterminate claims for damages; potentially involve penalties, fines, disgorgement, or punitive damages; or could result in a change in business practice. See Note 20 in Item 8 for information on the Company's legal proceedings.

Item 4. MINE SAFETY DISCLOSURES

None.

PART II

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

Common Stock Market

The Company's common stock is listed and traded on the New York Stock Exchange under the trading symbol "ADM".

The number of registered stockholders of the Company's common stock at December 31, 2018 , was 9,495 .

Issuer Purchases of Equity Securities

Period	Total Number of Shares Purchased (1)	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Program (2)	Number of Shares Remaining to be Purchased Under the Program (2)
October 1, 2018 to October 31, 2018	48,876	\$ 48.838	164	13,758,617
November 1, 2018 to November 30, 2018	546,379	45.785	546,336	13,212,281
December 1, 2018 to December 31, 2018	1,149,514	45.023	1,148,867	12,063,414
Total	1,744,769	\$ 45.369	1,695,367	12,063,414

(1) Total shares purchased represent those shares purchased in the open market as part of the Company's publicly announced stock repurchase program described below, shares received as payment for the exercise price of stock option exercises, and shares received as payment for the withholding taxes on vested restricted stock awards. During the three-month period ended December 31, 2018 , there were 49,402 shares received as payments for the minimum withholding taxes on vested restricted stock awards and for the exercise price of stock option exercises.

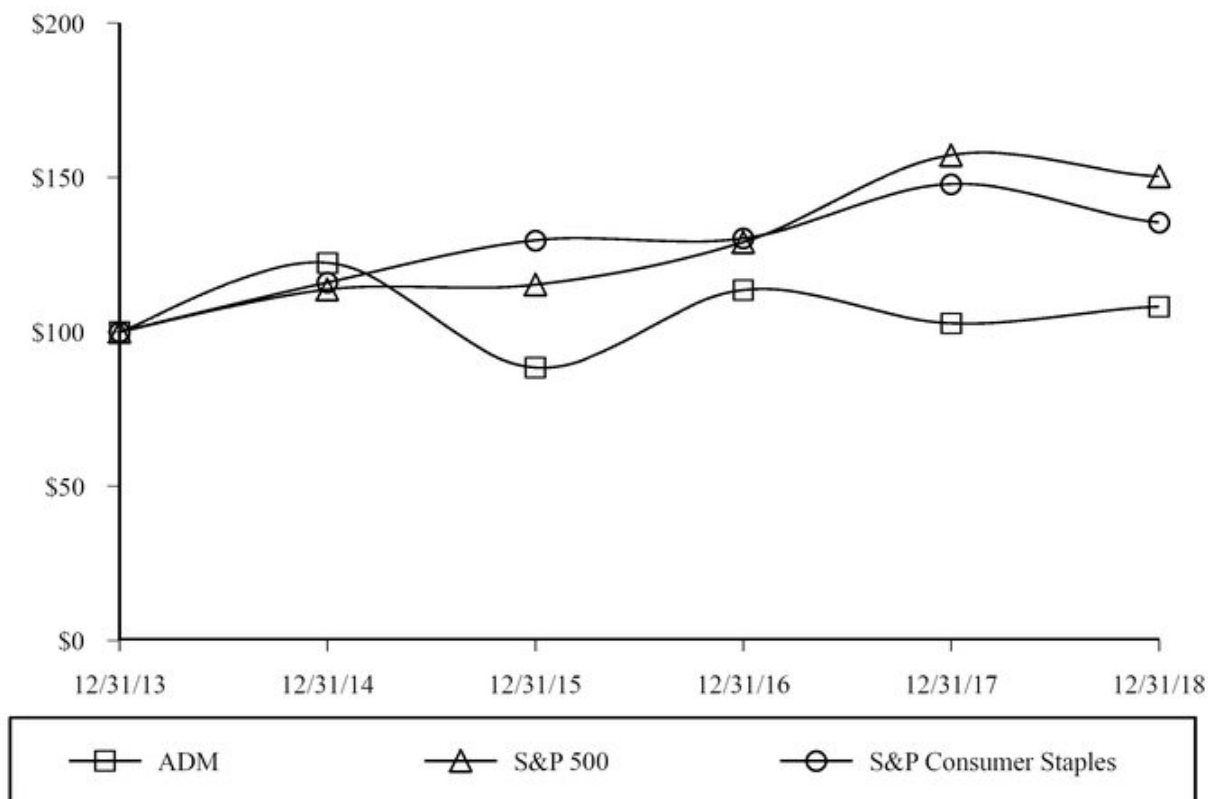
(2) On November 5, 2014, the Company's Board of Directors approved a stock repurchase program authorizing the Company to repurchase up to 100,000,000 shares of the Company's common stock during the period commencing January 1, 2015 and ending December 31, 2019.

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

Performance Graph

The graph below compares the Company's common stock with those of the S&P 500 Index and the S&P Consumer Staples Index. The graph assumes an initial investment of \$100 on December 31, 2013 and assumes all dividends have been reinvested through December 31, 2018.

COMPARISON OF 60 MONTH CUMULATIVE TOTAL RETURN
Among Archer Daniels Midland Company (ADM), the S&P 500 Index, and the S&P Consumer Staples Index



Index Data: Copyright© Standard and Poor's, Inc.

Item 6. SELECTED FINANCIAL DATA

Selected Financial Data
(In millions, except ratio and per share data)

	Years Ended December 31				
	2018	2017	2016	2015	2014
Revenues	\$ 64,341	\$ 60,828	\$ 62,346	\$ 67,702	\$ 81,201
Depreciation	812	802	787	799	850
Net earnings attributable to controlling interests	1,810	1,595	1,279	1,849	2,248
Basic earnings per common share	3.21	2.80	2.18	2.99	3.44
Diluted earnings per common share	3.19	2.79	2.16	2.98	3.43
Cash dividends	758	730	701	687	624
Per common share	1.34	1.28	1.20	1.12	0.96
Working capital	8,812	7,355	7,872	8,324	10,426
Current ratio	1.7	1.6	1.6	1.6	1.7
Inventories	8,813	9,173	8,831	8,243	9,374
Net property, plant, and equipment	9,953	10,138	9,758	9,853	9,851
Gross additions to property, plant, and equipment	845	1,100	882	1,350	1,357
Total assets	40,833	39,963	39,769	40,157	43,997
Long-term debt, excluding current maturities	7,698	6,623	6,504	5,779	5,528
Shareholders' equity	18,996	18,322	17,181	17,915	19,630
Per common share	33.98	32.89	29.98	30.11	30.82
Weighted average shares outstanding-basic	564	569	588	618	653
Weighted average shares outstanding-diluted	567	572	591	621	656

Significant items affecting the comparability of the financial data shown above are as follows:

- Net earnings attributable to controlling interests for the year ended December 31, 2018 included net gains totaling \$13 million (\$13 million after tax, equal to \$0.02 per share) related to the sale of businesses and assets; charges of \$292 million (\$226 million after tax, equal to \$0.40 per share) consisting of a non-cash pension settlement charge related to the purchase of a group annuity contract that irrevocably transferred the future benefit obligations and annuity administration for certain retirees under the Company's ADM Retirement Plan, charges related to a discontinued software project, a long-term receivable, an equity investment, certain long-lived assets, and several individually insignificant asset impairment charges, restructuring charges in Corporate primarily related to the reorganization of IT services in Corporate and several individually insignificant restructuring charges, and other settlement charges; charges of \$8 million (\$6 million after tax, equal to \$0.01 per share) related to acquisition expenses and net losses on foreign currency derivative contracts to economically hedge certain acquisitions; and net tax benefits due to changes in the provisional transition tax amount related to the enactment of the Tax Cuts and Jobs Act and certain discrete items totaling \$33 million (equal to \$0.06 per share).

Item 6. SELECTED FINANCIAL DATA (Continued)

- Net earnings attributable to controlling interests for the year ended December 31, 2017 included gains totaling \$22 million (\$10 million after tax loss, equal to \$0.02 per share) primarily related to the sale of the crop risk services business partially offset by an adjustment of the proceeds of the 2015 sale of the cocoa business; charges of \$214 million (\$144 million after tax, equal to \$0.25 per share) consisting of asset impairments related to the reconfiguration of the Company's Peoria, Illinois ethanol complex, restructuring charges related to the reduction of certain positions within the Company's global workforce, several individually insignificant asset impairments and restructuring charges, and provisions for contingent losses related to certain settlement items; a debt extinguishment charge of \$11 million (\$7 million after tax, equal to \$0.01 per share) related to the early redemption of the Company's \$559 million notes due on March 15, 2018; and net tax benefits related to the Tax Cuts and Jobs Act and certain discrete tax adjustments totaling \$366 million (equal to \$0.64 per share).
- Net earnings attributable to controlling interests for the year ended December 31, 2016 included gains totaling \$119 million (\$100 million after tax, equal to \$0.17 per share) primarily related to recovery of loss provisions and gains related to the sale of the Company's Brazilian sugar ethanol facilities, realized contingent consideration on the sale of the Company's equity investment in Gruma S.A. de C.V. in December 2012, and revaluation of the remaining interest to settlement value in conjunction with the acquisition of Amazon Flavors; a gain of \$38 million (\$24 million after tax, equal to \$0.04 per share) related to a U.S. retiree medical benefit plan curtailment; charges of \$117 million (\$77 million after tax, equal to \$0.13 per share) primarily related to legal fees and settlement, impairment of software, investments, and certain long-lived assets; a \$10 million (\$8 million after tax, equal to \$0.02 per share) loss on sale of individually immaterial assets; and certain discrete tax adjustments totaling \$24 million (equal to \$0.04 per share) related to valuation allowances, deferred tax re-rates, and changes in assertion.
- Net earnings attributable to controlling interests for the year ended December 31, 2015 included gains totaling \$530 million (\$515 million after tax, equal to \$0.83 per share) related primarily to the sale of the cocoa, chocolate, and lactic businesses, revaluation of the Company's previously held investments in North Star Shipping, Minmetal, and Eaststarch C.V. in conjunction with the acquisition of the remaining interests, and the sale of a 50% interest in the Barcarena export terminal facility in Brazil to Glencore plc; long-lived asset impairment charges of \$129 million (\$109 million after tax, equal to \$0.18 per share) related primarily to certain international Oilseeds Processing facilities, sugar ethanol facilities in Brazil, and goodwill, intangible, and property, plant, and equipment asset impairments; restructuring and exit charges of \$71 million (\$63 million after tax, equal to \$0.10 per share) related to an international pension plan settlement, sugar ethanol facilities in Brazil, and other restructuring charges; loss provisions, settlements, and inventory writedown of \$67 million (\$58 million after tax, equal to \$0.09 per share); certain discrete tax adjustments totaling \$60 million (equal to \$0.10 per share) related to valuation allowances and deferred tax re-rates; and loss on debt extinguishment of \$189 million (\$118 million after tax, equal to \$0.19 per share) related to the cash tender offers and redemption of certain of the Company's outstanding debentures.
- Net earnings attributable to controlling interests for the year ended December 31, 2014 included a gain on sale of assets related to the sale of the fertilizer business and other asset of \$135 million (\$89 million after tax, equal to \$0.14 per share); gain of \$156 million (\$97 million after tax, equal to \$0.15 per share) upon the Company's effective dilution in the Pacificor (formerly Kalama Export Company) joint venture resulting from the contribution of additional assets by another member in exchange for new equity units; and loss of \$102 million (\$63 million after tax, equal to \$0.10 per share) on Euro foreign currency derivative contracts entered into to economically hedge the Wild Flavors acquisition; asset impairment charges related to certain fixed assets of \$41 million (\$26 million after tax, equal to \$0.04 per share) and \$64 million (\$41 million after tax, equal to \$0.06 per share) of costs related to the relocation of the global headquarters to Chicago, Illinois, and restructuring charges related to the Wild Flavors acquisition and Toepfer integration following the acquisition of the minority interest and other restructuring charges; a charge of \$98 million (\$61 million after tax, equal to \$0.09 per share) related to pension settlements; and certain discrete tax adjustments of \$15 million (equal to \$0.02 per share) related to deferred tax re-rates.

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

Company Overview

This MD&A should be read in conjunction with the accompanying consolidated financial statements.

The Company's vision is to be the most admired global agribusiness and nutrition company while creating value and growing responsibly. The Company's growth strategy is spread across its five key growth platforms: Taste, Nutrition, Animal Nutrition, Health and Wellness, and Carbohydrates. The Company desires to execute this vision and these strategies by conducting its business in accordance with its core values of operating with integrity, treating others with respect, achieving excellence, being resourceful, displaying teamwork, and being responsible.

The Company is principally engaged in procuring, transporting, storing, processing, and merchandising agricultural commodities, products, and ingredients. The Company uses its significant global asset base to originate and transport agricultural commodities, connecting to markets in more than 170 countries. The Company also processes corn, oilseeds, and wheat into products for food, animal feed, chemical and energy uses. The Company also engages in the manufacturing, sale, and distribution of specialty products including natural flavor ingredients, flavor systems, natural colors, proteins, emulsifiers, soluble fiber, polyols, hydrocolloids, natural health and nutrition products, and other specialty food and feed ingredients. The Company uses its global asset network, business acumen, and its relationships with suppliers and customers to efficiently connect the harvest to the home thereby generating returns for our shareholders, principally from margins earned on these activities.

The Company's operations are organized, managed, and classified into four reportable business segments: Origination, Oilseeds, Carbohydrate Solutions, and Nutrition. Each of these segments is organized based upon the nature of products and services offered. The Company's remaining operations are not reportable business segments, as defined by the applicable accounting standard, and are classified as Other. Financial information with respect to the Company's reportable business segments is set forth in Note 17 of "Notes to Consolidated Financial Statements" included in Item 8.

Effective January 1, 2018, the Company changed its segment reporting to reflect changes in its operating structure. The Company's new segments are Origination (formerly Agricultural Services), Oilseeds (formerly Oilseeds Processing), Carbohydrate Solutions (formerly Corn Processing), and Nutrition (formerly Wild Flavors and Specialty Ingredients). The European origination business previously reported in Oilseeds is now managed by leaders in Origination to better coordinate continental trading activities. Carbohydrate Solutions now includes the results of ADM Milling, which were previously reported in Origination. In addition, the Company also moved the segment reporting of its renewable chemicals business from Carbohydrate Solutions to Oilseeds effective July 1, 2018. Nutrition now includes the results of Animal Nutrition and certain product lines previously reported in Carbohydrate Solutions as well as certain product lines previously reported in Oilseeds.

Prior period results have been reclassified to conform to the current period presentation.

The Company's recent significant portfolio actions and announcements include:

- the investment in June 2018 of a 50% interest in SoyVen, a joint venture with Cargill to provide soybean meal and oil for customers in Egypt;
- the acquisition in June 2018 of a 50% equity stake in the starches and sweeteners business of Russian-based Aston Foods and Food Ingredients;
- the sale in July 2018 of the Company's oilseeds operations in Bolivia to Inversiones Piuranas S.A.;
- the acquisition in August 2018 of Probiotics International Limited, a British-based provider of probiotic supplements for human, pet, and production-animal uses;
- the acquisition in August 2018 of Rodelle Inc., a premium originator, processor and supplier of vanilla products;
- the announcement in October 2018 of the launch of GrainBridge LLC, a 50% joint venture with Cargill that will develop and offer revolutionary new digital tools to help farmers make more informed grain marketing decisions based on personalized production economics;
- the acquisition in December 2018 of certain soybean origination, crushing, refining, and bottling assets from Brazil-based Algar Agro;
- the acquisition in January 2019 of Neovia, a French-based global provider of value-added animal nutrition solutions, with 72 production facilities and a presence in 25 countries;

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

- the announcement in January 2019 of an agreement to purchase Florida Chemical Company, one of the world's largest providers of citrus oils and ingredients, which is subject to regulatory approval and expected to close in the first quarter of 2019; and
- the announcement in January 2019 of an agreement to purchase the remaining 50% interest owned by Invivo in Gleadell Agriculture Ltd., a current joint venture with Invivo, which is subject to regulatory approval and is expected to close in the first quarter of 2019.

The Company executes its strategic vision through three pillars: Optimize the Core, Drive Efficiencies, and Expand Strategically, all supported by its Readiness culture. During 2018, the Company launched Readiness to drive new efficiencies and improve the customer experience in the Company's existing businesses through a combination of data and analytics, process simplification and standardization, and behavioral and cultural change; building upon its earlier 1ADM and operational excellence programs. Readiness will also support the execution of the Company's growth strategies across its five key growth platforms: Taste, Nutrition, Animal Nutrition, Health and Wellness, and Carbohydrates.

Operating Performance Indicators

The Company's Origination and Oilseeds operations are principally agricultural commodity-based businesses where changes in selling prices move in relationship to changes in prices of the commodity-based agricultural raw materials. Therefore, changes in agricultural commodity prices have relatively equal impacts on both revenues and cost of products sold. Thus, changes in revenues of these businesses do not necessarily correspond to the changes in margins or gross profit.

The Company's Carbohydrate Solutions operations and Nutrition businesses also utilize agricultural commodities (or products derived from agricultural commodities) as raw materials. However, in these operations, agricultural commodity market price changes do not necessarily correlate to changes in cost of products sold. Thus, changes in revenues of these businesses may correspond to changes in margins or gross profit.

The Company has consolidated subsidiaries in more than 80 countries. For the majority of the Company's subsidiaries located outside the United States, the local currency is the functional currency. Revenues and expenses denominated in foreign currencies are translated into U.S. dollars at the weighted average exchange rates for the applicable periods. For the majority of the Company's business activities in Brazil and Argentina, the functional currency is the U.S. dollar; however, certain transactions, including taxes, occur in local currency and require remeasurement to the functional currency. Changes in revenues are expected to be correlated to changes in expenses reported by the Company caused by fluctuations in the exchange rates of foreign currencies, primarily the Euro, British pound, Canadian dollar, and Brazilian real, as compared to the U.S. dollar.

The Company measures its performance using key financial metrics including net earnings, segment operating profit, return on invested capital, EBITDA, economic value added, manufacturing expenses, and selling, general, and administrative expenses. The Company's financial results can vary significantly due to changes in factors such as fluctuations in energy prices, weather conditions, crop plantings, government programs and policies, trade policies, changes in global demand, general global economic conditions, changes in standards of living, and global production of similar and competitive crops. Due to these unpredictable factors, the Company undertakes no responsibility for updating any forward-looking information contained within "Management's Discussion and Analysis of Financial Condition and Results of Operations."

Year Ended December 31, 2018 Compared to Year Ended December 31, 2017

As an agricultural commodity-based business, the Company is subject to a variety of market factors which affect the Company's operating results. In 2018, markets were volatile amid escalating global trade tensions including the announcement of tariffs on Chinese imports of U.S. soybeans. In Origination, strong demand for feedstuffs in light of weather conditions in Northern Europe resulted in higher sales volumes and margins in destination markets, and strong basis positions across commodities resulted in higher margins. In Oilseeds, dry conditions in Argentina resulted in a smaller soybean crop, which combined with continued good global meal demand, resulted in strong global crushing margins and volumes. South American origination volumes and margins benefited from stronger farmer selling. Demand and margins for refined oil remained solid, and biodiesel margins improved. Excess global peanut supply resulted in weak peanut margins. In Carbohydrate Solutions, global demand and prices for starches and sweeteners remained solid in North America while co-product prices were stable. U.S. ethanol industry production remained at high levels. Although ethanol demand remained strong both in North America and export markets due to favorable gasoline blending economics and ethanol's continuing status as a competitive octane enhancer, margins continue to remain under pressure. Nutrition benefited from strong demand for flavor ingredients and flavor systems and from strong demand for and favorable margin development in certain non-flavor food businesses.

Net earnings attributable to controlling interests increased 13% or \$0.2 billion, to \$1.8 billion. Segment operating profit increased 29% or \$0.7 billion, to \$3.3 billion. Included in segment operating profit in the current year was a net charge of \$89 million consisting of asset impairment, restructuring, and settlement charges and a net gain on sales of assets and businesses. Included in segment operating profit in the prior year was a net charge of \$134 million consisting of asset impairment and restructuring charges, a net gain on sales of assets and businesses, and corn hedge timing effects. Adjusted segment operating profit increased \$0.7 billion to \$3.4 billion due to an increase in sales prices and volumes of corn and meal, improved margins in Origination, Oilseeds, and Nutrition, and the benefits of the 2017 biodiesel tax credit which was approved and received in the first quarter of 2018, partially offset by lower ethanol margins. Corporate results were a net charge of \$1.2 billion in the current year compared to \$0.9 billion in the prior year. Corporate results in the current year included a pension settlement charge of \$117 million, a \$49 million charge related to a discontinued software project, restructuring charges of \$24 million primarily related to the reorganization of IT services, and a credit of \$18 million from the effect of changes in agricultural commodity prices on LIFO inventory valuation reserves, compared to a credit of \$2 million in the prior year. Corporate results in the prior year also included \$54 million of restructuring charges primarily related to the reduction of certain positions within the Company's global workforce.

Income taxes of \$245 million increased \$238 million due to a higher effective tax rate and higher earnings before income taxes. The Company's effective tax rate for 2018 increased to 11.9% compared to 0.4% for 2017 due primarily to the low rate in 2017 that was impacted by favorable tax adjustments related to the Tax Cuts and Jobs Act totaling \$379 million. The effective tax rate for the current year also included the final effects of the U.S. tax reform and the 2017 biodiesel tax credit recorded in the first quarter of 2018, along with certain favorable discrete tax items netting to a favorable \$74 million.

Analysis of Statements of Earnings

Processed volumes by product for the years ended December 31, 2018 and 2017 are as follows (in metric tons):

(In thousands)	2018	2017	Change
Oilseeds	36,308	34,733	5 %
Corn	22,343	22,700	(2)%
Total	58,651	57,433	2 %

The Company generally operates its production facilities, on an overall basis, at or near capacity, adjusting facilities individually, as needed, to react to the current margin environment and seasonal local supply and demand conditions. Processed volumes of oilseeds increased due to increasing global demand for oilseed products, particularly meal, and higher crushing volumes in North America due to the reduced soybean crop in Argentina. The overall decrease in corn is primarily related to decreased current year processing after the reconfiguration of the Company's Peoria, Illinois ethanol complex in the third quarter of fiscal 2017 and production issues in the Decatur, Illinois corn complex in 2018.

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

Revenues by segment for the years ended December 31, 2018 and 2017 are as follows:

(In millions)	2018	2017	Change
Origination			
Merchandising and Handling	\$ 24,816	\$ 23,915	\$ 901
Transportation	244	209	35
Total Origination	<u>25,060</u>	<u>24,124</u>	<u>936</u>
Oilseeds			
Crushing and Origination	16,943	14,171	2,772
Refining, Packaging, Biodiesel, and Other	7,888	8,217	(329)
Total Oilseeds	<u>24,831</u>	<u>22,388</u>	<u>2,443</u>
Carbohydrate Solutions			
Starches and Sweeteners	6,696	6,565	131
Bioproducts	3,583	3,841	(258)
Total Carbohydrate Solutions	<u>10,279</u>	<u>10,406</u>	<u>(127)</u>
Nutrition			
Wild Flavors and Specialty Ingredients	2,571	2,367	204
Animal Nutrition	1,219	1,156	63
Total Nutrition	<u>3,790</u>	<u>3,523</u>	<u>267</u>
Other	<u>381</u>	<u>387</u>	<u>(6)</u>
Total Other	<u>381</u>	<u>387</u>	<u>(6)</u>
Total	<u>\$ 64,341</u>	<u>\$ 60,828</u>	<u>\$ 3,513</u>

Revenues and cost of products sold in commodity merchandising and processing businesses are significantly correlated to the underlying commodity prices and volumes. In periods of significant changes in commodity prices, the underlying performance of the Company is better evaluated by looking at margins since both revenues and cost of products sold, particularly in Oilseeds and Origination, generally have a relatively equal impact from commodity price changes which generally result in an insignificant impact to gross profit.

Revenues increased \$3.5 billion or 6% , to \$64.3 billion due principally to higher sales prices (\$2.3 billion) and higher sales volumes (\$1.2 billion). The increase in sales prices and volumes was due primarily to increases in corn and soybean meal. Origination revenues increased 4% to \$25.1 billion due to higher sales prices (\$2.1 billion), partially offset by lower sales volumes (\$1.2 billion). Oilseeds revenues increased 11% to \$24.8 billion due to higher sales volumes (\$2.0 billion) and higher sales prices (\$0.4 billion). Carbohydrate Solutions revenues decreased 1% to \$10.3 billion due to lower sales prices (\$0.2 billion), partially offset by higher sales volumes (\$0.1 billion). Nutrition revenues increased 8% to \$3.8 billion due to higher sales volumes (\$0.3 billion).

Cost of products sold increased \$2.9 billion to \$60.2 billion due principally to higher sales volumes and higher prices for commodities. Included in cost of products sold was a credit of \$18 million from the effect of changes in agricultural commodity prices on LIFO inventory valuation reserves compared to \$2 million in the prior year. Manufacturing expenses increased \$0.2 billion to \$5.4 billion due principally to increased energy cost, railroad maintenance expense that has an offsetting benefit in income tax expense, and other individually insignificant increases in certain expense categories.

Foreign currency translation impacts increased both revenues and cost of products sold by \$0.4 billion .

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

Gross profit increased \$0.7 billion or 19% , to \$4.2 billion . Higher results in Crushing and Origination (\$490 million), Refining, Packaging, Biodiesel, and Other (\$99 million), Merchandising and Handling (\$204 million), and Wild Flavors and Specialty Ingredients (\$76 million) were partially offset by lower results in Bioproducts (\$103 million) and Other (\$36 million). These factors are explained in the segment operating profit discussion on page 33. The effect of changes in agricultural commodity prices on LIFO inventory valuation reserves had a positive impact on gross profit of \$18 million compared to \$2 million in the prior year.

Selling, general, and administrative expenses increased 9% to \$2.2 billion due principally to higher performance-related compensation accruals and increased pension and project-related expenses.

Asset impairment, exit, and restructuring costs decreased \$2 million to \$171 million . Current year charges consisted of \$56 million of impairment of certain long-lived assets, a \$12 million impairment of an equity investment, a \$21 million impairment related to a long-term financing receivable, and \$9 million of other individually insignificant impairment and restructuring charges (presented as specified items within segment operating profit), and a \$49 million charge related to a discontinued software project, \$18 million of restructuring charges related to the reorganization of IT services and \$6 million of individually insignificant restructuring charges in Corporate. Prior year charges consisted of \$63 million of asset impairments related to the reconfiguration of the Company's Peoria, Illinois ethanol complex, \$20 million of asset impairments related to the closure of a facility, and \$36 million of several individually insignificant asset impairments and restructuring charges presented as specified items within segment operating profit, and \$54 million of restructuring charges in Corporate primarily related to the reduction of certain positions within the Company's global workforce.

Interest expense increased \$34 million to \$364 million primarily due to higher interest rates on short-term debt and higher borrowings.

Equity in earnings of unconsolidated affiliates increased \$62 million to \$518 million due to earnings from a new equity investment and higher earnings from the Company's equity investments in CIP and Olenex, partially offset by lower earnings from other equity investments.

Other expense - net of \$101 million increased \$111 million from net income of \$10 million . Current year expense included foreign exchange losses and a non-cash pension settlement charge of \$117 million related to the purchase of a group annuity contract that irrevocably transferred the future benefit obligations and annuity administration for certain U.S. salaried retirees under the Company's ADM Retirement Plan. These expenses were partially offset by gains on disposals of businesses, an equity investment, and individually insignificant assets in the ordinary course of business, and other income. Prior year net income included gains related to the sale of the crop risk services business and disposals of other individually insignificant assets in the ordinary course of business, partially offset by an adjustment of the proceeds of the 2015 sale of the cocoa business, changes in contingent settlement provisions, a charge related to the early redemption of the Company's \$559 million notes due March 15, 2018, and foreign exchange losses.

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

Segment operating profit, adjusted segment operating profit (a non-GAAP measure), and earnings before income taxes for the years ended December 31, 2018 and 2017 are as follows:

Segment Operating Profit	2018	2017	Change
	(In millions)		
Origination			
Merchandising and Handling	\$ 442	\$ 318	\$ 124
Transportation	104	86	18
Total Origination	<u>546</u>	<u>404</u>	<u>142</u>
Oilseeds			
Crushing and Origination	748	237	511
Refining, Packaging, Biodiesel, and Other	383	259	124
Asia	343	329	14
Total Oilseeds	<u>1,474</u>	<u>825</u>	<u>649</u>
Carbohydrate Solutions			
Starches and Sweeteners	894	930	(36)
Bioproducts	51	148	(97)
Total Carbohydrate Solutions	<u>945</u>	<u>1,078</u>	<u>(133)</u>
Nutrition			
Wild Flavors and Specialty Ingredients	318	279	39
Animal Nutrition	21	33	(12)
Total Nutrition	<u>339</u>	<u>312</u>	<u>27</u>
Other	58	51	7
Total Other	<u>58</u>	<u>51</u>	<u>7</u>
Specified Items:			
Gains on sales of assets and businesses	13	22	(9)
Impairment, restructuring, and settlement charges	(102)	(160)	58
Hedge timing effects	—	4	(4)
Total Specified Items	<u>(89)</u>	<u>(134)</u>	<u>45</u>
Total Segment Operating Profit	\$ 3,273	\$ 2,536	\$ 737
Adjusted Segment Operating Profit ⁽¹⁾	\$ 3,362	\$ 2,670	\$ 692
Segment Operating Profit	\$ 3,273	\$ 2,536	\$ 737
Corporate	(1,213)	(927)	(286)
Earnings Before Income Taxes	<u>\$ 2,060</u>	<u>\$ 1,609</u>	<u>\$ 451</u>

⁽¹⁾ Adjusted segment operating profit is segment operating profit excluding the listed specified items.

Item 7. MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS (Continued)

Origination operating profit increased 35% . Merchandising and Handling was up significantly year-over-year. Global trade delivered strong results due to increased volumes, strong margins, and improved opportunities in the soybean and feedstuff value chain. North American grain was up due to improved margins and higher volumes. Transportation was up due primarily to higher freight rates.

Oilseeds operating profit increased 79% . Crushing and Origination results increased due to a strong global demand and margin environment. The reduced soybean crop in Argentina combined with continued good global meal demand resulted in strong crushing margins and volumes. South America saw strong origination volumes and improving margins as farmer selling accelerated. Refining, Packaging, Biodiesel, and Other results were higher mainly due to the 2017 biodiesel tax credit of approximately \$120 million which was approved and received in the first quarter of 2018, solid biodiesel results, and higher earnings from the Company’s investment in Olenex, partially offset by weaker peanut shelling margins primarily caused by large peanut inventories and difficult market conditions. Asia results increased due to higher earnings from the Company’s investment in Wilmar.

Carbohydrate Solutions operating profit decreased 12% . Starches and Sweeteners results decreased due to lower margins and volumes in liquid sweeteners mainly due to production issues in the Decatur, Illinois corn complex partially offset by improved results from starches and dry sweeteners. Bioproducts results were down as near record industry fuel ethanol inventories pressured margins and production issues in the Decatur, IL corn complex increased costs, partially offset by effective ethanol risk management.

Nutrition operating profit increased 9% . Wild Flavors and Specialty Ingredients results were up due to improved earnings across the segment and higher sales volumes related to contributions from new acquisitions and organic growth. In Wild Flavors, an improved portfolio mix boosted sales and margins. Health and Wellness improved driven largely by increased contributions from bioactives. Specialty Ingredients was up due to improved volumes and margins in proteins and increased sales in fibers partially offset by lower results in polyols. Animal Nutrition was down due to operational issues in Decatur, IL that constrained lysine production volumes and increased manufacturing costs partially offset by improved premix and commercial feed margins.

Other operating profit increased 14% primarily due to stronger results from its futures commission brokerage business due to higher short-term interest rates, partially offset by lower underwriting results from the Company’s captive insurance operations during the first half of 2018.

Corporate results are as follows:

(In millions)	2018	2017	Change
LIFO credit (charge)	\$ 18	\$ 2	\$ 16
Interest expense - net	(321)	(310)	(11)
Unallocated corporate costs	(660)	(470)	(190)
Acquisition-related expenses	(8)	—	(8)
Loss on debt extinguishment	—	(11)	11
Impairment, restructuring, and settlement charges	(190)	(54)	(136)
Other charges	(52)	(84)	32
Total Corporate	<u>\$ (1,213)</u>	<u>\$ (927)</u>	<u>\$ (286)</u>

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

Corporate results were a net charge of \$1.2 billion in the current year compared to \$0.9 billion in the prior year. The effect of changes in agricultural commodity prices on LIFO inventory valuation reserves resulted in a credit of \$18 million in the current year compared to a credit of \$2 million in the prior year. Interest expense - net increased \$11 million due to higher interest rates on short-term debt and higher borrowings, partially offset by interest income related to a tax credit and lower-tax related expense. Unallocated corporate costs increased \$190 million due principally to higher performance-related compensation accruals, increased pension and project-related expenses, and railroad maintenance expense that has an offsetting benefit in income tax expense. Acquisition-related expenses in the current year related to expenses and losses on foreign currency derivative contracts entered into to economically hedge certain acquisitions. Loss on debt extinguishment in the prior period related to the early redemption of the \$559 million aggregate principal amount of 5.45% notes due on March 15, 2018. Impairment, restructuring, and settlement charges in the current year included a pension settlement charge of \$117 million, a \$49 million charge related to a discontinued software project, and restructuring charges of \$24 million primarily related to the reorganization of IT services compared to restructuring charges related to the reduction of certain positions within the Company's global workforce of \$54 million in the prior year. Other charges decreased \$32 million primarily due to improved results in the Company's investment in CIP and lower non-service cost related pension expenses.

Non-GAAP Financial Measures

The Company uses adjusted earnings per share (EPS), adjusted earnings before taxes, interest, and depreciation and amortization (EBITDA), and adjusted segment operating profit, non-GAAP financial measures as defined by the Securities and Exchange Commission, to evaluate the Company's financial performance. These performance measures are not defined by accounting principles generally accepted in the United States and should be considered in addition to, and not in lieu of, GAAP financial measures.

Adjusted EPS is defined as diluted EPS adjusted for the effects on reported diluted EPS of specified items. Adjusted EBITDA is defined as earnings before taxes, interest, and depreciation and amortization, adjusted for specified items. The Company calculates adjusted EBITDA by removing the impact of specified items and adding back the amounts of interest expense and depreciation and amortization to earnings before income taxes. Adjusted segment operating profit is segment operating profit adjusted, where applicable, for specified items.

Management believes that adjusted EPS, adjusted EBITDA, and adjusted segment operating profit are useful measures of the Company's performance because they provide investors additional information about the Company's operations allowing better evaluation of underlying business performance and better period-to-period comparability. Adjusted EPS, adjusted EBITDA, and adjusted segment operating profit are not intended to replace or be an alternative to diluted EPS, earnings before income taxes, and segment operating profit, respectively, the most directly comparable amounts reported under GAAP.

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

The table below provides a reconciliation of diluted EPS to adjusted EPS for the years ended December 31, 2018 and 2017 .

	2018		2017	
	In millions	Per share	In millions	Per share
Average number of shares outstanding - diluted	567		572	
Net earnings and reported EPS (fully diluted)	\$ 1,810	\$ 3.19	\$ 1,595	\$ 2.79
Adjustments:				
LIFO charge (credit) (net of tax of \$4 million in 2018 and \$1 million in 2017) ⁽¹⁾	(14)	(0.02)	(1)	—
(Gains) Losses on sales of assets and businesses (net of tax of \$0 million in 2018 and \$32 million in 2017) ⁽²⁾	(13)	(0.02)	10	0.02
Asset impairment, restructuring, and settlement charges (net of tax of \$66 million in 2018 and \$70 million in 2017) ⁽²⁾	226	0.40	144	0.25
Acquisition-related expenses (net of tax of \$2 million) ⁽²⁾	6	0.01	—	—
Loss on debt extinguishment (net of tax of \$4 million) ⁽¹⁾	—	—	7	0.01
Tax adjustments ⁽³⁾	(33)	(0.06)	(366)	(0.64)
Adjusted net earnings and adjusted EPS	\$ 1,982	\$ 3.50	\$ 1,389	\$ 2.43

⁽¹⁾ Tax effected using the Company's U.S. tax rate.

⁽²⁾ Tax effected using the applicable tax rates.

⁽³⁾ Includes tax adjustments related to the U.S. Tax Cuts and Jobs Act.

The tables below provide a reconciliation of earnings before income taxes to adjusted EBITDA and adjusted EBITDA by segment for the years ended December 31, 2018 and 2017 .

(In millions)	2018	2017	Change
Earnings before income taxes	\$ 2,060	\$ 1,609	\$ 451
Interest expense	364	330	34
Depreciation and amortization	941	924	17
LIFO charge (credit)	(18)	(2)	(16)
(Gains) Losses on sales of assets and businesses	(13)	(22)	9
Asset impairment, restructuring, and settlement charges	292	214	78
Acquisition-related expenses	8	—	8
Loss on debt extinguishment	—	11	(11)
Adjusted EBITDA	\$ 3,634	\$ 3,064	\$ 570

(In millions)	2018	2017	Change
Origination	\$ 717	\$ 581	136
Oilseeds	1,693	1,039	654
Carbohydrate Solutions	1,282	1,415	(133)
Nutrition	486	450	36
Other	92	69	23
Corporate	(636)	(490)	(146)
Adjusted EBITDA	\$ 3,634	\$ 3,064	\$ 570

Year Ended December 31, 2017 Compared to Year Ended December 31, 2016

As an agricultural commodity-based business, the Company is subject to a variety of market factors which affect the Company's operating results. In Origination, U.S. export competitiveness was strong during the first half of 2017 but weakened during the second half due to the large crops in South America. Overall low market volatility continued due to surplus in the global market. In Carbohydrate Solutions, demand and prices for sweeteners and starches remained solid in North America while co-product prices were stable. Ethanol continues to face a challenging environment. Although ethanol demand remained strong both in North America and export markets due to favorable gasoline blending economics and ethanol's continuing status as a competitive octane enhancer, U.S. industry ethanol production also remained at high levels which limited margins. Global oilseeds processing volumes remained strong, but ample supply of competing proteins and abundance of Argentine meal and oil in world markets pressured margins. Slow selling by farmers in Brazil continues to depress grain origination margins despite strong export volumes. While demand and margins for refined oil remained solid across all regions, uncertainty surrounding the U.S. biodiesel tax credit has negatively impacted biodiesel margins. Nutrition benefited from strong demand for flavor ingredients and flavor systems, but continued to be adversely affected by start-up costs and margin pressure in certain non-flavor food ingredient markets.

Net earnings attributable to controlling interests increased \$0.3 billion to \$1.6 billion. Segment operating profit decreased \$0.2 billion to \$2.5 billion. Included in segment operating profit in 2017 was a net charge of \$134 million consisting of a net gain on sales of assets and businesses, impairment, restructuring, and settlement charges, and corn hedge timing effects. Included in segment operating profit in 2016 was income of \$81 million consisting of a net gain on sales of assets and businesses/revaluation, impairment and restructuring charges, and corn hedge timing effects. Adjusted segment operating profit increased \$47 million to \$2.7 billion due to solid results in Carbohydrate Solutions, partially offset by weaker South American origination margins, lower soybean crush margins, and weaker results in some specialty ingredients. Corporate results were a net charge of \$927 million in 2017 compared to \$882 million in 2016. Corporate results in 2017 included a credit of \$2 million from the effect of changes in agricultural commodity prices on LIFO inventory valuation reserves, compared to a charge of \$19 million in 2016.

Income taxes decreased \$527 million due to lower earnings before income taxes and a lower effective tax rate. The Company's effective tax rate for 2017 decreased to 0.4% compared to 29.3% for 2016 due primarily to the estimated impact of the Tax Cuts and Jobs Act (the "Act"). Excluding the impact of the Act, the Company's effective tax rate for 2017 would have decreased from 29.3% to approximately 24.0% due primarily to the impact of changes in discrete tax items, including the favorable resolution of an uncertain tax position related to a 2014 acquisition and return to provision adjustments in the current year, partially offset by changes in the geographic mix of pre-tax earnings and the expiration of U.S. tax credits, including the biodiesel credit, at the end of 2016 (see Note 13 in Item 8 for more information).

Analysis of Statements of Earnings

Processed volumes by product for the years ended December 31, 2017 and 2016 are as follows (in metric tons):

(In thousands)	2017	2016	Change
Oilseeds	34,733	33,788	3%
Corn	22,700	22,273	2%
Total	57,433	56,061	2%

The Company generally operates its production facilities, on an overall basis, at or near capacity, adjusting facilities individually, as needed, to react to the current margin environment and seasonal local supply and demand conditions. Processed volumes of oilseeds increased due to the strong demand environment for soybean meal and canola oil. The overall increase in corn is due to the strong demand environment for ethanol, partially offset by the production disruption in one of the Company's plants due to a water main break in the first quarter and the reconfiguration of the Company's Peoria, Illinois ethanol complex.

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

Revenues by segment for the years ended December 31, 2017 and 2016 are as follows:

(In millions)	2017	2016	Change
Origination			
Merchandising and Handling	\$ 23,915	\$ 25,522	\$ (1,607)
Transportation	209	224	(15)
Total Origination	<u>24,124</u>	<u>25,746</u>	<u>(1,622)</u>
Oilseeds			
Crushing and Origination	14,171	14,034	137
Refining, Packaging, Biodiesel, and Other	8,217	7,920	297
Total Oilseeds	<u>22,388</u>	<u>21,954</u>	<u>434</u>
Carbohydrate Solutions			
Starches and Sweeteners	6,565	6,413	152
Bioproducts	3,841	4,302	(461)
Total Carbohydrate Solutions	<u>10,406</u>	<u>10,715</u>	<u>(309)</u>
Nutrition			
Wild Flavors and Specialty Ingredients	2,367	2,466	(99)
Animal Nutrition	1,156	1,057	99
Total Nutrition	<u>3,523</u>	<u>3,523</u>	<u>—</u>
Other	<u>387</u>	<u>408</u>	<u>(21)</u>
Total Other	<u>387</u>	<u>408</u>	<u>(21)</u>
Total	<u>\$ 60,828</u>	<u>\$ 62,346</u>	<u>\$ (1,518)</u>

Revenues and cost of products sold in commodity merchandising and processing businesses are significantly correlated to the underlying commodity prices and volumes. In periods of significant changes in commodity prices, the underlying performance of the Company is better evaluated by looking at margins since both revenues and cost of products sold, particularly in Oilseeds and Origination, generally have a relatively equal impact from commodity price changes which generally result in an insignificant impact to gross profit.

Revenues decreased \$1.5 billion, or 2%, to \$60.8 billion due to lower sales volumes (\$1.4 billion) and lower average sales prices (\$0.1 billion). The decrease in sales volumes was due principally to a decrease in volumes of unprocessed commodities, in particular volumes of soybeans, corn, rapeseed, and wheat. Origination revenues decreased 6% to \$24.1 billion due to lower sales volumes (\$1.5 billion) and lower average sales prices (\$0.1 billion). Oilseeds revenues increased 2% to \$22.4 billion due to higher sales volumes (\$0.4 billion). Carbohydrate Solutions revenues decreased 3% to \$10.4 billion due to lower sales volumes (\$0.3 billion). Nutrition revenues of \$3.5 billion were comparable to 2016.

Cost of products sold decreased \$1.4 billion to \$57.3 billion due principally to lower sales volumes. Included in cost of products sold is a credit of \$2 million from the effect of changes in agricultural commodity prices on LIFO inventory valuation reserves compared to a charge of \$19 million in 2016. Manufacturing expenses increased \$0.1 billion to \$5.2 billion due to increased expenses for energy, operating and maintenance supplies, and contracted labor, and higher salaries and benefits.

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

Gross profit decreased \$0.1 billion or 3%, to \$3.5 billion. Lower results in soybean processing (\$159 million) and grain origination (\$86 million) were partially offset by higher results in canola processing (\$41 million), sweeteners and starches (\$44 million), and animal nutrition (\$39 million). These factors are explained in the segment operating profit discussion on page 40. The effect of changes in agricultural commodity prices on LIFO inventory valuation reserves had a \$2 million positive impact on gross profit compared to a negative impact of \$19 million in 2016.

Selling, general, and administrative expenses of \$2.0 billion were comparable to 2016. Expenses in 2017 included increased salaries and benefits cost related to further investments in the Company's business transformation, IT, research and development, and innovation initiatives. Expenses in 2016 included expenses related to the settlement of a legal matter.

Asset impairment, exit, and restructuring costs increased \$118 million to \$173 million. Charges in 2017 consisted of \$63 million of asset impairments related to the reconfiguration of the Company's Peoria, Illinois ethanol complex, \$20 million of asset impairments primarily related to the closure of a facility, \$36 million of several individually insignificant asset impairments and restructuring charges presented as specified items within segment operating profit, and \$54 million of restructuring charges in Corporate primarily related to the reduction of certain positions within the Company's global workforce. Charges in 2016 included \$32 million of individually insignificant fixed asset impairment and restructuring charges presented as specified items within segment operating profit, \$11 million of software impairment in Corporate, \$6 million of other-than-temporary impairment charges on the Company's investment in two available for sale equity securities in Corporate, and \$6 million of individually insignificant fixed asset impairment and restructuring charges in Corporate.

Interest expense increased \$37 million to \$330 million primarily due to higher interest rates on short-term debt, the issuance of the \$1 billion fixed-rate notes in August 2016, and interest related to an amended foreign income tax, partially offset by the retirement of the \$261 million bond that matured in April 2017. Interest expense in 2016 also included a credit of \$8 million for the revaluation of the mandatorily redeemable 10% interest in Harvest Innovations.

Equity in earnings of unconsolidated affiliates increased \$164 million to \$456 million primarily due to higher earnings from the Company's investment in Wilmar resulting from the increased ownership stake in and higher results from Wilmar and improved results from the Company's equity investment in CIP, partially offset by losses from a new equity investment and decreased earnings resulting from the disposal of an equity investment.

Other income - net decreased \$110 million to \$37 million. Income in 2016 included realized additional consideration related to the sale of the Company's equity investment in Gruma S.A.B. de C.V. in December 2012, recovery of loss provisions and gain related to the sale of the Company's Brazilian sugar ethanol facilities, a gain related to the revaluation of the remaining interest to settlement value in conjunction with the acquisition of Amazon Flavors, and loss on sale of other individually immaterial assets. Income in 2017 included gains related to the sale of the crop risk services business and disposals of other individually insignificant assets in the ordinary course of business, partially offset by an adjustment of the proceeds of the 2015 sale of the cocoa business, changes in contingent settlement provisions, a charge related to the full redemption of the Company's \$559 million notes due March 15, 2018, and foreign exchange losses.

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

Operating profit by segment and earnings before income taxes for the years ended December 31, 2017 and 2016 are as follows:

Segment Operating Profit	2017	2016	Change
	(In millions)		
Origination			
Merchandising and Handling	\$ 318	\$ 243	\$ 75
Transportation	86	119	(33)
Total Origination	<u>404</u>	<u>362</u>	<u>42</u>
Oilseeds			
Crushing and Origination	237	380	(143)
Refining, Packaging, Biodiesel, and Other	259	319	(60)
Asia	329	154	175
Total Oilseeds	<u>825</u>	<u>853</u>	<u>(28)</u>
Carbohydrate Solutions			
Sweeteners and Starches	930	867	63
Bioproducts	148	134	14
Total Carbohydrate Solutions	<u>1,078</u>	<u>1,001</u>	<u>77</u>
Nutrition			
Wild Flavors and Specialty Ingredients	279	271	8
Animal Nutrition	33	2	31
Total Nutrition	<u>312</u>	<u>273</u>	<u>39</u>
Other	51	134	(83)
Total Other	<u>51</u>	<u>134</u>	<u>(83)</u>
Specified Items:			
Gains on sales of assets and businesses	22	114	(92)
Impairment, restructuring, and exit charges	(160)	(32)	(128)
Hedge timing effects	4	(1)	5
Total Specified Items	<u>(134)</u>	<u>81</u>	<u>(215)</u>
Total Segment Operating Profit	2,536	2,704	(168)
Adjusted Segment Operating Profit ⁽¹⁾	2,670	2,623	47
Segment Operating Profit	2,536	2,704	(168)
Corporate	(927)	(882)	(45)
Earnings Before Income Taxes	<u>\$ 1,609</u>	<u>\$ 1,822</u>	<u>\$ (213)</u>

⁽¹⁾ Adjusted segment operating profit is segment operating profit excluding the above specified items.

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

Origination operating profit increased 12%. Merchandising and Handling operating results increased due to improved Global Trade execution and strong destination marketing volume growth. Merchandising and Handling results also included a gain related to a confidential legal settlement, and a \$42 million net recovery of property damage costs and business interruption losses related to the Company's New Orleans, Louisiana export facility. Transportation results decreased due to river conditions and lower barge freight volumes and margins.

Oilseeds operating profit decreased 3%. Crushing and Origination operating profit decreased from the prior year. Higher softseed results in North America and Europe were more than offset by weaker soybean crush margins due to ample supply of alternative proteins competing with soybean meal. In addition, improved South American soybean crushing results were more than offset by weak grain origination margins throughout the year. Refining, Packaging, Biodiesel, and Other operating profit declined due to weaker biodiesel and specialty oils margins partially offset by higher results in South American packaged oils and the global peanut business. Asia results increased on higher earnings from the Company's investment in Wilmar due to the increased ownership stake in and higher results from Wilmar.

Carbohydrate Solutions operating profit increased 8%. Starches and Sweeteners operating profit increased due to improved domestic demand and higher volumes and margins from the international business. Bioproducts profit increased due to higher trading results partially offset by slightly lower ethanol margins.

Nutrition operating profit increased 14%. Wild Flavors and Specialty Ingredients operating profit increased due the continuing strong demand for flavor ingredients and flavor systems across all regions, partially offset by lower results in specialty ingredients due in part to operational start-up costs. Animal Nutrition operating profit increased due to improved lysine margins partially offset by lower volumes caused by a mild winter.

Other operating profit decreased 62% primarily due to losses from the Company's captive insurance operations and lower results from its futures commission brokerage business. Results in 2017 included settlement of insurance claims from the Company's Origination segment totaling \$50 million related to the New Orleans, Louisiana export facility.

Corporate results are as follows:

(In millions)	2017	2016	Change
LIFO credit (charge)	\$ 2	\$ (19)	\$ 21
Interest expense - net	(310)	(282)	(28)
Unallocated corporate costs	(470)	(457)	(13)
Loss on debt extinguishment	(11)	—	(11)
Asset impairment, restructuring, and settlement charges	(54)	(85)	31
Post-retirement benefit adjustment	—	38	(38)
Loss on sale of asset	—	(5)	5
Other charges	(84)	(72)	(12)
Total Corporate	<u>\$ (927)</u>	<u>\$ (882)</u>	<u>\$ (45)</u>

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

Corporate results were a net charge of \$927 million in 2017 compared to \$882 million in 2016. The effect of changes in agricultural commodity prices on LIFO inventory valuation reserves resulted in a credit of \$2 million in 2017 compared to a charge of \$19 million in 2016. Interest expense - net increased \$28 million due principally to higher interest rates on short-term debt, the issuance of \$1 billion fixed-rate debt in August 2016, and interest related to an amended foreign income tax return, partially offset by the retirement of the \$261 million bond that matured in April 2017 and the absence of the original Harvest Innovation adjustment of buy-out liability in May 2016. Unallocated corporate costs increased \$13 million due principally to increased investments in the Company's business transformation, IT, research and development, and innovation initiatives partially offset by the absence of the railroad maintenance expense in 2016. Loss on debt extinguishment related to the early redemption of the Company's \$559 million aggregate principal amount of 5.45% notes due on March 15, 2018. Asset impairment, restructuring, and settlement charges in 2017 related to the reduction of certain positions within the Company's global workforce compared to charges in 2016 which consisted of legal settlement costs and legal fees, a software impairment charge, other-than-temporary impairment charges on the Company's investments in two available for sale equity securities, and other asset impairment and restructuring charges. Post-retirement benefit adjustment related to the U.S. retiree medical benefit curtailment gain. Loss on sale of asset related to the sale of an investment, partially offset by a gain related to a U.S. retiree medical benefit plan curtailment. Other charges increased \$12 million due principally to lower results from the Company's equity investment in CIP.

Non-GAAP Financial Measures

The Company uses adjusted earnings per share (EPS), adjusted earnings before taxes, interest, and depreciation and amortization (EBITDA), and adjusted segment operating profit, non-GAAP financial measures as defined by the Securities and Exchange Commission, to evaluate the Company's financial performance. These performance measures are not defined by accounting principles generally accepted in the United States and should be considered in addition to, and not in lieu of, GAAP financial measures.

Adjusted EPS is defined as diluted EPS adjusted for the effects on reported diluted EPS of specified items. Adjusted EBITDA is defined as earnings before taxes, interest, and depreciation and amortization, adjusted for specified items. The Company calculates adjusted EBITDA by removing the impact of specified items and adding back the amounts of interest expense and depreciation and amortization to earnings before income taxes. Adjusted segment operating profit is segment operating profit adjusted, where applicable, for specified items.

Management believes that adjusted EPS, adjusted EBITDA, and adjusted segment operating profit are useful measures of the Company's performance because they provide investors additional information about the Company's operations allowing better evaluation of underlying business performance and better period-to-period comparability. Adjusted EPS, adjusted EBITDA, and adjusted segment operating profit are not intended to replace or be an alternative to diluted EPS, earnings before income taxes, and segment operating profit, respectively, the most directly comparable amounts reported under GAAP.

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

The table below provides a reconciliation of diluted EPS to adjusted EPS for the years ended December 31, 2017 and 2016 .

	2017		2016	
	In millions	Per share	In millions	Per share
Average number of shares outstanding - diluted	572		591	
Net earnings and reported EPS (fully diluted)	\$ 1,595	\$ 2.79	\$ 1,279	\$ 2.16
Adjustments:				
LIFO charge (credit) (net of tax of \$1 million in 2017 and \$7 million in 2016 ⁽¹⁾)	(1)	—	12	0.02
(Gains) Losses on sales and revaluation of assets and businesses (net of tax of \$32 million in 2017 and \$17 million in 2016) ⁽²⁾	10	0.02	(92)	(0.15)
Asset impairment, restructuring, and settlement charges (net of tax of \$70 million in 2017 and \$40 million in 2016) ⁽²⁾	144	0.25	77	0.13
Post-retirement benefit curtailment (net of tax of \$14 million) ⁽¹⁾	—	—	(24)	(0.04)
Loss on debt extinguishment (net of tax of \$4 million) ⁽¹⁾	7	0.01	—	—
Tax adjustments ⁽³⁾	(366)	(0.64)	24	0.04
Adjusted net earnings and adjusted EPS	<u>\$ 1,389</u>	<u>\$ 2.43</u>	<u>\$ 1,276</u>	<u>\$ 2.16</u>

⁽¹⁾ Tax effected using the Company's U.S. effective tax rate.

⁽²⁾ Tax effected using the U.S. and other applicable tax rates.

⁽³⁾ Includes tax adjustments related to the 2017 U.S. Tax Cuts and Jobs Act.

The tables below provide a reconciliation of earnings before income taxes to adjusted EBITDA and adjusted EBITDA by segment for the years ended December 31, 2017 and 2016 .

(In millions)	2017	2016	Change
Earnings before income taxes	\$ 1,609	\$ 1,822	\$ (213)
Interest expense	330	293	37
Depreciation and amortization	924	900	24
LIFO charge (credit)	(2)	19	(21)
Gain on sale and revaluation of assets	(22)	(109)	87
Asset impairment, restructuring, and settlement charges	214	117	97
Post-retirement benefit adjustment	—	(38)	38
Loss on debt extinguishment	11	—	11
Adjusted EBITDA	<u>\$ 3,064</u>	<u>\$ 3,004</u>	<u>\$ 60</u>

(In millions)	2017	2016	Change
Origination	\$ 581	\$ 539	42
Oilseeds	1,039	1,059	(20)
Carbohydrate Solutions	1,415	1,335	80
Nutrition	450	396	54
Other - Financial	69	144	(75)
Corporate	(490)	(469)	(21)
Adjusted EBITDA	<u>\$ 3,064</u>	<u>\$ 3,004</u>	<u>\$ 60</u>

Liquidity and Capital Resources

A Company objective is to have sufficient liquidity, balance sheet strength, and financial flexibility to fund the operating and capital requirements of a capital intensive agricultural commodity-based business. The Company depends on access to credit markets, which can be impacted by its credit rating and factors outside of the Company's control, to fund its working capital needs and capital expenditures. The primary source of funds to finance the Company's operations, capital expenditures, and advancement of its growth strategy is cash generated by operations and lines of credit, including a commercial paper borrowing facility. In addition, the Company believes it has access to funds from public and private equity and debt capital markets in both U.S. and international markets.

Cash used in operating activities was \$4.8 billion for 2018 compared to \$6.0 billion in 2017. Working capital changes, including the increase in deferred consideration, decreased cash by \$7.5 billion in the current year compared to \$7.9 billion in the prior year. Trade receivables increased \$0.4 billion due to higher revenues. Inventories decreased \$0.2 billion due to lower inventory quantities.

Increase in deferred consideration in securitized receivables of \$7.8 billion and \$8.2 billion in 2018 and 2017, respectively, was offset by the same amount of net consideration received for beneficial interest obtained for selling trade receivables, which were previously classified as operating activities in the prior year, that are now classified as investing activities in accordance with the amended guidance of Topic 230.

Cash provided by investing activities was \$6.6 billion this year compared to \$7.3 billion last year. Capital expenditures and net assets of businesses acquired were \$0.8 billion and \$0.5 billion, respectively, this year compared to \$1.0 billion and \$0.2 billion, respectively last year. Proceeds from the sale of businesses and assets of \$0.2 billion in the current year were comparable to the prior year. There were immaterial marketable securities sales transactions this year compared to sales of marketable securities, net of purchases, of \$0.4 billion in the prior year. Investments in and advances to affiliates of \$0.2 billion in the current year related to the joint venture with Cargill and investment in Aston Foods compared to \$0.3 billion of additional investment in Wilmar in the prior year. Net consideration received for beneficial interest obtained for selling trade receivables was \$7.8 billion and \$8.2 billion in 2018 and 2017, respectively.

Cash provided by financing activities was \$0.2 billion this year compared to a use of \$1.0 billion last year. Long-term debt borrowings in the current year consisted of the €650 million (\$744 million as of December 31, 2018) aggregate principal amount of 1.0% Notes issued on September 12, 2018 and the December 3, 2018 issuance of \$600 million and \$400 million aggregate principal amounts of 4.5% and 3.375% Notes, respectively. Long-term debt borrowings in the prior year related to the \$500 million aggregate principal amount of 3.75% Notes issued on September 14, 2017. Long-term debt payments in the current year were \$30 million compared to \$0.8 billion in the prior year which primarily related to the full redemption of the \$559 million notes due in 2018 and the retirement of the \$261 million bond that matured in April 2017. The Company issued debt in the current year for general corporate expenses and to pay down commercial paper borrowings. Commercial paper payments in the current year were \$0.7 billion compared to borrowings of \$0.7 billion in the prior year. Share repurchases in the current year were \$0.1 billion compared to \$0.8 billion in the prior year.

At December 31, 2018, the Company had \$2.0 billion of cash, cash equivalents, and short-term marketable securities and a current ratio, defined as current assets divided by current liabilities, of 1.7 to 1. Included in working capital is \$5.6 billion of readily marketable commodity inventories. At December 31, 2018, the Company's capital resources included shareholders' equity of \$19.0 billion and lines of credit, including the accounts receivable securitization programs described below, totaling \$10.4 billion, of which \$8.9 billion was unused. The Company's ratio of long-term debt to total capital (the sum of long-term debt and shareholders' equity) was 29% at December 31, 2018 and 27% at December 31, 2017. The Company uses this ratio as a measure of the Company's long-term indebtedness and an indicator of financial flexibility. The Company's ratio of net debt (the sum of short-term debt, current maturities of long-term debt, and long-term debt less the sum of cash and cash equivalents and short-term marketable securities) to capital (the sum of net debt and shareholders' equity) was 25% at December 31, 2018 and 27% at December 31, 2017. Of the Company's total lines of credit, \$5.0 billion supported the combined U.S. and European commercial paper borrowing programs, against which there was no commercial paper outstanding at December 31, 2018.

As of December 31, 2018, the Company had \$2.0 billion of cash and cash equivalents, \$0.4 billion of which is cash held by foreign subsidiaries whose undistributed earnings are considered indefinitely reinvested. Based on the Company's historical ability to generate sufficient cash flows from its U.S. operations and unused and available U.S. credit capacity of \$5.2 billion, the Company has asserted that these funds are indefinitely reinvested outside the U.S.

Item 7. MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS (Continued)

The Company has accounts receivable securitization programs (the “Programs”) with certain commercial paper conduit purchasers and committed purchasers. The Programs provide the Company with up to \$1.8 billion in funding against accounts receivable transferred into the Programs and expands the Company’s access to liquidity through efficient use of its balance sheet assets (see Note 19 in Item 8 for more information and disclosures on the Programs). As of December 31, 2018, the Company utilized \$1.5 billion of its facility under the Programs. The Programs are due to terminate during the first half of 2019. However, the Company currently expects to extend these Programs upon termination.

On November 5, 2014, the Company’s Board of Directors approved a stock repurchase program authorizing the Company to repurchase up to 100,000,000 shares of the Company’s common stock during the period commencing January 1, 2015 and ending December 31, 2019. The Company has acquired approximately 87.9 million shares under this program as of December 31, 2018.

The Company expects capital expenditures of \$0.9 billion to \$1.0 billion during 2019. In 2019, the Company expects additional cash outlays of approximately \$0.8 billion in dividends.

The Company’s credit facilities and certain debentures require the Company to comply with specified financial and non-financial covenants including maintenance of minimum tangible net worth as well as limitations related to incurring liens, secured debt, and certain other financing arrangements. The Company was in compliance with these covenants as of December 31, 2018.

The three major credit rating agencies have maintained the Company’s credit ratings at solid investment grade levels with stable outlooks.

In January 2019, the Company completed the acquisition of Neovia, a French-based global provider of value-added animal nutrition solutions, with 72 production facilities and a presence in 25 countries, for \$1.8 billion (€1.5 billion). The Company funded the transaction using operating cash flows and other sources of liquidity.

Contractual Obligations

In the normal course of business, the Company enters into contracts and commitments which obligate the Company to make payments in the future. The following table sets forth the Company’s significant future obligations by time period. Purchases include commodity-based contracts entered into in the normal course of business, which are further described in Item 7A, “Quantitative and Qualitative Disclosures About Market Risk,” energy-related purchase contracts entered into in the normal course of business, and other purchase obligations related to the Company’s normal business activities. The following table does not include unrecognized income tax benefits of \$107 million as of December 31, 2018 as the Company is unable to reasonably estimate the timing of settlement. Where applicable, information included in the Company’s consolidated financial statements and notes is cross-referenced in this table.

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

Contractual Obligations and Other Commitments	Item 8 Note Reference	Total	Payments Due by Period			
			Less than 1 Year	1 - 3 Years	3 - 5 Years	More than 5 Years
			(In millions)			
Purchases						
Inventories		\$ 10,868	\$ 8,473	\$ 2,394	\$ 1	\$ —
Energy		424	258	163	3	—
Other		537	228	137	59	113
Total purchases		11,829	8,959	2,694	63	113
Short-term debt		108	108	—	—	—
Long-term debt	Note 10	8,280	582	682	420	6,596
Estimated interest payments		5,684	328	614	544	4,198
One-time transition tax		202	15	36	51	100
Operating leases	Note 14	808	214	270	147	177
Estimated pension and other postretirement plan contributions (1)	Note 15	141	40	25	23	53
Total		\$ 27,052	\$ 10,246	\$ 4,321	\$ 1,248	\$ 11,237

⁽¹⁾ Includes pension contributions of \$27 million for fiscal 2019. The Company is unable to estimate the amount of pension contributions beyond fiscal year 2019. For more information concerning the Company's pension and other postretirement plans, see Note 15 in Item 8.

At December 31, 2018, the Company estimates it will spend approximately \$1.3 billion through fiscal year 2023 to complete currently approved capital projects which are not included in the table above.

The Company also has outstanding letters of credit and surety bonds of \$1.7 billion at December 31, 2018 which are not included in the table above.

The Company has entered into agreements, primarily debt guarantee agreements related to equity-method investees, which could obligate the Company to make future payments. The Company's liability under these agreements arises only if the primary entity fails to perform its contractual obligation. The Company has collateral for a portion of these contingent obligations.

Off Balance Sheet Arrangements

Accounts Receivable Securitization Programs

Since March 2012, the Company has had an accounts receivable securitization program with certain commercial paper conduit purchasers and committed purchasers. In March 2014, the Company entered into a second accounts receivable securitization program with certain commercial paper conduit purchasers and committed purchasers. See Note 19 of Item 8 for more information about these programs.

Synthetic Leasing Program

The Company is a party to lease agreements under synthetic leasing programs for certain of its U.S. barge and tugboat assets with expiration dates ranging from 2020 to 2024. The agreements are accounted for as operating leases, such that the rent expense is recorded in the consolidated statement of earnings. As of December 31, 2018, outstanding lease balances, including the value of the underlying assets of \$164 million, were off-balance sheet. These agreements provide the Company with the right to use these assets for specified periods in exchange for an obligation to make rental payments. The future lease payments pertaining to these lease agreements are included in the contractual obligations table in Item 7. These leasing programs are utilized primarily to diversify funding sources and to retain flexibility. The Company recorded \$10 million, \$10 million, and \$5 million of rent expense pertaining to synthetic lease payments for the years ended December 31, 2018, 2017, and 2016, respectively.

Critical Accounting Policies

The process of preparing financial statements requires management to make estimates and judgments that affect the carrying values of the Company's assets and liabilities as well as the recognition of revenues and expenses. These estimates and judgments are based on the Company's historical experience and management's knowledge and understanding of current facts and circumstances. Certain of the Company's accounting policies are considered critical, as these policies are important to the depiction of the Company's financial statements and require significant or complex judgment by management. Management has discussed with the Company's Audit Committee the development, selection, disclosure, and application of these critical accounting policies. Following are the accounting policies management considers critical to the Company's financial statements.

Fair Value Measurements - Inventories and Commodity Derivatives

Certain of the Company's inventory and commodity derivative assets and liabilities as of December 31, 2018 are valued at estimated fair values, including \$4.5 billion of merchandisable agricultural commodity inventories, \$0.6 billion of derivative assets, \$0.8 billion of derivative liabilities, and \$0.6 billion of inventory-related payables. Commodity derivative assets and liabilities include forward fixed-price purchase and sale contracts for agricultural commodities. Merchandisable agricultural commodities are freely traded, have quoted market prices, and may be sold without significant additional processing. Management estimates fair value for its commodity-related assets and liabilities based on exchange-quoted prices, adjusted for differences in local markets. The Company's inventory and derivative commodity fair value measurements are mainly based on observable market quotations without significant adjustments and are therefore reported as Level 2 within the fair value hierarchy. Level 3 fair value measurements of approximately \$1.7 billion of assets and \$0.3 billion of liabilities represent fair value estimates where unobservable price components represent 10% or more of the total fair value price. For more information concerning amounts reported as Level 3, see Note 4 in Item 8. Changes in the market values of these inventories and commodity contracts are recognized in the statement of earnings as a component of cost of products sold. If management used different methods or factors to estimate market value, amounts reported as inventories and cost of products sold could differ materially. Additionally, if market conditions change subsequent to year-end, amounts reported in future periods as inventories and cost of products sold could differ materially.

Derivatives – Designated Hedging Activities

The Company, from time to time, uses derivative contracts designated as cash flow hedges to hedge the purchase or sales price of anticipated volumes of commodities to be purchased and processed in a future month, to hedge the purchase price of the Company's anticipated natural gas requirements for certain production facilities, and to hedge the sales price of anticipated volumes of ethanol. Assuming normal market conditions, the change in the market value of such derivative contracts has historically been, and is expected to continue to be, highly effective at offsetting changes in price movements of the hedged item. Gains and losses arising from open and closed hedging transactions are deferred in accumulated other comprehensive income, net of applicable income taxes, and recognized as a component of cost of products sold and revenues in the statement of earnings when the hedged item is recognized. If it is determined that the derivative instruments used are no longer effective at offsetting changes in the price of the hedged item, then the changes in the market value of these exchange-traded futures and exchange-traded and over-the-counter option contracts would be recorded immediately in the statement of earnings as a component of revenues and/or cost of products sold. See Note 5 in Item 8 for additional information.

Investments in Affiliates

The Company applies the equity method of accounting for investments over which the Company has the ability to exercise significant influence. These investments are carried at cost plus equity in undistributed earnings and are adjusted, where appropriate, for amortizable basis differences between the investment balance and the underlying net assets of the investee. Generally, the minimum ownership threshold for asserting significant influence is 20% ownership of the investee. However, the Company considers all relevant factors in determining its ability to assert significant influence including, but not limited to, ownership percentage, board membership, customer and vendor relationships, and other arrangements. If management used a different accounting method for these investments, then the amount of earnings from affiliates the Company recognizes may materially differ.

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

Income Taxes

The Company accounts for income taxes in accordance with the applicable accounting standards. These standards prescribe a minimum threshold a tax position is required to meet before being recognized in the consolidated financial statements. The Company recognizes in its consolidated financial statements tax positions determined more likely than not to be sustained upon examination, based on the technical merits of the position. The Company frequently faces challenges from U.S. and foreign tax authorities regarding the amount of taxes due. These challenges include questions regarding the timing and amount of deductions and the allocation of income among various tax jurisdictions. In evaluating the exposure associated with various tax filing positions, the Company records reserves for estimates of potential additional tax owed by the Company. For example, the Company has received tax assessments from tax authorities in Brazil and Argentina, challenging income tax positions taken by subsidiaries of the Company. The Company evaluated its tax positions for these matters and concluded, based in part upon advice from legal counsel, that it was appropriate to recognize the tax benefits of these positions (see Note 13 in Item 8 for additional information).

Deferred tax assets represent items to be used as tax deductions or credits in future tax returns where the related tax benefit has already been recognized in the Company's income statement. The realization of the Company's deferred tax assets is dependent upon future taxable income in specific tax jurisdictions, the timing and amount of which are uncertain. The Company evaluates all available positive and negative evidence including estimated future reversals of existing temporary differences, projected future taxable income, tax planning strategies, and recent financial results. Valuation allowances related to these deferred tax assets have been established to the extent the realization of the tax benefit is not likely. During 2018, the Company increased valuation allowances by approximately \$25 million primarily related to certain realized foreign capital losses. To the extent the Company were to favorably resolve matters for which valuation allowances have been established or be required to pay amounts in excess of the aforementioned valuation allowances, the Company's effective tax rate in a given financial statement period may be impacted.

Undistributed earnings of the Company's foreign subsidiaries and the Company's share of the undistributed earnings of affiliated corporate joint venture companies accounted for on the equity method amounting to approximately \$10.5 billion at December 31, 2018, are considered to be indefinitely reinvested.

The Tax Cuts and Jobs Act (the "Act"), which was enacted on December 22, 2017, included a one-time transition tax on accumulated foreign earnings. As a result, the Company recorded a \$369 million provisional impact of the transition tax and a \$220 million beneficial impact on reserves previously established under Accounting Standards Codification Subtopic 740-30, *Income Taxes - Other Considerations or Special Areas*, or a net provisional impact of \$149 million. The Company performed a quarterly review of the provisional tax liability recorded in 2017 as new guidance on the Act was issued in 2018. The Company finalized its calculation of the transition tax and recorded a tax benefit of \$29 million in the fourth quarter of 2018. The Company is currently assessing the impact of pending Treasury Regulations on the Company's transition tax calculation, and will record any adjustment in 2019. The Company elected to pay the one-time transition tax over eight years. Because the Company's undistributed foreign earnings and outside basis differences inherent in foreign entities continue to be indefinitely reinvested in foreign operations, no income taxes have been provided. It is not practicable to determine the amount of unrecognized deferred tax liability related to any remaining undistributed foreign earnings not subject to the transition tax and additional outside basis difference in these entities.

The Act also contains new provisions related to Global Intangible Low Taxed Income (GILTI) and Foreign Derived Intangible Income (FDII) which are effective for fiscal year 2018. The Company made an accounting policy election to treat GILTI as a period cost. During 2018, U.S. tax authorities issued proposed Treasury Regulations addressing some of the tax reform items that were effective in 2018. Once final Treasury Regulations are issued, the Company will record the impact of any changes during 2019. It is also reasonable to expect that global taxing authorities will be reviewing their current legislation for potential modifications in reaction to the implementation of the Act. The additional guidance, along with the potential for additional global tax legislation changes, may affect significant deductions and income inclusions and could have a material adverse effect on the Company's net income or cash flow.

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

Property, Plant, and Equipment and Asset Abandonments and Write-Downs

The Company is principally engaged in the business of procuring, transporting, storing, processing, and merchandising agricultural commodities and products. This business is global in nature and is highly capital-intensive. Both the availability of the Company's raw materials and the demand for the Company's finished products are driven by factors such as weather, plantings, government programs and policies, changes in global demand, changes in standards of living, and global production of similar and competitive crops. These aforementioned factors may cause a shift in the supply/demand dynamics for the Company's raw materials and finished products. Any such shift will cause management to evaluate the efficiency and cash flows of the Company's assets in terms of geographic location, size, and age of its facilities. The Company, from time to time, will also invest in equipment, technology, and companies related to new, value-added products produced from agricultural commodities and products. These new products are not always successful from either a commercial production or marketing perspective. Management evaluates the Company's property, plant, and equipment for impairment whenever indicators of impairment exist. Assets are written down to fair value after consideration of the ability to utilize the assets for their intended purpose or to employ the assets in alternative uses or sell the assets to recover the carrying value. If management used different estimates and assumptions in its evaluation of these assets, then the Company could recognize different amounts of expense over future periods. During the years ended December 31, 2018, 2017, and 2016, impairment charges for property, plant, and equipment were \$100 million, \$101 million, and \$17 million, respectively. Asset abandonment and impairment charges in 2018 included a \$49 million discontinued software project (see Note 18 in Item 8 for additional information).

Business Combinations

The Company's acquisitions are accounted for as purchases in accordance with Accounting Standards Codification (ASC) Topic 805, *Business Combinations*, as amended. Assets acquired and liabilities assumed are recorded at fair values at acquisition date with the remainder of the purchase price, if any, recorded as goodwill. When determining the fair values of assets acquired and liabilities assumed, management makes significant estimates and assumptions, especially with respect to intangible assets. Critical estimates in valuing certain intangible assets include, but are not limited to, future expected cash flows and discount rates. Although management's estimates of fair value are based upon assumptions believed to be reasonable, actual results may differ.

Goodwill and Other Intangible Assets

Goodwill and intangible assets deemed to have indefinite lives are not amortized but are subject to annual impairment tests. The Company evaluates goodwill for impairment at the reporting unit level annually on October 1 or whenever there are indicators that the carrying value may not be fully recoverable. The Company adopted the provisions of ASC 350, *Intangibles - Goodwill and Other*, which permits, but does not require, a company to qualitatively assess indicators of a reporting unit's fair value. If after completing the qualitative assessment, a company believes it is likely that a reporting unit is impaired, a discounted cash flow analysis is prepared to estimate fair value. Critical estimates in the determination of the fair value of each reporting unit include, but are not limited to, future expected cash flows and discount rates. Definite-lived intangible assets are amortized over their estimated useful lives of 2 to 50 years and are reviewed for impairment whenever there are indicators that the carrying values may not be fully recoverable. The Company recorded impairment charges totaling \$9 million related to customer lists and \$11 million related to computer software during the years ended December 31, 2018 and 2016, respectively. There were no impairment charges recorded for goodwill and intangible assets during the year ended December 31, 2017 (see Note 18 in Item 8 for more information). If management used different estimates and assumptions in its impairment tests, then the Company could recognize different amounts of expense over future periods.

Employee Benefit Plans

The Company provides substantially all U.S. employees and employees at certain international subsidiaries with retirement benefits including defined benefit pension plans and defined contribution plans. The Company provides certain eligible U.S. employees who retire under qualifying conditions with subsidized postretirement health care coverage or Health Care Reimbursement Accounts.

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

In order to measure the expense and funded status of these employee benefit plans, management makes several estimates and assumptions, including interest rates used to discount certain liabilities, rates of return on assets set aside to fund these plans, rates of compensation increases, employee turnover rates, anticipated mortality rates, and anticipated future health care costs. These estimates and assumptions are based on the Company's historical experience combined with management's knowledge and understanding of current facts and circumstances. Management also uses third-party actuaries to assist in measuring the expense and funded status of these employee benefit plans. If management used different estimates and assumptions regarding these plans, the funded status of the plans could vary significantly, and the Company could recognize different amounts of expense over future periods.

The Company uses the corridor approach when amortizing actuarial losses. Under the corridor approach, net unrecognized actuarial losses in excess of 10% of the greater of the projected benefit obligation or the market related value of plan assets are amortized over future periods. For plans with little to no active participants, the amortization period is the remaining average life expectancy of the participants. For plans with active participants, the amortization period is the remaining average service period of the active participants. The amortization periods range from 4 to 39 years for the Company's defined benefit pension plans and from 6 to 24 years for the Company's postretirement benefit plans.

Item 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

The market risk inherent in the Company's market risk sensitive instruments and positions is the potential loss arising from adverse changes in: commodity market prices as they relate to the Company's net commodity position, foreign currency exchange rates, and interest rates as described below.

Commodities

The availability and prices of agricultural commodities are subject to wide fluctuations due to factors such as changes in weather conditions, crop disease, plantings, government programs and policies, competition, changes in global demand, changes in customer preferences and standards of living, and global production of similar and competitive crops.

The Company manages its exposure to adverse price movements of agricultural commodities used for, and produced in, its business operations, by entering into derivative and non-derivative contracts which reduce the Company's overall short or long commodity position. Additionally, the Company uses exchange-traded futures and exchange-traded and over-the-counter option contracts as components of merchandising strategies designed to enhance margins. The results of these strategies can be significantly impacted by factors such as the correlation between the value of exchange-traded commodities futures contracts and the cash prices of the underlying commodities, counterparty contract defaults, and volatility of freight markets. In addition, the Company, from time-to-time, enters into derivative contracts which are designated as hedges of specific volumes of commodities that will be purchased and processed, or sold, in a future month. The changes in the market value of such futures contracts have historically been, and are expected to continue to be, highly effective at offsetting changes in price movements of the hedged item. Gains and losses arising from open and closed designated hedging transactions are deferred in other comprehensive income, net of applicable taxes, and recognized as a component of cost of products sold or revenues in the statement of earnings when the hedged item is recognized.

The Company's commodity position consists of merchandisable agricultural commodity inventories, related purchase and sales contracts, energy and freight contracts, and exchange-traded futures and exchange-traded and over-the-counter option contracts including contracts used to hedge portions of production requirements, net of sales.

The fair value of the Company's commodity position is a summation of the fair values calculated for each commodity by valuing all of the commodity positions at quoted market prices for the period, where available, or utilizing a close proxy. The Company has established metrics to monitor the amount of market risk exposure, which consist of volumetric limits, and value-at-risk (VaR) limits. VaR measures the potential loss, at a 95% confidence level, that could be incurred over a one year period. Volumetric limits are monitored daily and VaR calculations and sensitivity analysis are monitored weekly.

In addition to measuring the hypothetical loss resulting from an adverse two standard deviation move in market prices (assuming no correlations) over a one year period using VaR, sensitivity analysis is performed measuring the potential loss in fair value resulting from a hypothetical 10% adverse change in market prices. The highest, lowest, and average weekly position for the years ended December 31, 2018 and 2017 together with the market risk from a hypothetical 10% adverse price change is as follows:

Item 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK (Continued)

Long/(Short)	December 31, 2018		December 31, 2017	
	Fair Value	Market Risk	Fair Value	Market Risk
	(In millions)			
Highest position	\$ 434	\$ 43	\$ 455	\$ 46
Lowest position	25	2	(82)	(8)
Average position	237	24	213	21

The change in fair value of the average position was principally the result of an increase in prices underlying the weekly commodity position partially offset by a decrease in quantities.

Currencies

The Company has consolidated subsidiaries in more than 80 countries. For the majority of the Company's subsidiaries located outside the United States, the local currency is the functional currency except certain significant subsidiaries in Switzerland where Euro is the functional currency, and Brazil and Argentina where U.S. dollar is the functional currency. To reduce the risks associated with foreign currency exchange rate fluctuations, the Company enters into currency exchange contracts to minimize its foreign currency position related to transactions denominated primarily in Euro, British pound, Canadian dollar, and Brazilian real currencies. These currencies represent the major functional or local currencies in which recurring business transactions occur. The Company does not use currency exchange contracts as hedges against amounts indefinitely invested in foreign subsidiaries and affiliates. The currency exchange contracts used are forward contracts, swaps with banks, exchange-traded futures contracts, and over-the-counter options. The changes in market value of such contracts have a high correlation to the price changes in the currency of the related transactions. The potential loss in fair value for such net currency position resulting from a hypothetical 10% adverse change in foreign currency exchange rates is not material.

The amount the Company considers indefinitely invested in foreign subsidiaries and affiliates and translated into dollars using the year-end exchange rates is \$8.7 billion and \$8.2 billion (\$10.5 billion and \$9.4 billion at historical rates) at December 31, 2018 and 2017 , respectively. The increase is due to the increase in retained earnings of the foreign subsidiaries and affiliates of \$1.1 billion partially offset by the depreciation of foreign currencies versus the U.S. dollar of \$0.6 billion . The potential loss in fair value, which would principally be recognized in Other Comprehensive Income, resulting from a hypothetical 10% adverse change in quoted foreign currency exchange rates is \$870 million and \$820 million for December 31, 2018 and 2017 , respectively. Actual results may differ.

Interest

The fair value of the Company's long-term debt is estimated using quoted market prices, where available, and discounted future cash flows based on the Company's current incremental borrowing rates for similar types of borrowing arrangements. Such fair value exceeded the long-term debt carrying value. Market risk is estimated as the potential increase in fair value resulting from a hypothetical 50 basis points decrease in interest rates. Actual results may differ.

	December 31, 2018		December 31, 2017	
	(In millions)			
Fair value of long-term debt	\$	8,434	\$	7,777
Excess of fair value over carrying value		736		1,155
Market risk		405		384

The increase in fair value of long-term debt at December 31, 2018 is primarily due to increased borrowings.

Item 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

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Archer-Daniels-Midland Company

Consolidated Statements of Earnings

(In millions, except per share amounts)	Year Ended December 31		
	2018	2017	2016
Revenues	\$ 64,341	\$ 60,828	\$ 62,346
Cost of products sold	60,160	57,310	58,728
Gross Profit	4,181	3,518	3,618
Selling, general and administrative expenses	2,165	1,978	1,981
Asset impairment, exit, and restructuring costs	171	173	55
Interest expense	364	330	293
Equity in earnings of unconsolidated affiliates	(518)	(456)	(292)
Interest income	(162)	(106)	(92)
Other (income) expense - net	101	(10)	(149)
Earnings Before Income Taxes	2,060	1,609	1,822
Income tax expense	245	7	534
Net Earnings Including Noncontrolling Interests	1,815	1,602	1,288
Less: Net earnings (losses) attributable to noncontrolling interests	5	7	9
Net Earnings Attributable to Controlling Interests	\$ 1,810	\$ 1,595	\$ 1,279
Average number of shares outstanding – basic	564	569	588
Average number of shares outstanding – diluted	567	572	591
Basic earnings per common share	\$ 3.21	\$ 2.80	\$ 2.18
Diluted earnings per common share	\$ 3.19	\$ 2.79	\$ 2.16

See notes to consolidated financial statements.

Archer-Daniels-Midland Company
Consolidated Statements of Comprehensive Income (Loss)

(In millions)	Year Ended December 31		
	2018	2017	2016
Net earnings including noncontrolling interests	\$ 1,815	\$ 1,602	\$ 1,288
Other comprehensive income (loss):			
Foreign currency translation adjustment	(581)	692	(467)
Tax effect	(28)	59	(10)
Net of tax amount	(609)	751	(477)
Pension and other postretirement benefit liabilities adjustment	156	298	(1)
Tax effect	(55)	(98)	3
Net of tax amount	101	200	2
Deferred gain (loss) on hedging activities	57	12	33
Tax effect	(13)	(1)	(12)
Net of tax effect	44	11	21
Unrealized gain (loss) on investments	(4)	(1)	3
Tax effect	(1)	2	(2)
Net of tax effect	(5)	1	1
Other comprehensive income (loss)	(469)	963	(453)
Comprehensive income (loss)	1,346	2,565	835
Less: Comprehensive income (loss) attributable to noncontrolling interests	5	9	8
Comprehensive income (loss) attributable to controlling interests	\$ 1,341	\$ 2,556	\$ 827

See notes to consolidated financial statements.

Archer-Daniels-Midland Company
Consolidated Balance Sheets

(In millions)	December 31, 2018	December 31, 2017
Assets		
Current Assets		
Cash and cash equivalents	\$ 1,997	\$ 804
Short-term marketable securities	6	—
Segregated cash and investments	4,506	4,826
Trade receivables	2,233	1,947
Inventories	8,813	9,173
Other current assets	3,033	3,175
Total Current Assets	<u>20,588</u>	<u>19,925</u>
Investments and Other Assets		
Investments in and advances to affiliates	5,317	5,088
Long-term marketable securities	7	92
Goodwill and other intangible assets	4,041	3,918
Other assets	927	802
Total Investments and Other Assets	<u>10,292</u>	<u>9,900</u>
Property, Plant, and Equipment		
Land and land improvements	545	541
Buildings	5,171	5,043
Machinery and equipment	18,399	17,985
Construction in progress	987	1,224
	<u>25,102</u>	<u>24,793</u>
Accumulated depreciation	<u>(15,149)</u>	<u>(14,655)</u>
Net Property, Plant, and Equipment	<u>9,953</u>	<u>10,138</u>
Total Assets	<u><u>\$ 40,833</u></u>	<u><u>\$ 39,963</u></u>
Liabilities, Temporary Equity, and Shareholders' Equity		
Current Liabilities		
Short-term debt	\$ 108	\$ 857
Trade payables	3,545	3,894
Payables to brokerage customers	4,628	4,973
Accrued expenses and other payables	2,913	2,833
Current maturities of long-term debt	582	13
Total Current Liabilities	<u>11,776</u>	<u>12,570</u>
Long-Term Liabilities		
Long-term debt	7,698	6,623
Deferred income taxes	1,067	1,053
Other	1,247	1,342
Total Long-Term Liabilities	<u>10,012</u>	<u>9,018</u>
Temporary Equity - Redeemable noncontrolling interest	49	53
Shareholders' Equity		
Common stock	2,560	2,398
Reinvested earnings	18,527	17,552
Accumulated other comprehensive income (loss)	(2,106)	(1,637)
Noncontrolling interests	15	9
Total Shareholders' Equity	<u>18,996</u>	<u>18,322</u>
Total Liabilities, Temporary Equity, and Shareholders' Equity	<u><u>\$ 40,833</u></u>	<u><u>\$ 39,963</u></u>

See notes to consolidated financial statements.

Archer-Daniels-Midland Company
Consolidated Statements of Cash Flows

(In millions)	Year Ended December 31		
	2018	2017	2016
Operating Activities			
Net earnings including noncontrolling interests	\$ 1,815	\$ 1,602	\$ 1,288
Adjustments to reconcile net earnings to net cash provided by (used in) operating results			
Depreciation and amortization	941	924	900
Asset impairment charges	142	101	34
Deferred income taxes	(47)	(714)	56
Equity in earnings of affiliates, net of dividends	(247)	(210)	(61)
Stock compensation expense	109	66	74
Pension and postretirement accruals (contributions), net	69	16	(135)
Gain on sale and revaluation of assets	(43)	(80)	(130)
Other – net	(67)	190	34
Changes in operating assets and liabilities, net of acquisitions and dispositions			
Segregated investments	1,176	260	342
Trade receivables	(376)	73	(160)
Inventories	226	(137)	(654)
Deferred consideration in securitized receivables	(7,838)	(8,177)	(8,063)
Other current assets	(70)	676	(176)
Trade payables	(300)	181	161
Payables to brokerage customers	(309)	(261)	87
Accrued expenses and other payables	35	(476)	(105)
Total Operating Activities	(4,784)	(5,966)	(6,508)
Investing Activities			
Purchases of property, plant, and equipment	(842)	(1,049)	(882)
Net assets of businesses acquired	(464)	(187)	(130)
Proceeds from sale of business and assets	191	195	195
Investments in and advances to affiliates	(157)	(280)	(662)
Investments in retained interest in securitized receivables	(6,957)	(4,306)	(3,823)
Proceeds from retained interest in securitized receivables	14,795	12,483	11,886
Purchases of marketable securities	—	(538)	(1,401)
Proceeds from sales of marketable securities	13	985	1,659
Other – net	3	(12)	10
Total Investing Activities	6,582	7,291	6,852
Financing Activities			
Long-term debt borrowings	1,762	532	1,041
Long-term debt payments	(30)	(835)	(14)
Net borrowings (payments) under lines of credit agreements	(743)	685	61
Debt repurchase premium and costs	—	(11)	—
Share repurchases	(77)	(750)	(1,000)
Cash dividends	(758)	(730)	(701)
Other – net	33	81	34
Total Financing Activities	187	(1,028)	(579)
Increase (decrease) in cash, cash equivalents, restricted cash, and restricted cash equivalents	1,985	297	(235)
Cash, cash equivalents, restricted cash, and restricted cash equivalents – beginning of year	1,858	1,561	1,796
Cash, cash equivalents, restricted cash, and restricted cash equivalents – end of year	\$ 3,843	\$ 1,858	\$ 1,561
Reconciliation of cash, cash equivalents, restricted cash, and restricted cash equivalents to the consolidated balance sheets			
Cash and cash equivalents	\$ 1,997	\$ 804	\$ 619

Restricted cash and restricted cash equivalents included in segregated cash and investments	1,846	1,054	942
Total cash, cash equivalents, restricted cash, and restricted cash equivalents	\$ 3,843	\$ 1,858	\$ 1,561
Cash paid for interest and income taxes were as follows:			
Interest	\$ 351	\$ 338	\$ 283
Income taxes	\$ 376	\$ 538	\$ 398
Supplemental Disclosure of Noncash Investing Activity:			
Retained interest in securitized receivables	\$ 7,897	\$ 7,938	\$ 8,064
See notes to consolidated financial statements.			

Archer-Daniels-Midland Company

Consolidated Statements of Shareholders' Equity

	Common Stock		Reinvested Earnings	Accumulated Other Comprehensive	Noncontrolling	Total
	Shares	Amount		Income (Loss)	Interests	Shareholders' Equity
(In millions)						
Balance, December 31, 2015	595	\$ 3,180	\$ 16,865	\$ (2,146)	\$ 16	\$ 17,915
Comprehensive income						
Net earnings			1,279		9	
Other comprehensive income (loss)				(452)	(1)	
Total comprehensive income						835
Cash dividends paid-\$1.20 per share			(701)			(701)
Treasury stock purchases	(25)	(1,000)				(1,000)
Stock compensation expense	1	74				74
Other	2	73	1		(16)	58
Balance, December 31, 2016	573	\$ 2,327	\$ 17,444	\$ (2,598)	\$ 8	\$ 17,181
Impact of ASU 2016-16			(7)			(7)
Balance, January 1, 2017	573	2,327	17,437	(2,598)	8	17,174
Comprehensive income						
Net earnings			1,595		7	
Other comprehensive income (loss)				961	2	
Total comprehensive income						2,565
Cash dividends paid-\$1.28 per share			(730)			(730)
Share repurchases	(18)		(750)			(750)
Stock compensation expense	1	66				66
Other	1	5	—		(8)	(3)
Balance, December 31, 2017	557	\$ 2,398	\$ 17,552	\$ (1,637)	\$ 9	\$ 18,322
Comprehensive income						
Net earnings			1,810		5	
Other comprehensive income (loss)				(469)	—	
Total comprehensive income						1,346
Cash dividends paid-\$1.34 per share			(758)			(758)
Share repurchases	(2)		(77)			(77)
Stock compensation expense	2	109				109
Other	2	53	—		1	54
Balance, December 31, 2018	559	\$ 2,560	\$ 18,527	\$ (2,106)	\$ 15	\$ 18,996

See notes to consolidated financial statements.

Archer-Daniels-Midland Company

Notes to Consolidated Financial Statements

Note 1. Summary of Significant Accounting Policies

Nature of Business

The Company is principally engaged in procuring, transporting, storing, processing, and merchandising agricultural commodities products, and ingredients.

Principles of Consolidation

The consolidated financial statements include the accounts of the Company and its subsidiaries. All significant intercompany accounts and transactions have been eliminated. The Company consolidates all entities, including variable interest entities (VIEs), in which it has a controlling financial interest. For VIEs, the Company assesses whether it is the primary beneficiary as defined under the applicable accounting standard. Investments in affiliates, including VIEs through which the Company exercises significant influence but does not control the investee and is not the primary beneficiary of the investee's activities, are carried at cost plus equity in undistributed earnings since acquisition and are adjusted, where appropriate, for basis differences between the investment balance and the underlying net assets of the investee. The Company's portion of the results of certain affiliates and results of certain VIEs are included using the most recent available financial statements. In each case, the financial statements are within 93 days of the Company's year-end and are consistent from period to period.

Use of Estimates

The preparation of consolidated financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect amounts reported in its consolidated financial statements and accompanying notes. Actual results could differ from those estimates.

Reclassifications

The Company classified \$7.8 billion of cash inflows from net consideration received for beneficial interest obtained for selling trade receivables as investing instead of operating activities for the year ended December 31, 2018 in accordance with the adoption of Accounting Standards Codification (ASC) Topic 230, *Statement of Cash Flows*. Prior period amounts have been conformed to the current presentation, which resulted in a decrease of \$8.2 billion and \$8.1 billion in total cash provided by operating activities and a corresponding increase in cash provided by investing activities for the years ended December 31, 2017 and 2016, respectively.

The Company classified \$(10) million of non-service components of net benefit cost (income) as other (income) expense - net in its consolidated statement of earnings for the year ended December 31, 2018, as a result of the adoption of the amended guidance of ASC Topic 715, *Compensation - Retirement Benefits*. Amounts previously reported in cost of goods sold of \$12 million and \$(1) million for the years ended December 31, 2017 and 2016, respectively, and in selling, general, and administrative expenses of \$15 million and \$(1) million for the years ended December 31, 2017 and 2016, respectively, have been reclassified to other (income) expense - net to conform to the current presentation (see Note 12).

Effective January 1, 2018, the Company changed its segment reporting to reflect changes in its operating structure. The Company's new segments are Origination (formerly Agricultural Services), Oilseeds (formerly Oilseeds Processing), Carbohydrate Solutions (formerly Corn Processing), and Nutrition (formerly Wild Flavors and Specialty Ingredients). The European origination business previously reported in Oilseeds is now managed by leaders in Origination to better coordinate continental trading activities. Carbohydrate Solutions now includes the results of ADM Milling, which were previously reported in Origination. In addition, the Company also moved the segment reporting of its renewable chemicals business from Carbohydrate Solutions to Oilseeds effective July 1, 2018. Nutrition now includes the results of Animal Nutrition and certain product lines previously reported in Carbohydrate Solutions, as well as certain product lines previously reported in Oilseeds.

Throughout this annual report on Form 10-K, prior period results have been reclassified to conform to the current period presentation.

Archer-Daniels-Midland Company

Notes to Consolidated Financial Statements (Continued)

Note 1. Summary of Significant Accounting Policies (Continued)

Cash Equivalents

The Company considers all non-segregated, highly-liquid investments with a maturity of three months or less at the time of purchase to be cash equivalents.

Segregated Cash and Investments

The Company segregates certain cash, cash equivalents, and investment balances in accordance with regulatory requirements, commodity exchange requirements, and insurance arrangements. These balances represent deposits received from customers of the Company's registered futures commission merchant and commodity brokerage services, cash margins and securities pledged to commodity exchange clearinghouses, and cash pledged as security under certain insurance arrangements. Segregated cash and investments also include restricted cash collateral for the various insurance programs of the Company's captive insurance business. To the degree these segregated balances are comprised of cash and cash equivalents, they are considered restricted cash and cash equivalents on the statement of cash flows.

Receivables

The Company records accounts receivable at net realizable value. This value includes an allowance for estimated uncollectible accounts of \$84 million and \$73 million at December 31, 2018 and 2017, respectively, to reflect any loss anticipated on the accounts receivable balances. The Company estimates this allowance based on its history of write-offs, level of past-due accounts, and its relationships with, and the economic status of, its customers. Portions of the allowance for uncollectible accounts are recorded in trade receivables, other current assets, and other assets.

Credit risk on receivables is minimized as a result of the large and diversified nature of the Company's worldwide customer base. The Company manages its exposure to counter-party credit risk through credit analysis and approvals, credit limits, and monitoring procedures. Collateral is generally not required for the Company's receivables.

Accounts receivable due from unconsolidated affiliates as of December 31, 2018 and 2017 was \$161 million and \$343 million, respectively.

Inventories

Inventories of certain merchandisable agricultural commodities, which include inventories acquired under deferred pricing contracts, are stated at market value. In addition, the Company values certain inventories using the lower of cost, determined by either the first-in, first-out (FIFO) or last-in, first-out (LIFO) methods, or net realizable value.

The following table sets forth the Company's inventories as of December 31, 2018 and 2017.

	December 31, 2018	December 31, 2017
	(In millions)	
LIFO inventories		
FIFO value	\$ 1,011	\$ 1,056
LIFO valuation reserve	(55)	(73)
LIFO inventories carrying value	<u>956</u>	<u>983</u>
FIFO inventories	2,908	2,906
Market inventories	4,547	4,886
Supplies and other inventories	402	398
Total inventories	<u><u>\$ 8,813</u></u>	<u><u>\$ 9,173</u></u>

Archer-Daniels-Midland Company

Notes to Consolidated Financial Statements (Continued)

Note 1. Summary of Significant Accounting Policies (Continued)

Fair Value Measurements

The Company determines fair value based on the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The Company uses the market approach valuation technique to measure the majority of its assets and liabilities carried at fair value. Three levels are established within the fair value hierarchy that may be used to report fair value: Level 1: Quoted prices (unadjusted) in active markets for identical assets or liabilities. Level 2: Observable inputs, including Level 1 prices that have been adjusted; quoted prices for similar assets or liabilities; quoted prices in markets that are less active than traded exchanges; and other inputs that are observable or can be substantially corroborated by observable market data. Level 3: Unobservable inputs that are supported by little or no market activity and that are a significant component of the fair value of the assets or liabilities. In evaluating the significance of fair value inputs, the Company generally classifies assets or liabilities as Level 3 when their fair value is determined using unobservable inputs that individually or when aggregated with other unobservable inputs, represent more than 10% of the fair value of the assets or liabilities. Judgment is required in evaluating both quantitative and qualitative factors in the determination of significance for purposes of fair value level classification. Level 3 amounts can include assets and liabilities whose value is determined using pricing models, discounted cash flow methodologies, or similar techniques, as well as assets and liabilities for which the determination of fair value requires significant management judgment or estimation.

Based on historical experience with the Company's suppliers and customers, the Company's own credit risk and knowledge of current market conditions, the Company does not view nonperformance risk to be a significant input to fair value for the majority of its forward commodity purchase and sale contracts. However, in certain cases, if the Company believes the nonperformance risk to be a significant input, the Company records estimated fair value adjustments, and classifies the measurement in Level 3.

In many cases, a valuation technique used to measure fair value includes inputs from multiple levels of the fair value hierarchy. The lowest level of input that is a significant component of the fair value measurement determines the placement of the entire fair value measurement in the hierarchy. The Company's assessment of the significance of a particular input to the fair value measurement requires judgment, and may affect the classification of fair value assets and liabilities within the fair value hierarchy levels.

The Company's policy regarding the timing of transfers between levels, including both transfers into and transfers out of Level 3, is to measure and record the transfers at the end of the reporting period.

Derivatives

The Company recognizes all of its derivative instruments as either assets or liabilities at fair value in its consolidated balance sheet. Unrealized gains are reported as other current assets and unrealized losses are reported as accrued expenses and other payables. The accounting for changes in the fair value (i.e., gains or losses) of a derivative instrument depends on whether it has been designated and qualifies as part of a hedging relationship and on the type of hedging relationship. The majority of the Company's derivatives have not been designated as hedging instruments, and as such, changes in fair value of these derivatives are recognized in earnings immediately. For those derivative instruments that are designated and qualify as hedging instruments, the Company designates the hedging instrument, based upon the exposure being hedged, as a fair value hedge or a cash flow hedge.

Beginning in 2017, for derivative instruments that are designated and qualify as highly-effective cash flow hedges (i.e., hedging the exposure to variability in expected future cash flows that is attributable to a particular risk), the gain or loss on the derivative instrument is reported as a component of accumulated other comprehensive income (loss) (AOCI) and as an operating activity in the statement of cash flows and reclassified into earnings in the same line item affected by the hedged transaction and in the same period or periods during which the hedged transaction affects earnings. Hedge components excluded from the assessment of effectiveness and gains and losses related to discontinued hedges are recognized in the consolidated statement of earnings during the current period.

Prior to 2017, gain or loss on the derivative instrument that was in excess of the cumulative change in the cash flows of the hedged item, if any (i.e., the ineffective portion) were recognized in the consolidated statement of earnings during the current period.

For derivative instruments that are designated and qualify as fair value hedges, changes in the fair value of the hedging instrument and changes in the fair value of the hedged item are recognized in the consolidated statement of earnings during the current period.

Archer-Daniels-Midland Company

Notes to Consolidated Financial Statements (Continued)

Note 1. Summary of Significant Accounting Policies (Continued)

Property, Plant, and Equipment

Property, plant, and equipment is recorded at cost. Repair and maintenance costs are expensed as incurred. The Company generally uses the straight-line method in computing depreciation for financial reporting purposes and generally uses accelerated methods for income tax purposes. The annual provisions for depreciation have been computed principally in accordance with the following ranges of asset lives: buildings - 15 to 40 years; machinery and equipment - 3 to 40 years. The Company capitalized interest on major construction projects in progress of \$21 million, \$17 million, and \$20 million for the years ended December 31, 2018, 2017, and 2016, respectively.

Income Taxes

The Company accounts for income taxes in accordance with the liability method. Deferred tax assets and liabilities are recorded for temporary differences between the tax basis of assets and liabilities and reported amounts in the consolidated financial statements using statutory rates in effect for the year in which the differences are expected to reverse. The effect on deferred tax assets and liabilities of a change in tax rates is recorded in the results of operations in the period that includes the enactment date under the law. Applicable accounting standards prescribe a minimum threshold a tax position is required to meet before being recognized in the consolidated financial statements. The Company recognizes in its consolidated financial statements tax positions determined more likely than not to be sustained upon examination, based on the technical merits of the position.

The Company classifies interest on income tax-related balances as interest expense and classifies tax-related penalties as selling, general, and administrative expenses.

Goodwill and other intangible assets

Goodwill and other intangible assets deemed to have indefinite lives are not amortized but are subject to annual impairment tests. Definite-lived intangible assets are amortized over their estimated useful lives of 2 to 50 years and are reviewed for impairment whenever there are indicators that the carrying value of the assets may not be fully recoverable. The Company's accounting policy is to evaluate goodwill and other intangible assets with indefinite lives for impairment on October 1 of each fiscal year or whenever there are indicators that the carrying value of the assets may not be fully recoverable. The Company recorded impairment charges for goodwill and intangibles totaling \$9 million related to customer lists and \$11 million related to computer software during the years ended December 31, 2018 and 2016, respectively. There were no impairment charges recorded for goodwill and intangible assets during the year ended December 31, 2017 (see Note 9 for additional information).

Asset Abandonments and Write-Downs

The Company evaluates long-lived assets for impairment whenever indicators of impairment exist. Assets are written down to fair value after consideration of the Company's ability to utilize the assets for their intended purpose, employ the assets in alternative uses, or sell the assets to recover the carrying value. Fair value is generally based on discounted cash flow analysis which relies on management's estimate of market participant assumptions (a Level 3 measurement under applicable accounting standards). During the years ended December 31, 2018, 2017, and 2016, impairment charges were \$100 million, \$101 million, and \$17 million, respectively. Asset abandonment and impairment charges in 2018 included a \$49 million discontinued software project (see Note 18 for additional information).

Payables to Brokerage Customers

Payables to brokerage customers represent the total of customer accounts at the Company's futures commission merchant with credit or positive balances. Customer accounts are used primarily in connection with commodity transactions and include gains and losses on open commodity trades as well as securities and other deposits made for margins or other purposes as required by the Company or the exchange-clearing organizations or counterparties. Payables to brokerage customers have a corresponding balance in segregated cash and investments and customer omnibus receivable in other current assets.

Archer-Daniels-Midland Company

Notes to Consolidated Financial Statements (Continued)

Note 1. Summary of Significant Accounting Policies (Continued)

Revenues

The Company follows a policy of recognizing revenue at a single point in time when it satisfies its performance obligation by transferring control over a product or service to a customer. For transportation service contracts, the Company recognizes revenue over time as the barge, ocean-going vessel, truck, rail, or container freight moves towards its destination in accordance with the transfer of control guidance of ASC Topic 606, *Revenue from Contracts with Customers* (Topic 606). For physically settled derivative sales contracts that are outside the scope of Topic 606, the Company recognizes revenue when control of the inventory is transferred within the meaning of Topic 606 as required by ASC 610-20, *Gains and Losses from the Derecognition of Nonfinancial Assets* (Topic 610-20).

Net sales to unconsolidated affiliates during the years ended December 31, 2018 , 2017 , and 2016 were \$6.8 billion , \$6.0 billion , and \$4.2 billion , respectively.

Stock Compensation

The Company recognizes expense for its stock compensation based on the fair value of the awards that are granted. The Company's stock compensation plans provide for the granting of restricted stock, restricted stock units, performance stock units, and stock options. The fair values of stock options and performance stock units are estimated at the date of grant using the Black-Scholes option valuation model and a lattice valuation model, respectively. These valuation models require the input of highly subjective assumptions. Measured compensation cost, net of estimated forfeitures, is recognized ratably over the vesting period of the related stock compensation award.

Research and Development

Costs associated with research and development are expensed as incurred. Such costs incurred, net of expenditures subsequently reimbursed by government grants, were \$141 million , \$129 million , and \$123 million for the years ended December 31, 2018 , 2017 , and 2016 , respectively.

Per Share Data

Basic earnings per common share are determined by dividing net earnings attributable to controlling interests by the weighted average number of common shares outstanding. In computing diluted earnings per share, average number of common shares outstanding is increased by common stock options outstanding with exercise prices lower than the average market price of common shares using the treasury share method.

Business Combinations

The Company's acquisitions are accounted for as purchases in accordance with ASC Topic 805, *Business Combinations*, as amended . Assets acquired and liabilities assumed are recorded at fair values at acquisition date with the remainder of the consideration, if any, recorded as goodwill. During the measurement period, which may take up to one year from the acquisition date, adjustments due to changes in the estimated fair value of assets acquired and liabilities assumed may be recorded as adjustments to the purchase price allocations. Upon the conclusion of the measurement period or the final determination of the values of assets acquired and liabilities assumed, whichever comes first, any such adjustments are charged to the consolidated statements of earnings.

Adoption of New Accounting Standards

Effective January 1, 2018, the Company adopted the amended guidance of ASC Subtopic 825-10, *Financial Instruments - Overall* , which is intended to improve the recognition and measurement of financial instruments. The amended guidance requires an entity to measure equity investments, except those accounted for under the equity method of accounting or those that result in consolidation of the investee, at fair value with changes in fair value recognized in net income. The amended guidance also simplifies the impairment assessment of equity investments without readily determinable fair values by using a qualitative assessment to identify impairment. The adoption of this amended guidance did not have a significant impact on the Company's financial results.

Archer-Daniels-Midland Company

Notes to Consolidated Financial Statements (Continued)

Note 1. Summary of Significant Accounting Policies (Continued)

Effective January 1, 2018, the Company adopted the new guidance of ASC Topic 606, *Revenue from Contracts with Customers* for all contracts that had not been completed as of the adoption date (the modified retrospective approach). Topic 606 requires the Company to recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. The new guidance requires the Company to apply the following steps: (1) identify the contract with a customer; (2) identify the performance obligations in the contract; (3) determine the transaction price; (4) allocate the transaction price to the performance obligations in the contract; and (5) recognize revenue when, or as, the Company satisfies a performance obligation. Many of the Company's forward commodity sales contracts are considered physically settled derivatives under ASC Topic 815, *Derivatives and Hedging* (Topic 815), and are therefore excluded from the scope of Topic 606. Comparative balance sheet and statement of earnings information has not been restated and continues to be reported under the guidance of ASC 605, *Revenue Recognition* (Topic 605), that was in effect as of December 31, 2017 and in the years ended December 31, 2017 and 2016. The cumulative effect of initially applying the guidance as an adjustment to the opening reinvested earnings balance at January 1, 2018 was less than \$1 million. For more information about the adoption of Topic 606, see Note 2.

Effective January 1, 2018, the Company adopted the amended guidance of ASC 230, *Statement of Cash Flows* (Topic 230), which provides guidance on the application of the predominance principle and the presentation and classification of specific cash flow issues including a requirement to classify consideration received for beneficial interest obtained for selling trade receivables as investing instead of operating activities. The adoption of the amended guidance on the Company's accounts receivable securitization programs resulted in expanded disclosures and a reclassification of cash inflows from operating activities to investing activities (see Note 1 for reclassification amounts).

Effective January 1, 2018, the Company adopted the amended guidance of ASC Topic 715, *Compensation - Retirement Benefits*, which requires that an employer report the service cost component in the same line or items as other compensation costs arising from services rendered by the pertinent employees during the period. The other components of net benefit cost are required to be presented in the income statement separately from the service cost component and outside a subtotal of income from operations, if one is presented. The adoption of this amended guidance required expanded disclosures and the reclassification of the non-service components of net benefit cost from cost of products sold and selling, general, and administrative expenses to other (income) expense - net in the Company's consolidated statements of earnings but did not impact financial results (see Note 1 for reclassification amounts).

Pending Accounting Standards

Effective January 1, 2019, the Company will be required to adopt the new guidance of ASC Topic 842, *Leases* (Topic 842), which will supersede ASC Topic 840, *Leases*. Topic 842 requires lessees to recognize assets and liabilities for all leases. The Company will adopt Topic 842 using a modified retrospective transition approach for leases existing at, or entered into after, the beginning of the earliest comparative period presented in the financial statements. The adoption of this new guidance will require expanded disclosures in the Company's consolidated financial statements. The Company has established a cross-functional implementation team consisting of representatives from accounting, legal, procurement, and operations. The Company utilized surveys to centrally gather more information about its existing leases and lease processes and to gather lease contracts. To ensure completeness of the population of lease contracts, the results of the survey were cross-referenced against other available lease information (i.e., year-end disclosures and authorization for expenditure listings). The Company has implemented a lease accounting system which will assist in delivering the required accounting changes and disclosures. The adoption of the new standard will result in a significant increase to right of use assets and lease liabilities on the Company's consolidated balance sheet, primarily as a result of operating leases currently not recognized on the balance sheet. The Company estimates that it will record right of use assets and corresponding lease liabilities of approximately \$0.7 billion to \$0.8 billion at the January 1, 2019 transition date.

Archer-Daniels-Midland Company

Notes to Consolidated Financial Statements (Continued)

Note 1. Summary of Significant Accounting Policies (Continued)

Effective January 1, 2019, the Company will be required to adopt the amended guidance of ASC Topic 220, *Income Statement - Reporting Comprehensive Income* (Topic 220), which allows a reclassification from accumulated other comprehensive income (AOCI) to retained earnings for stranded tax effects resulting from the Tax Cuts and Jobs Act (the “Act”), eliminating the stranded tax effects resulting from the Act and improving the usefulness of information reported to financial statement users. In addition, the Company will be required to disclose (1) a description of its accounting policy for releasing income tax effects from accumulated other comprehensive income; (2) whether it elects to reclassify the stranded income tax effects from the Act; and (3) information about other income tax effects related to the application of the Act that are reclassified from AOCI to retained earnings, if any. Early adoption is permitted in any interim period for which financial statements have not been issued. The Company has elected not to reclassify the stranded tax effects resulting from the Act.

Effective January 1, 2020, the Company will be required to adopt the amended guidance of ASC Topic 326, *Financial Instruments - Credit Losses*, which is intended to improve financial reporting by requiring more timely recording of credit losses on loans and other financial instruments held by financial institutions and other organizations. The amended guidance requires the measurement of all expected credit losses for financial assets held at the reporting date based on historical experience, current conditions, and reasonable and supportable forecasts. Early adoption is permitted for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2018. The Company does not expect the adoption of this amended guidance to have a significant impact on the Company’s financial results.

Effective January 1, 2020, the Company will be required to adopt the amended guidance of ASC Topic 820, *Fair Value Measurement*, which modifies the disclosure requirements on fair value measurements. Early adoption is permitted. The adoption of this amended guidance will not impact the Company’s financial results.

Effective December 31, 2020, the Company will be required to adopt the amended guidance of ASC Subtopic 715-20, *Compensation - Retirement Benefits - Defined Benefit Plans - General*, which modifies the disclosure requirements for employers that sponsor defined benefit pension or other postretirement plans. Early adoption is permitted. The adoption of this amended guidance will not impact the Company’s financial results.

Note 2. Revenues

Revenue Recognition

The Company principally generates revenue from merchandising and transporting agricultural commodities and manufactured products used as ingredients in food and beverages, feed, energy, and industrial products. Revenue is measured based on the consideration specified in the contract with a customer, and excludes any sales incentives and amounts collected on behalf of third parties. The Company follows a policy of recognizing revenue at a single point in time when it satisfies its performance obligation by transferring control over a product or service to a customer. For transportation service contracts, the Company recognizes revenue over time as the barge, ocean-going vessel, truck, rail, or container freight moves towards its destination in accordance with the transfer of control guidance of Topic 606. For physically settled derivative sales contracts that are outside the scope of Topic 606, the Company recognizes revenue when control of the inventory is transferred within the meaning of Topic 606 as required by Topic 610-20.

Shipping and Handling Costs

Shipping and handling costs related to contracts with customers for sale of goods are accounted for as a fulfillment activity and are included in cost of products sold. Accordingly, amounts billed to customers for such costs are included as a component of revenues.

Taxes Collected from Customers and Remitted to Governmental Authorities

The Company does not include taxes assessed by governmental authorities that are (i) imposed on and concurrent with a specific revenue-producing transaction and (ii) collected from customers, in the measurement of transactions prices or as a component of revenues and cost of products sold.

Archer-Daniels-Midland Company

Notes to Consolidated Financial Statements (Continued)

Note 2. Revenues (Continued)

Transaction Price Allocated to Remaining Performance Obligations

The Company generally recognizes revenue at a point in time with the exception of revenue from transportation services which is recognized over time. The majority of the Company's contracts with customers have one performance obligation and a contract duration of one year or less. The Company applies the practical expedient in paragraph 10-50-14 of Topic 606 and does not disclose information about remaining performance obligations that have original expected durations of one year or less.

Contract Liabilities

Contract liabilities relate to advance payments from customers for goods and services that the Company has yet to provide. Contract liabilities of \$501 million and \$519 million as of December 31, 2018 and January 1, 2018, respectively, were recorded in accrued expenses and other payables in the consolidated balance sheet. Contract liabilities recognized as revenues for the year ended December 31, 2018 were \$647 million .

Disaggregation of Revenues

The following table presents revenue disaggregated by timing of recognition and major product lines for the year ended December 31, 2018 .

	Topic 606 Revenue			Topic 815 ⁽¹⁾ Revenue	Total Revenues
	Point in Time	Over Time	Total		
	(In millions)				
Origination					
Merchandising and Handling	\$ 2,182	\$ 237	\$ 2,419	\$ 22,397	\$ 24,816
Transportation	—	244	244	—	244
Total Origination	2,182	481	2,663	22,397	25,060
Oilseeds					
Crushing and Origination	664	—	664	16,279	16,943
Refining, Packaging, Biodiesel, and Other	1,792	—	1,792	6,096	7,888
Total Oilseeds	2,456	—	2,456	22,375	24,831
Carbohydrate Solutions					
Starches and Sweeteners	4,901	—	4,901	1,795	6,696
Bioproducts	3,583	—	3,583	—	3,583
Total Carbohydrate Solutions	8,484	—	8,484	1,795	10,279
Nutrition					
Wild Flavors and Specialty Ingredients	2,571	—	2,571	—	2,571
Animal Nutrition	1,219	—	1,219	—	1,219
Total Nutrition	3,790	—	3,790	—	3,790
Other	381	—	381	—	381
Total Revenues	\$ 17,293	\$ 481	\$ 17,774	\$ 46,567	\$ 64,341

⁽¹⁾ Topic 815 revenue relates to the physical delivery or the settlement of the Company's sales contracts that are accounted for as derivatives and are outside the scope of Topic 606.

Archer-Daniels-Midland Company

Notes to Consolidated Financial Statements (Continued)

Note 2. Revenues (Continued)

Origination

The Origination segment generates revenue from the sale of commodities and from service fees for the transportation of goods. Revenue is measured based on the consideration specified in the contract and excludes any sales incentives and amounts collected on behalf of third parties. Revenue is recognized when a performance obligation is satisfied by transferring control over a product or providing service to a customer. For transportation service contracts, the Company recognizes revenue over time as the barge, ocean-going vessel, truck, rail, or container freight moves towards its destination in accordance with the transfer of control guidance of Topic 606. For physically settled derivative sales contracts that are outside the scope of Topic 606, the Company recognizes revenue when control of the inventory is transferred within the meaning of Topic 606 as required by Topic 610-20.

Oilseeds

The Oilseeds segment generates revenue primarily from the sale of products manufactured in its global processing facilities. The segment also generates revenue from the sale of raw commodities in its South American grain origination business and from the sale of peanuts, tree nuts, and peanut-derived ingredients. Revenue is recognized when a performance obligation is satisfied by transferring control over a product. The amount of revenue recognized follows the contractually specified price which may include freight or other contractually specified cost components. For physically settled derivative sales contracts that are outside the scope of Topic 606, the Company recognizes revenue when control of the inventory is transferred within the meaning of Topic 606 as required by Topic 610-20.

Carbohydrate Solutions

The Carbohydrate Solutions segment generates revenue from the sale of products manufactured at the Company's global corn and milling facilities around the world. Revenue is recognized when control over products is transferred to the customer. Products are shipped to the customers from the Company's various facilities and from its network of storage terminals. The amount of revenue recognized is based on the consideration specified in the contract which could include freight and other costs depending on the specific shipping terms of each contract. For physically settled derivative sales contracts that are outside the scope of Topic 606, the Company recognizes revenue when control of the inventory is transferred within the meaning of Topic 606 as required by Topic 610-20.

Nutrition

The Nutrition segment sells specialty products including natural flavor ingredients, flavor systems, natural colors, animal nutrition products, and other specialty food and feed ingredients. Revenue is recognized when control over products is transferred to the customer. The amount of revenue recognized follows the contracted price or the mutually agreed price of the product. Freight and shipping are recognized as a component of revenue at the same time control transfers to the customer.

Other

Other includes the Company's futures commission business whose primary sources of revenue are commissions and brokerage income generated from executing orders and clearing futures contracts and options on futures contracts on behalf of its customers. Commissions and brokerage revenue are recognized on the date the transaction is executed. Other also includes the Company's captive insurance business which generates third-party revenue through its proportionate share of premiums from third-party reinsurance pools. Reinsurance premiums are recognized on a straight-line basis over the period underlying the policy.

Archer-Daniels-Midland Company

Notes to Consolidated Financial Statements (Continued)

Note 2. Revenues (Continued)

Impacts on Financial Statements

The following tables summarize the impacts of Topic 606 adoption on the various lines of the Company's consolidated financial statements.

Consolidated Balance Sheets (excerpt)

	January 1, 2018	December 31, 2018		
	After Adoption of Topic 606	As Reported	Under Topic 605	Effect of Change
	(In millions)			
Assets				
Trade receivables	\$ 2,343	\$ 2,233	\$ 1,989	\$ 244
Inventories	8,770	8,813	9,049	(236)
Other current assets	3,175	3,033	3,056	(23)
Total Current Assets	19,918	20,588	20,603	(15)
Total Assets	\$ 39,956	\$ 40,833	\$ 40,848	\$ (15)
Liabilities, Temporary Equity, and Shareholders' Equity				
Accrued expenses and other payables	\$ 2,826	\$ 2,913	\$ 2,926	\$ (13)
Total Current Liabilities	12,563	11,776	11,789	(13)
Reinvested earnings	17,552	18,527	18,529	(2)
Total Shareholders' Equity	18,322	18,996	18,998	(2)
Total Liabilities, Temporary Equity, and Shareholders' Equity	\$ 39,956	\$ 40,833	\$ 40,848	\$ (15)

Consolidated Statements of Earnings (excerpt)

	Twelve Months Ended December 31, 2018		
	As Reported	Under Topic 605	Effect of Change
	(In millions)		
Revenues	\$ 64,341	\$ 64,502	\$ (161)
Cost of products sold	60,160	60,319	(159)
Gross profit	4,181	4,183	(2)
Earnings before income taxes	2,060	2,062	(2)
Income taxes	245	245	—
Net earnings including noncontrolling interests	1,815	1,817	(2)
Net earnings attributable to controlling interests	1,810	1,812	(2)

Archer-Daniels-Midland Company

Notes to Consolidated Financial Statements (Continued)

Note 3. Acquisitions

Operating results of acquisitions are included in the Company's financial statements from the date of acquisition which were immaterial in all periods. Goodwill allocated in connection with the acquisitions is primarily attributable to synergies expected to arise after the Company's acquisition of the businesses.

Fiscal year 2018 acquisitions

During the year ended December 31, 2018, the Company acquired Probiotics International Limited (also known as Protexin), a British-based provider of probiotic supplements for human, pet, and production-animal uses, Rodelle Inc., a premium originator, processor and supplier of vanilla products, and certain soybean origination, crushing, refining, and bottling assets of Brazil-based Algar Agro, for an aggregate consideration of \$506 million in cash. The aggregate consideration of these acquisitions, net of \$42 million in cash acquired, was preliminarily allocated as follows:

	(In millions)
Working capital	\$ 30
Property, plant, and equipment	133
Goodwill	187
Other intangible assets	132
Other long-term assets	6
Deferred tax liabilities	(15)
Noncontrolling interest	(9)
Aggregate cash consideration, net of cash acquired	<u>\$ 464</u>

The acquisitions of Protexin and Rodelle Inc. expand the Company's wide portfolio of health and wellness offerings for both human and animal nutrition consumers.

Fiscal year 2017 acquisitions

During the year ended December 31, 2017, the Company acquired Crosswind Industries, Inc., an industry leader in the manufacture of contract and private label treats and foods, as well as specialty ingredients, Chamtor SA, a French producer of wheat-based sweeteners and starches, a 51% controlling interest in Industries Centers, an Israeli company specializing in the import and distribution of agricultural feed products, and an 89% controlling interest in Biopolis SL, a leading provider of microbial technology with a strong portfolio of novel food ingredients, for an aggregate consideration of \$194 million in cash. The aggregate consideration of these acquisitions, net of \$7 million in cash acquired, was allocated as follows:

	(In millions)
Working capital	\$ 19
Property, plant, and equipment	116
Goodwill	33
Other intangible assets	47
Other long-term assets	8
Long-term debt	(8)
Other long-term liabilities	(16)
Noncontrolling interest	(12)
Aggregate cash consideration, net of cash acquired	<u>\$ 187</u>

Archer-Daniels-Midland Company

Notes to Consolidated Financial Statements (Continued)

Note 3. Acquisitions (Continued)

The Company records the remaining 49% in Industries Centers and 11% in Biopolis SL in temporary equity - redeemable noncontrolling interest and noncontrolling interest, respectively.

Fiscal year 2016 acquisitions

During the year ended December 31, 2016, the Company acquired a 90% interest in Harvest Innovations, an industry leader in minimally processed, expeller-pressed soy proteins, oils, and gluten-free ingredients; a 50% interest in Cairo-based Medsofts Group, a joint venture that owns and manages merchandising and supply chain operations; Caterina Foods, a leading toll manufacturer of specialty gluten-free and high-protein pastas; and a Casablanca, Morocco-based corn wet mill that produces glucose and native starch for an aggregate consideration of \$141 million in cash. The aggregate consideration of these acquisitions, net of \$11 million in cash acquired, was allocated as follows:

	(In millions)
Working capital	\$ 15
Property, plant, and equipment	23
Goodwill	72
Other intangible assets	41
Other long-term assets	34
Long-term liabilities	(17)
Noncontrolling interest	(38)
Aggregate cash consideration, net of cash acquired	<u>\$ 130</u>

The remaining 10% interest in Harvest Innovations is recorded in other long-term liabilities and accounted for as a mandatorily redeemable interest which the Company has agreed to acquire following two years of operations. In 2018, the Company purchased the mandatorily redeemable interest for \$8 million .

The Company has an option three years from the date of acquisition to acquire the remaining 50% interest in Medsofts Group based on a fixed multiple of earnings before taxes, interest, and depreciation and amortization for the last twelve months of this three -year period. If the Company does not elect to exercise its option, the noncontrolling interest holder has the option to put the 50% interest to the Company on similar, though discounted, terms. The Company records the 50% remaining interest in temporary equity - redeemable noncontrolling interest.

Archer-Daniels-Midland Company

Notes to Consolidated Financial Statements (Continued)

Note 4. Fair Value Measurements

The following tables set forth, by level, the Company's assets and liabilities that were accounted for at fair value on a recurring basis as of December 31, 2018 and 2017.

Fair Value Measurements at December 31, 2018				
	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total
	(In millions)			
Assets:				
Inventories carried at market	\$ —	\$ 3,032	\$ 1,515	\$ 4,547
Unrealized derivative gains:				
Commodity contracts	—	306	155	461
Foreign exchange contracts	—	175	—	175
Cash equivalents	1,288	—	—	1,288
Marketable securities	12	1	—	13
Segregated investments	1,044	—	—	1,044
Deferred consideration	—	379	—	379
Total Assets	\$ 2,344	\$ 3,893	\$ 1,670	\$ 7,907
Liabilities:				
Unrealized derivative losses:				
Commodity contracts	\$ —	\$ 344	\$ 245	\$ 589
Foreign exchange contracts	—	152	—	152
Interest rate contracts	—	20	—	20
Inventory-related payables	—	579	18	597
Total Liabilities	\$ —	\$ 1,095	\$ 263	\$ 1,358

Archer-Daniels-Midland Company

Notes to Consolidated Financial Statements (Continued)

Note 4. Fair Value Measurements (Continued)

Fair Value Measurements at December 31, 2017				
	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total
(In millions)				
Assets:				
Inventories carried at market	\$ —	\$ 3,400	\$ 1,486	\$ 4,886
Unrealized derivative gains:				
Commodity contracts	—	275	111	386
Foreign currency contracts	—	63	—	63
Cash equivalents	352	—	—	352
Marketable securities	91	1	—	92
Segregated investments	1,733	—	—	1,733
Deferred consideration	—	307	—	307
Total Assets	\$ 2,176	\$ 4,046	\$ 1,597	\$ 7,819
Liabilities:				
Unrealized derivative losses:				
Commodity contracts	\$ —	\$ 268	\$ 103	\$ 371
Foreign currency contracts	—	92	—	92
Interest rate contracts	—	1	—	1
Inventory-related payables	—	680	39	719
Total Liabilities	\$ —	\$ 1,041	\$ 142	\$ 1,183

Estimated fair values for inventories carried at market are based on exchange-quoted prices, adjusted for differences in local markets, broker or dealer quotations or market transactions in either listed or over-the-counter (OTC) markets. Market valuations for the Company's inventories are adjusted for location and quality because the exchange-quoted prices represent contracts that have standardized terms for commodity, quantity, future delivery period, delivery location, and commodity quality or grade. When unobservable inputs have a significant impact on the measurement of fair value, the inventory is classified in Level 3. Changes in the fair value of inventories are recognized in the consolidated statements of earnings as a component of cost of products sold.

Derivative contracts include exchange-traded commodity futures and options contracts, forward commodity purchase and sale contracts, and OTC instruments related primarily to agricultural commodities, energy, interest rates, and foreign currencies. Exchange-traded futures and options contracts are valued based on unadjusted quoted prices in active markets and are classified in Level 1. The majority of the Company's exchange-traded futures and options contracts are cash-settled on a daily basis and, therefore, are not included in these tables. Fair value for forward commodity purchase and sale contracts is estimated based on exchange-quoted prices adjusted for differences in local markets. These differences are generally determined using inputs from broker or dealer quotations or market transactions in either the listed or OTC markets. When observable inputs are available for substantially the full term of the contract, it is classified in Level 2. When unobservable inputs have a significant impact (more than 10%) on the measurement of fair value, the contract is classified in Level 3. Except for certain derivatives designated as cash flow hedges, changes in the fair value of commodity-related derivatives are recognized in the consolidated statements of earnings as a component of cost of products sold. Changes in the fair value of foreign currency-related derivatives are recognized in the consolidated statements of earnings as a component of revenues, cost of products sold, and other (income) expense - net, depending upon the purpose of the contract. The changes in the fair value of derivatives designated as effective cash flow hedges are recognized in the consolidated balance sheets as a component of accumulated other comprehensive income (loss) (AOCI) until the hedged items are recorded in earnings or it is probable the hedged transaction will no longer occur.

Archer-Daniels-Midland Company

Notes to Consolidated Financial Statements (Continued)

Note 4. Fair Value Measurements (Continued)

The Company's cash equivalents are comprised of money market funds valued using quoted market prices and are classified as Level 1.

The Company's marketable securities are comprised of U.S. Treasury securities and corporate debt securities. U.S. Treasury securities are valued using quoted market prices and are classified in Level 1. Corporate debt securities are valued using third-party pricing services and substantially all are classified in Level 2. Unrealized changes in the fair value of available-for-sale marketable debt securities are recognized in the consolidated balance sheets as a component of AOCI unless a decline in value is deemed to be other-than-temporary at which point the decline is recorded in earnings.

The Company's segregated investments are comprised of U.S. Treasury securities. U.S. Treasury securities are valued using quoted market prices and are classified in Level 1.

The Company has deferred consideration under its accounts receivable securitization programs (the "Programs") which represents notes receivable from the purchasers under the Programs (see Note 19). This amount is reflected in other current assets on the consolidated balance sheet (see Note 6). The Company carries the deferred consideration at fair value determined by calculating the expected amount of cash to be received. The fair value is principally based on observable inputs (a Level 2 measurement) consisting mainly of the face amount of the receivables adjusted for anticipated credit losses and discounted at the appropriate market rate. Payment of deferred consideration is not subject to significant risks other than delinquencies and credit losses on accounts receivable transferred under the Programs which have historically been insignificant.

The following tables present a rollforward of the activity of all assets and liabilities measured at fair value on a recurring basis using significant unobservable inputs (Level 3) during the years ended December 31, 2018 and 2017.

Level 3 Fair Value Assets Measurements at December 31, 2018			
	Inventories Carried at Market	Commodity Derivative Contracts Gains	Total
	(In millions)		
Balance, December 31, 2017	\$ 1,486	\$ 111	\$ 1,597
Total increase (decrease) in net realized/unrealized gains included in cost of products sold ⁽¹⁾	631	395	1,026
Purchases	11,153	—	11,153
Sales	(11,728)	—	(11,728)
Settlements	—	(468)	(468)
Transfers into Level 3	80	157	237
Transfers out of Level 3	(107)	(40)	(147)
Ending balance, December 31, 2018	\$ 1,515	\$ 155	\$ 1,670

⁽¹⁾ Includes increase in unrealized gains of \$669 million relating to Level 3 assets still held at December 31, 2018.

Archer-Daniels-Midland Company

Notes to Consolidated Financial Statements (Continued)

Note 4. Fair Value Measurements (Continued)

Level 3 Fair Value Liabilities Measurements at December 31, 2018				
	Inventory- related Payables		Commodity Derivative Contracts Losses	Total
	(In millions)			
Balance, December 31, 2017	\$ 39	\$	103	\$ 142
Total increase (decrease) in net realized/unrealized losses included in cost of products sold ⁽¹⁾	11		526	537
Purchases	57		—	57
Sales	(89)		—	(89)
Settlements	—		(476)	(476)
Transfers into Level 3	—		150	150
Transfers out of Level 3	—		(58)	(58)
Ending balance, December 31, 2018	\$ 18	\$	245	\$ 263

⁽¹⁾ Includes increase in unrealized losses of \$532 million relating to Level 3 liabilities still held at December 31, 2018 .

Level 3 Fair Value Assets Measurements at December 31, 2017				
	Inventories Carried at Market		Commodity Derivative Contracts Gains	Total
	(In millions)			
Balance, December 31, 2016	\$ 1,322	\$	140	\$ 1,462
Total increase (decrease) in net realized/unrealized gains included in cost of products sold ⁽¹⁾	(29)		248	219
Purchases	11,236		—	11,236
Sales	(11,231)		—	(11,231)
Settlements	—		(369)	(369)
Transfers into Level 3	241		136	377
Transfers out of Level 3	(53)		(44)	(97)
Ending balance, December 31, 2017	\$ 1,486	\$	111	\$ 1,597

⁽¹⁾ Includes increase in unrealized gains of \$106 million relating to Level 3 assets still held at December 31, 2017 .

Archer-Daniels-Midland Company

Notes to Consolidated Financial Statements (Continued)

Note 4. Fair Value Measurements (Continued)

	Level 3 Fair Value Liabilities Measurements at December 31, 2017		
	Inventory- related Payables	Commodity Derivative Contracts Losses	Total
	(In millions)		
Balance, December 31, 2016	\$ 30	\$ 142	\$ 172
Total increase (decrease) in net realized/unrealized losses included in cost of products sold ⁽¹⁾	(4)	257	253
Purchases	38	—	38
Sales	(25)	—	(25)
Settlements	—	(397)	(397)
Transfers into Level 3	—	128	128
Transfers out of Level 3	—	(27)	(27)
Ending balance, December 31, 2017	\$ 39	\$ 103	\$ 142

⁽¹⁾Includes increase in unrealized losses of \$260 million relating to Level 3 liabilities still held at December 31, 2017.

For all periods presented, the Company had no transfers between Levels 1 and 2. Transfers into Level 3 of assets and liabilities previously classified in Level 2 were due to the relative value of unobservable inputs to the total fair value measurement of certain products and derivative contracts rising above the 10% threshold. Transfers out of Level 3 were primarily due to the relative value of unobservable inputs to the total fair value measurement of certain products and derivative contracts falling below the 10% threshold and thus permitting reclassification to Level 2.

In some cases, the price components that result in differences between exchange-traded prices and local prices for inventories and commodity purchase and sale contracts are observable based upon available quotations for these pricing components, and in some cases, the differences are unobservable. These price components primarily include transportation costs and other adjustments required due to location, quality, or other contract terms. In the table below, these other adjustments are referred to as basis. The changes in unobservable price components are determined by specific local supply and demand characteristics at each facility and the overall market. Factors such as substitute products, weather, fuel costs, contract terms, and futures prices also impact the movement of these unobservable price components.

The following table sets forth the weighted average percentage of the unobservable price components included in the Company's Level 3 valuations as of December 31, 2018 and 2017. The Company's Level 3 measurements may include basis only, transportation cost only, or both price components. As an example, for Level 3 inventories with basis, the unobservable component as of December 31, 2018 is a weighted average 18.5% of the total price for assets and 125.0% of the total price for liabilities.

Component Type	Weighted Average % of Total Price			
	December 31, 2018		December 31, 2017	
	Assets	Liabilities	Assets	Liabilities
Inventories and Related Payables				
Basis	18.5%	125.0%	12.8%	99.9%
Transportation cost	25.9%	39.4%	19.2%	—%
Commodity Derivative Contracts				
Basis	21.6%	19.1%	24.2%	23.0%
Transportation cost	29.5%	35.1%	12.5%	10.4%

Archer-Daniels-Midland Company

Notes to Consolidated Financial Statements (Continued)

Note 4. Fair Value Measurements (Continued)

In certain of the Company's principal markets, the Company relies on price quotes from third parties to value its inventories and physical commodity purchase and sale contracts. These price quotes are generally not further adjusted by the Company in determining the applicable market price. In some cases, availability of third-party quotes is limited to only one or two independent sources. In these situations, absent other corroborating evidence, the Company considers these price quotes as 100% unobservable and, therefore, the fair value of these items is reported in Level 3.

Note 5. Derivative Instruments & Hedging Activities

Derivatives Not Designated as Hedging Instruments

The majority of the Company's derivative instruments have not been designated as hedging instruments. The Company uses exchange-traded futures and exchange-traded and OTC options contracts to manage its net position of merchandisable agricultural commodity inventories and forward cash purchase and sales contracts to reduce price risk caused by market fluctuations in agricultural commodities and foreign currencies. The Company also uses exchange-traded futures and exchange-traded and OTC options contracts as components of merchandising strategies designed to enhance margins. The results of these strategies can be significantly impacted by factors such as the correlation between the value of exchange-traded commodities futures contracts and the value of the underlying commodities, counterparty contract defaults, and volatility of freight markets. Derivatives, including exchange traded contracts and physical purchase or sale contracts, and inventories of certain merchandisable agricultural commodities, which include amounts acquired under deferred pricing contracts, are stated at market value. Inventory is not a derivative and therefore fair values of and changes in fair values of inventories are not included in the tables below.

The following table sets forth the fair value of derivatives not designated as hedging instruments as of December 31, 2018 and 2017.

	December 31, 2018		December 31, 2017	
	Assets	Liabilities	Assets	Liabilities
	(In millions)			
Foreign Currency Contracts	\$ 175	\$ 152	\$ 63	\$ 92
Commodity Contracts	461	589	386	371
Total	<u>\$ 636</u>	<u>\$ 741</u>	<u>\$ 449</u>	<u>\$ 463</u>

Archer-Daniels-Midland Company

Notes to Consolidated Financial Statements (Continued)

Note 5. Derivative Instruments & Hedging Activities (Continued)

The following table sets forth the pre-tax gains (losses) on derivatives not designated as hedging instruments that have been included in the consolidated statements of earnings for the years ended December 31, 2018, 2017, and 2016.

(In millions)	Revenues	Cost of products sold	Other expense (income) - net	
For the Year Ended December 31, 2018				
Consolidated Statement of Earnings	\$ 64,341	\$ 60,160	\$ 101	
Pre-tax gains (losses) on:				
Foreign Currency Contracts	\$ 5	\$ (139)	\$ (177)	
Commodity Contracts	—	258	—	
Total gain (loss) recognized in earnings	<u>\$ 5</u>	<u>\$ 119</u>	<u>\$ (177)</u>	<u>\$ (53)</u>
For the Year Ended December 31, 2017				
Consolidated Statement of Earnings	\$ 60,828	\$ 57,310	\$ (10)	
Pre-tax gains (losses) on:				
Foreign Currency Contracts	\$ (10)	\$ 58	\$ 214	
Commodity Contracts	—	375	—	
Total gain (loss) recognized in earnings	<u>\$ (10)</u>	<u>\$ 433</u>	<u>\$ 214</u>	<u>\$ 637</u>
For the Year Ended December 31, 2016				
Consolidated Statement of Earnings	\$ 62,346	\$ 58,728	\$ (149)	
Pre-tax gains (losses) on:				
Foreign Currency Contracts	\$ (35)	\$ 291	\$ (225)	
Commodity Contracts	—	(383)	—	
Total gain (loss) recognized in earnings	<u>\$ (35)</u>	<u>\$ (92)</u>	<u>\$ (225)</u>	<u>\$ (352)</u>

Changes in the market value of inventories of certain merchandisable agricultural commodities, forward cash purchase and sales contracts, exchange-traded futures, and exchange-traded and OTC options contracts are recognized in earnings immediately as a component of cost of products sold.

Derivatives Designated as Cash Flow or Fair Value Hedging Strategies

As of December 31, 2018 and 2017, the Company had certain derivatives designated as cash flow and fair value hedges.

The Company uses interest rate swaps designated as fair value hedges to protect the fair value of \$496 million in fixed-rate debt due to changes in interest rates. The changes in the fair value of the interest rate swaps and the underlying fixed-rate debt are recorded in other (income) expense - net. The terms of the interest rate swaps match the terms of the underlying debt. At December 31, 2018, the Company had \$4 million in other current liabilities representing the fair value of the interest rate swaps and a corresponding decrease in the underlying debt for the same amount with no net impact to earnings.

Archer-Daniels-Midland Company

Notes to Consolidated Financial Statements (Continued)

Note 5. Derivative Instruments & Hedging Activities (Continued)

For each of the commodity hedge programs described below, the derivatives are designated as cash flow hedges. Assuming normal market conditions, the changes in the market value of such derivative contracts have historically been, and are expected to continue to be, highly effective at offsetting changes in price movements of the hedged item. Once the hedged item is recognized in earnings, the gains/losses arising from the hedge are reclassified from AOCI to either revenues or cost of products sold, as applicable. As of December 31, 2018, the Company had \$31 million of after-tax gains in AOCI related to gains and losses from commodity cash flow hedge transactions. The Company expects to recognize \$31 million of these after-tax gains in its consolidated statement of earnings during the next 12 months.

The Company uses futures or options contracts to hedge the purchase price of anticipated volumes of corn to be purchased and processed in a future month. The objective of this hedging program is to reduce the variability of cash flows associated with the Company's forecasted purchases of corn. The Company's corn processing plants currently grind approximately 72 million bushels of corn per month. During the past 12 months, the Company hedged between 23% and 95% of its monthly anticipated grind. At December 31, 2018, the Company had designated hedges representing between 7% to 60% of its anticipated monthly grind of corn for the next 12 months.

The Company, from time to time, also uses futures, options, and swaps to hedge the sales price of certain ethanol sales contracts. The Company has established hedging programs for ethanol sales contracts that are indexed to unleaded gasoline prices and to various exchange-traded ethanol contracts. The objective of these hedging programs is to reduce the variability of cash flows associated with the Company's sales of ethanol. During the past 12 months, the Company hedged between 2 million and 135 million gallons of ethanol sales per month under these programs. At December 31, 2018, the Company had designated hedges representing between 0 to 52 million gallons of ethanol sales per month over the next 12 months.

During the first quarter of 2018, the Company started using futures and options contracts to hedge the purchase price of anticipated volumes of soybeans to be purchased and processed in a future month for certain of its U.S. soybean crush facilities. The Company also uses futures or options contracts to hedge the sales prices of anticipated soybean meal and soybean oil sales proportionate to the soybean crushing process at these facilities. During the past 12 months, the Company hedged between 0% and 100% of the anticipated monthly soybean crush for soybean purchases and soybean meal and oil sales at the designated facilities. The Company has designated hedges representing between 0% and 100% of the anticipated monthly soybean crush for soybean purchases and soybean meal and oil sales at the designated facilities over the next 12 months.

The following table sets forth the fair value of derivatives designated as hedging instruments as of December 31, 2018 and 2017.

	December 31, 2018		December 31, 2017	
	Assets	Liabilities	Assets	Liabilities
	(In millions)			
Interest Rate Contracts	\$ —	\$ 20	\$ —	\$ 1
Total	\$ —	\$ 20	\$ —	\$ 1

Archer-Daniels-Midland Company

Notes to Consolidated Financial Statements (Continued)

Note 5. Derivative Instruments & Hedging Activities (Continued)

The following table sets forth the pre-tax gains (losses) on derivatives designated as hedging instruments that have been included in the consolidated statement of earnings for the years ended December 31, 2018, 2017, and 2016.

(In millions)	Revenues	Cost of products sold	Interest expense	Other expense (income) - net	
For the Year Ended December 31, 2018					
Consolidated Statement of Earnings	\$ 64,341	\$ 60,160	\$ 364	\$ 101	
<u>Effective amounts recognized in earnings</u>					
Pre-tax gains (losses) on:					
Interest Contracts	—	—	1	—	
Commodity Contracts	36	(113)	—	—	
Total gain (loss) recognized in earnings	<u>\$ 36</u>	<u>\$ (113)</u>	<u>\$ 1</u>	<u>\$ —</u>	<u>\$ (76)</u>
 For the Year Ended December 31, 2017					
Consolidated Statement of Earnings	\$ 60,828	\$ 57,310	330	\$ (10)	
<u>Effective amounts recognized in earnings</u>					
Pre-tax gains (losses) on:					
Foreign Currency Contracts	\$ —	\$ —	\$ —	\$ (2)	
Interest Rate Contracts	—	—	1	—	
Commodity Contracts	(1)	(45)	—	—	
Total gain (loss) recognized in earnings	<u>\$ (1)</u>	<u>\$ (45)</u>	<u>\$ 1</u>	<u>\$ (2)</u>	<u>\$ (47)</u>
 For the Year Ended December 31, 2016					
Consolidated Statement of Earnings	\$ 62,346	\$ 58,728	\$ 293	\$ (149)	
<u>Effective amounts recognized in earnings</u>					
Pre-tax gains (losses) on:					
Foreign Currency Contracts	\$ —	\$ —	\$ —	\$ (18)	
Interest Rate Contracts	—	—	(2)	—	
Commodity Contracts	(35)	(82)	—	—	
<u>Ineffective amounts recognized in earnings</u>					
Pre-tax gains (losses) on:					
Commodity Contracts	(5)	6	—	—	
Total gain (loss) recognized in earnings	<u>\$ (40)</u>	<u>\$ (76)</u>	<u>\$ (2)</u>	<u>\$ (18)</u>	<u>\$ (136)</u>

In 2017, the Company adopted the amended guidance of ASC 815, *Derivatives and Hedging*. As a result, gains or losses related to highly-effective hedging relationships are now deferred in AOCI until the hedged item impacts earnings. Prior to 2017, gain or loss on the derivative instrument that was in excess of the cumulative change in the cash flows of the hedged item, if any (i.e., the ineffective portion) were recognized in the consolidated statement of earnings during the current period.

Archer-Daniels-Midland Company

Notes to Consolidated Financial Statements (Continued)

Note 5. Derivative Instruments & Hedging Activities (Continued)

Net Investment Hedging Strategies

In June 2015, the Company issued €500 million aggregate principal amount of Floating Rate Notes and €600 million aggregate principal amount of 1.75% Notes. The Company designated the €1.1 billion as a hedge of its net investment in a foreign subsidiary. As of December 31, 2018, the Company had \$26 million of after-tax losses in AOCI related to gains and losses from the net investment hedge transaction. The amount is deferred in AOCI until the underlying investment is divested.

In July 2018, the Company entered into forward foreign exchange contracts and designated €500 million as a hedge of its net investment in a foreign subsidiary. As of December 31, 2018, the Company had \$14 million of after-tax losses in AOCI related to gains and losses from the net investment hedge transaction. The amount is deferred in AOCI until the underlying investment is divested.

Note 6. Other Current Assets

The following table sets forth the items in other current assets:

	December 31, 2018	December 31, 2017
	(In millions)	
Unrealized gains on derivative contracts	\$ 636	\$ 449
Deferred receivables consideration	379	307
Customer omnibus receivable	450	477
Financing receivables - net ⁽¹⁾	424	413
Insurance premiums receivable	35	129
Prepaid expenses	184	232
Tax receivables	379	425
Non-trade receivables ⁽²⁾	323	371
Other current assets	223	372
	\$ 3,033	\$ 3,175

⁽¹⁾ The Company provides financing to suppliers, primarily Brazilian farmers, to finance a portion of the suppliers' production costs. The amounts are reported net of allowances of \$3 million and \$6 million at December 31, 2018 and 2017, respectively. Interest earned on financing receivables of \$26 million, \$25 million, and \$22 million for the years ended December 31, 2018, 2017, and 2016, respectively, is included in interest income in the consolidated statements of earnings.

⁽²⁾ Non-trade receivables included \$84 million and \$91 million of reinsurance recoverables as of December 31, 2018 and 2017, respectively.

Archer-Daniels-Midland Company

Notes to Consolidated Financial Statements (Continued)

Note 7. Accrued Expenses and Other Payables

The following table sets forth the items in accrued expenses and other payables:

	December 31, 2018	December 31, 2017
	(In millions)	
Unrealized losses on derivative contracts	\$ 761	\$ 464
Accrued compensation	337	235
Income tax payable	—	140
Other taxes payable	98	99
Reinsurance premiums payable	15	111
Insurance claims payable	277	268
Contract liability	501	519
Other accruals and payables	924	997
	\$ 2,913	\$ 2,833

Note 8. Investments in and Advances to Affiliates

The Company applies the equity method of accounting for investments in investees over which the Company has the ability to exercise significant influence, including the Company's 24.9% share ownership in Wilmar as of December 31, 2018 and 2017. The Company had 56 unconsolidated domestic and foreign affiliates as of December 31, 2018 and 2017. The following table summarizes the combined balance sheets as of December 31, 2018 and 2017, and the combined statements of earnings of the Company's unconsolidated affiliates for the years ended December 31, 2018, 2017, and 2016.

	December 31	
(In millions)	2018	2017
Current assets	\$ 30,732	\$ 28,200
Non-current assets	21,841	21,411
Current liabilities	(26,592)	(24,209)
Non-current liabilities	(6,205)	(4,250)
Noncontrolling interests	(677)	(981)
Net assets	\$ 19,099	\$ 20,171

	Year Ended December 31		
(In millions)	2018	2017	2016
Revenues	\$ 53,143	\$ 55,908	\$ 45,296
Gross profit	5,118	4,687	4,375
Net income	1,881	1,800	1,119

Archer-Daniels-Midland Company

Notes to Consolidated Financial Statements (Continued)

Note 8. Investments in and Advances to Affiliates (Continued)

The Company's share of the undistributed earnings of its unconsolidated affiliates as of December 31, 2018 is \$2.4 billion . The Company's investment in Wilmar has a carrying value of \$3.9 billion as of December 31, 2018 , and a market value of \$3.6 billion based on quoted market price converted to U.S. dollars at the applicable exchange rate at December 31, 2018 . The investment has been in an unrealized loss position for less than 12 months. The Company evaluated the near-term prospects of the investee in relation to the severity and duration of the impairment. Based on that evaluation, the Company does not consider this equity method investment to be other-than-temporarily impaired at December 31, 2018 .

The Company provides credit facilities totaling \$105 million to four unconsolidated affiliates. Two facilities that are due on demand and bear interest between 0.00% and 5.74% have a total outstanding balance of \$34 million . The other two facilities have no outstanding balance as of December 31, 2018 . The outstanding balance is included in other current assets in the accompanying consolidated balance sheet.

Note 9. Goodwill and Other Intangible Assets

Goodwill balances attributable to consolidated businesses, by segment, are set forth in the following table.

	December 31, 2018	December 31, 2017
	(In millions)	
Origination	\$ 54	\$ 55
Oilseeds	131	133
Carbohydrate Solutions	265	281
Nutrition	2,042	1,901
Other	4	4
Total	\$ 2,496	\$ 2,374

The changes in goodwill during the year ended December 31, 2018 primarily related to acquisitions of \$187 million (see Note 3), partially offset by foreign currency translation adjustments of \$77 million .

Archer-Daniels-Midland Company

Notes to Consolidated Financial Statements (Continued)

Note 9. Goodwill and Other Intangible Assets (Continued)

The following table sets forth the other intangible assets:

	Useful Life	December 31, 2018			December 31, 2017		
		Gross Amount	Accumulated Amortization	Net	Gross Amount	Accumulated Amortization	Net
	(In years)			(In millions)			
Intangible assets with indefinite lives:							
Trademarks/brands		\$ 248	\$ —	\$ 248	\$ 235	\$ —	\$ 235
Other		1	—	1	1	—	1
Intangible assets with definite lives:							
Trademarks/brands	20	28	(10)	18	28	(9)	19
Customer lists	3 to 30	876	(228)	648	829	(183)	646
Patents	4 to 20	60	(35)	25	54	(32)	22
Computer software	2 to 8	411	(272)	139	389	(239)	150
Land rights	2 to 50	173	(25)	148	147	(17)	130
Recipes and other	3 to 20	525	(207)	318	519	(178)	341
Total		<u>\$ 2,322</u>	<u>\$ (777)</u>	<u>\$ 1,545</u>	<u>\$ 2,202</u>	<u>\$ (658)</u>	<u>\$ 1,544</u>

The changes in the gross carrying amounts of other intangible assets during the year ended December 31, 2018 primarily related to acquisitions of \$132 million (see Note 3), capitalized software of \$26 million , and reclassifications, partially offset by foreign currency translation adjustments of \$63 million and impairment of \$9 million .

Aggregate amortization expense was \$129 million , \$122 million , and \$113 million for the years ended December 31, 2018 , 2017 , and 2016 , respectively. The estimated future aggregate amortization expense for the next five years are \$146 million , \$143 million , \$136 million , \$131 million , and \$124 million .

Archer-Daniels-Midland Company

Notes to Consolidated Financial Statements (Continued)

Note 10. Debt Financing Arrangements

	December 31, 2018	December 31, 2017
	(In millions)	
2.5% Notes \$1 billion face amount, due in 2026	\$ 993	\$ 992
1.0% Notes €650 million face amount, due in 2025	736	—
1.75% Notes €600 million face amount, due in 2023	682	714
4.5% Notes \$600 million face amount, due in 2049	587	—
Floating Rate Notes €500 million face amount, due in 2019	572	599
4.479% Debentures \$516 million face amount, due in 2021	493	501
3.75% Notes \$500 million face amount, due in 2047	493	492
5.375% Debentures \$470 million face amount, due in 2035	461	460
3.375% Notes \$400 million face amount, due in 2022	398	—
4.016% Debentures \$570 million face amount, due in 2043	386	383
4.535% Debentures \$528 million face amount due in 2042	382	379
5.765% Debentures \$378 million face amount, due in 2041	378	378
5.935% Debentures \$383 million face amount, due in 2032	378	378
7.0% Debentures \$164 million face amount, due in 2031	163	163
6.625% Debentures \$160 million face amount, due in 2029	159	159
6.95% Debentures \$159 million face amount, due in 2097	155	155
7.5% Debentures \$150 million face amount, due in 2027	149	150
6.45% Debentures \$127 million face amount, due in 2038	126	126
6.75% Debentures \$118 million face amount, due in 2027	117	117
Other	472	490
Total long-term debt including current maturities	8,280	6,636
Current maturities	(582)	(13)
Total long-term debt	\$ 7,698	\$ 6,623

On December 3, 2018 , the Company issued \$600 million and \$400 million aggregate principal amounts of 4.5% Notes due in 2049 and 3.375% Notes due in 2022 , respectively. Net proceeds before expenses for the 4.5% and 3.375% Notes were \$588 million and \$399 million , respectively.

On September 12, 2018 , the Company issued €650 million (\$744 million as of December 31, 2018) aggregate principal amount of 1.0% Notes due in 2025 . Net proceeds before expenses were \$747 million .

On September 29, 2017 , the Company redeemed \$559 million aggregate principal amount of 5.45% Notes due on March 15, 2018 and incurred an early extinguishment charge of \$11 million in the year ended December 31, 2017.

On September 14, 2017 , the Company issued \$500 million aggregate principal amount of 3.75% Notes due in 2047 . Proceeds before expenses were \$493 million .

On April 15, 2017 , the Company retired \$261 million aggregate principal amount of 8.375% Notes that matured on April 15, 2017 .

Archer-Daniels-Midland Company

Notes to Consolidated Financial Statements (Continued)

Note 10. Debt Financing Arrangements (Continued)

Discount amortization expense, net of premium amortization, of \$10 million , \$11 million , and \$9 million for the years ended December 31, 2018 , 2017 , and 2016 , respectively, are included in interest expense related to the Company's long-term debt.

At December 31, 2018 , the fair value of the Company's long-term debt exceeded the carrying value by \$0.7 billion , as estimated using quoted market prices (a Level 2 measurement under applicable accounting standards).

The aggregate maturities of long-term debt for the five years after December 31, 2018 , are \$582 million , \$16 million , \$666 million , \$409 million , and \$11 million , respectively.

At December 31, 2018 , the Company had lines of credit, including the accounts receivable securitization programs described below, totaling \$10.4 billion , of which \$8.9 billion was unused. The weighted average interest rates on short-term borrowings outstanding at December 31, 2018 and 2017 , were 7.95% and 2.35% , respectively. Of the Company's total lines of credit, \$5.0 billion supported the combined U.S. and European commercial paper borrowing programs, against which there was no commercial paper outstanding at December 31, 2018 .

The Company's credit facilities and certain debentures require the Company to comply with specified financial and non-financial covenants including maintenance of minimum tangible net worth as well as limitations related to incurring liens, secured debt, and certain other financing arrangements. The Company is in compliance with these covenants as of December 31, 2018 .

The Company had outstanding standby letters of credit and surety bonds at December 31, 2018 and 2017 , totaling \$1.7 billion and \$1.2 billion , respectively.

The Company has accounts receivable securitization programs (the "Programs"). The Programs provide the Company with up to \$1.8 billion in funding resulting from the sale of accounts receivable. As of December 31, 2018 , the Company utilized \$1.5 billion of its facility under the Programs (see Note 19 for more information on the Programs).

Note 11. Stock Compensation

The Company's employee stock compensation plans provide for the granting of options to employees to purchase common stock of the Company pursuant to the Company's 2009 Incentive Compensation Plan. These options are issued at market value on the date of grant, vest incrementally over one to five years, and expire ten years after the date of grant.

The fair value of each option grant is estimated as of the date of grant using the Black-Scholes single option pricing model. The volatility assumption used in the Black-Scholes single option pricing model is based on the historical volatility of the Company's stock. The volatility of the Company's stock was calculated based upon the monthly closing price of the Company's stock for the period immediately prior to the date of grant corresponding to the average expected life of the grant. The average expected life represents the period of time that option grants are expected to be outstanding. The risk-free rate is based on the rate of U.S. Treasury zero-coupon issues with a remaining term equal to the expected life of option grants. The assumptions used in the Black-Scholes single option pricing model are as follows.

	Year Ended December 31		
	2018	2017	2016
Dividend yield	3%	3%	3%
Risk-free interest rate	2%	2%	1%
Stock volatility	23%	25%	25%
Average expected life (years)	6	6	6

Archer-Daniels-Midland Company

Notes to Consolidated Financial Statements (Continued)

Note 11. Stock Compensation (Continued)

A summary of option activity during 2018 is presented below:

	Shares	Weighted-Average Exercise Price
	(In thousands, except per share amounts)	
Shares under option at December 31, 2017	11,026	\$33.23
Granted ⁽¹⁾	—	40.50
Exercised	(1,954)	28.15
Forfeited or expired	(11)	27.06
Shares under option at December 31, 2018	9,061	\$34.33
Exercisable at December 31, 2018	6,736	\$33.07

⁽¹⁾ The number of shares granted during 2018 was immaterial.

The weighted-average remaining contractual term of options outstanding and exercisable at December 31, 2018, is 5 years and 4 years, respectively. The aggregate intrinsic value of options outstanding and exercisable at December 31, 2018, is \$81 million and \$69 million, respectively. The weighted-average grant-date fair values of options granted during the years ended December 31, 2018, 2017, and 2016, were \$6.95, \$7.90, and \$5.67, respectively. The total intrinsic values of options exercised during the years ended December 31, 2018, 2017, and 2016, were \$36 million, \$11 million, and \$28 million, respectively. Cash proceeds received from options exercised during the years ended December 31, 2018, 2017, and 2016, were \$55 million, \$27 million, and \$62 million, respectively.

At December 31, 2018, there was \$7 million of total unrecognized compensation expense related to option grants. Amounts to be recognized as compensation expense during the next two years are \$4 million and \$3 million, respectively.

The Company's 2009 Incentive Compensation Plan provides for the granting of restricted stock and restricted stock units (Restricted Stock Awards) at no cost to certain officers and key employees. In addition, the Company's 2009 Incentive Compensation Plan also provides for the granting of performance stock units (PSUs) at no cost to certain officers and key employees. Restricted Stock Awards are made in common stock or stock units with equivalent rights and vest at the end of a three-year restriction period. The awards for PSUs are made in common stock units and vest at the end of a three-year vesting period subject to the attainment of certain future service and performance criteria based on the Company's adjusted return on invested capital (ROIC), adjusted earnings before taxes, interest, and depreciation and amortization (EBITDA), and total shareholder return (TSR). During the years ended December 31, 2018, 2017, and 2016, 2.5 million, 2.2 million, and 1.8 million common stock or stock units, respectively, were granted as Restricted Stock Awards and PSUs. At December 31, 2018, there were 6.3 million shares available for future grants pursuant to the 2009 plan.

The fair value of Restricted Stock Awards is determined based on the market value of the Company's shares on the grant date. The fair value of PSUs is based on the weighted-average values of adjusted ROIC, adjusted EBITDA, and TSR. The adjusted ROIC and adjusted EBITDA fair value is determined based on the market value of the Company's shares on the grant date while the TSR fair value is determined using the Monte Carlo simulation. The weighted-average grant-date fair values of awards granted during the years ended December 31, 2018, 2017, and 2016 were \$42.72, \$44.38, and \$33.31, respectively.

Archer-Daniels-Midland Company

Notes to Consolidated Financial Statements (Continued)

Note 11. Stock Compensation (Continued)

A summary of Restricted Stock Awards and PSUs activity during 2018 is presented below:

	Restricted Stock Awards and PSUs	Weighted Average Grant-Date Fair Value
	(In thousands, except per share amounts)	
Non-vested at December 31, 2017	5,367	\$41.60
Granted	2,518	42.72
Vested	(1,575)	46.69
Forfeited	(185)	40.42
Non-vested at December 31, 2018	6,125	\$40.82

At December 31, 2018 , there was \$99 million of total unrecognized compensation expense related to Restricted Stock Awards and PSUs. Amounts to be recognized as compensation expense during the next three years are \$60 million , \$36 million , and \$3 million , respectively. The total grant-date fair value of Restricted Stock Awards that vested during the year ended December 31, 2018 was \$74 million .

Compensation expense for option grants, Restricted Stock Awards, and PSUs granted to employees is generally recognized on a straight-line basis during the service period of the respective grant. Certain of the Company's option grants, Restricted Stock Awards, and PSUs continue to vest upon the recipient's retirement from the Company and compensation expense related to option grants and Restricted Stock Awards granted to retirement-eligible employees is recognized in earnings on the date of grant. Compensation expense for PSUs is based on the probability of meeting the performance criteria.

Total compensation expense for option grants, Restricted Stock Awards, and PSUs recognized during the years ended December 31, 2018 , 2017 , and 2016 was \$109 million , \$66 million , and \$72 million , respectively.

Note 12. Other (Income) Expense – Net

The following table sets forth the items in other (income) expense:

(In millions)	Year Ended December 31		
	2018	2017	2016
Gains on sales and revaluation of assets and businesses	\$ (43)	\$ (80)	\$ (130)
Pension settlement	117	—	—
Loss on debt extinguishment	—	11	—
Other – net	27	59	(19)
	\$ 101	\$ (10)	\$ (149)

Individually significant items included in the table above are:

Gains on sales of assets and businesses for the year ended December 31, 2018 included gains on the sale of the Company's oilseeds operations in Bolivia and an equity investment, and individually insignificant assets in the ordinary course of business. Gains on sales of assets and businesses for the year ended December 31, 2017 included gains related to the sale of the crop risk services business and disposals of other individually insignificant assets in the ordinary course of business, partially offset by an adjustment of the proceeds of the 2015 sale of the cocoa business. Gains on sales and revaluation of assets for the year ended December 31, 2016 included realized additional consideration related to the sale of the Company's equity investment in Gruma S.A.B de C.V., recovery of loss provisions and a gain related to the sale of the Company's Brazilian sugar ethanol facilities, and a gain related to the revaluation of the remaining interest to settlement value in conjunction with the acquisition of Amazon Flavors , partially offset by a loss on sale of other individually immaterial assets.

Archer-Daniels-Midland Company

Notes to Consolidated Financial Statements (Continued)

Note 12. Other (Income) Expense – Net (Continued)

Pension settlement for the year ended December 31, 2018 related to the purchase of a group annuity contract that irrevocably transferred the future benefit obligations and annuity administration for certain retirees under the Company's ADM Retirement Plan.

Loss on debt extinguishment for the year ended December 31, 2017 related to the early redemption of the Company's \$559 million notes due on March 15, 2018.

Realized gains and losses on sales of available-for-sale marketable securities were immaterial for all periods presented. There were no impairment losses on securities for the years ended December 31, 2018 and 2017. Impairment losses on securities of \$6 million for the year ended December 31, 2016 were classified as asset impairment, exit, and restructuring charges in the consolidated statement of earnings (see Note 18 for more information).

Other - net for the year ended December 31, 2018 included foreign exchange losses partially offset by other income and the non-service components of net benefit income. Other - net for the year ended December 31, 2017 included provisions for contingent losses related to certain legal settlement items in the Oilseeds and Nutrition segments, foreign exchange losses, and the non-service components of net benefit cost, partially offset by other income.

Note 13. Income Taxes

The following table sets forth the geographic split of earnings before income taxes:

(In millions)	Year Ended December 31		
	2018	2017	2016
United States	\$ 972	\$ 1,104	\$ 1,215
Foreign	1,088	505	607
	<u>\$ 2,060</u>	<u>\$ 1,609</u>	<u>\$ 1,822</u>

Significant components of income taxes are as follows:

(In millions)	Year Ended December 31		
	2018	2017	2016
Current			
Federal	\$ 96 ¹	\$ 541 ¹	\$ 327
State	25	53	5
Foreign	171	127	146
Deferred			
Federal	(55)	(645) ¹	18
State	(16)	(6)	28
Foreign	24	(63)	10
	<u>\$ 245</u>	<u>\$ 7</u>	<u>\$ 534</u>

¹ Includes the impact of the Tax Cuts and Jobs Act as discussed on page 88.

Archer-Daniels-Midland Company

Notes to Consolidated Financial Statements (Continued)

Note 13. Income Taxes (Continued)

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

	December 31, 2018	December 31, 2017
	(In millions)	
Deferred tax liabilities		
Property, plant, and equipment	\$ 1,074	\$ 1,079
Equity in earnings of affiliates	70	91
Debt exchange	81	83
Reserves and other accruals	25	4
Other	83	79
	<u>\$ 1,333</u>	<u>\$ 1,336</u>
Deferred tax assets		
Pension and postretirement benefits	\$ 122	\$ 126
Stock compensation	55	52
Foreign tax loss carryforwards	313	254
Capital loss carryforwards	55	64
State tax attributes	74	78
Unrealized foreign currency losses	48	103
Reserves and other accruals	18	17
Other	56	40
Gross deferred tax assets	<u>741</u>	<u>734</u>
Valuation allowances	<u>(289)</u>	<u>(264)</u>
Net deferred tax assets	<u>\$ 452</u>	<u>\$ 470</u>
Net deferred tax liabilities	\$ 881	\$ 866
The net deferred tax liabilities are classified as follows:		
Noncurrent assets (foreign)	\$ 186	\$ 187
Noncurrent liabilities	(929)	(934)
Noncurrent liabilities (foreign)	<u>(138)</u>	<u>(119)</u>
	<u>\$ (881)</u>	<u>\$ (866)</u>

Archer-Daniels-Midland Company

Notes to Consolidated Financial Statements (Continued)

Note 13. Income Taxes (Continued)

Reconciliation of the statutory federal income tax rate to the Company's effective income tax rate on earnings is as follows:

	Year Ended December 31		
	2018	2017	2016
Statutory rate	21.0 %	35.0 %	35.0 %
State income taxes, net of federal tax benefit	0.3	1.7	1.4
Foreign earnings taxed at rates other than the U.S. statutory rate	(1.5)	(4.7)	(4.4)
Foreign currency effects/remeasurement	(1.9)	(0.7)	2.2
Income tax adjustment to filed returns	(1.9)	(3.0)	0.8
Tax benefit on U.S. biodiesel credits	(2.3)	—	(3.3)
Tax benefit on U.S. qualified production activity deduction	—	(2.2)	(1.4)
Tax on global intangible low-taxed income	1.0	—	—
Tax benefit on foreign derived intangible income deduction	(1.0)	—	—
U.S. tax reform impacts	(1.1)	(23.9)	—
Valuation allowances	—	0.3	0.6
Other	(0.7)	(2.1)	(1.6)
Effective income tax rate	11.9 %	0.4 %	29.3 %

The foreign rate differential is primarily due to lower tax rates from the Company's operations in Switzerland, Asia, and the Caribbean. The Company's foreign earnings, which were taxed at rates lower than the U.S. rate and were generated from these jurisdictions, were 56% , 59% , and 47% of its foreign earnings before taxes in fiscal years 2018 , 2017 , and 2016 , respectively.

Undistributed earnings of the Company's foreign subsidiaries and the Company's share of the undistributed earnings of affiliated corporate joint venture companies accounted for on the equity method aggregated to approximately \$10.5 billion at December 31, 2018 . Because the Company's undistributed foreign earnings and outside basis differences inherent in foreign entities continue to be indefinitely reinvested in foreign operations, no income taxes, other than the transition tax and the minimum tax on Global Intangible Low Taxed Income (GILTI), have been provided. It is not practicable to determine the amount of unrecognized deferred tax liability related to any remaining undistributed foreign earnings not subject to the transition tax and additional outside basis differences in these entities.

The Tax Cuts and Jobs Act (the "Act") was enacted on December 22, 2017. The income tax effects of changes in tax laws are recognized in the period when enacted. The Act provides for numerous significant tax law changes and modifications with varying effective dates, which include reducing the U.S. federal corporate income tax rate from 35% to 21% , creating a territorial tax system (with a one-time transition tax on previously deferred foreign earnings), broadening the tax base, and allowing for immediate capital expensing of certain qualified property. As a result, the Company made a reasonable estimate of the effects on existing deferred tax balances and the one-time transition tax, and recognized a net provisional benefit of \$379 million , which is included as a component of income tax expense in the year ended December 31, 2017. The net provisional benefit consisted of a net tax benefit of \$528 million related to the remeasurement of deferred tax balance and a beneficial impact of \$220 million on reserves previously established under ASC Subtopic 740-30, *Income Taxes - Other Considerations or Special Areas*, partially offset by the \$369 million provisional impact of the transition tax. The Company performed a quarterly review of the provisional tax liability recorded in 2017 as new guidance on the Act was issued in 2018. The Company finalized its calculation of the transition tax and recorded a tax benefit of \$29 million in the fourth quarter of 2018. The Company is currently assessing the impact of pending Treasury Regulations on the Company's transition tax calculation, and will record any adjustment in 2019. The Company has elected to pay the one-time transition tax over eight years.

Archer-Daniels-Midland Company

Notes to Consolidated Financial Statements (Continued)

Note 13. Income Taxes (Continued)

The Act also contains new provisions related to GILTI and Foreign Derived Intangible Income (FDII) which are effective for fiscal year 2018. In 2018, the Company incurred additional U.S. taxable income of \$101 million related to GILTI, and deducted \$101 million related to FDII. The Company made an accounting policy election to treat GILTI as a period cost. During 2018, U.S. tax authorities issued proposed Treasury Regulations addressing some of the tax reform items that were effective in 2018. Once final Treasury Regulations are issued, the Company will record the impact of any changes in 2019. It is also reasonable to expect that global taxing authorities will be reviewing their current legislation for potential modifications in reaction to the implementation of the Act. The additional guidance, along with the potential for additional global tax legislation changes, may affect significant deductions and income inclusions and could have a material adverse effect on the Company's net income or cash flow.

The Company had \$313 million and \$254 million of tax assets related to net operating loss carry-forwards of certain international subsidiaries at December 31, 2018 and 2017, respectively. As of December 31, 2018, approximately \$221 million of these assets have no expiration date, and the remaining \$92 million expire at various times through fiscal 2028. The annual usage of certain of these assets is limited to a percentage of taxable income of the respective foreign subsidiary for the year. The Company has recorded a valuation allowance of \$166 million and \$134 million against these tax assets at December 31, 2018 and 2017, respectively, due to the uncertainty of their realization.

The Company had \$55 million and \$64 million of tax assets related to foreign and domestic capital loss carryforwards at December 31, 2018 and 2017, respectively. The Company has recorded a valuation allowance of \$55 million and \$64 million against these tax assets at December 31, 2018 and 2017, respectively.

The Company had \$74 million and \$78 million of tax assets related to state income tax attributes (incentive credits and net operating loss carryforwards), net of federal tax benefit, at December 31, 2018 and 2017, respectively, which will expire at various times through fiscal 2038. Due to the uncertainty of realization, the Company recorded a valuation allowance of \$68 million and \$65 million related to state income tax assets net of federal tax benefit as of December 31, 2018 and 2017, respectively.

The Company remains subject to federal examination in the U.S. for the calendar tax years 2016, 2017, and 2018.

The following table sets forth a rollforward of activity of unrecognized tax benefits for the year ended December 31, 2018 and 2017 as follows:

	Unrecognized Tax Benefits	
	December 31, 2018	December 31, 2017
	(In millions)	
Beginning balance	\$ 56	\$ 55
Additions related to current year's tax positions	3	—
Additions related to prior years' tax positions	46	26
Additions related to acquisitions	7	—
Reductions related to lapse of statute of limitations	(2)	(1)
Settlements with tax authorities	(3)	(24)
Ending balance	<u>\$ 107</u>	<u>\$ 56</u>

The additions and reductions in unrecognized tax benefits shown in the table included effects related to net income and shareholders' equity. The changes in unrecognized tax benefits did not have a material effect on the Company's net income or cash flow. At December 31, 2018 and 2017, the Company had accrued interest and penalties on unrecognized tax benefits of \$24 million and \$23 million, respectively.

Notes to Consolidated Financial Statements (Continued)

Note 13. Income Taxes (Continued)

The Company is subject to income taxation and routine examinations in many jurisdictions around the world and frequently faces challenges regarding the amount of taxes due. These challenges include positions taken by the Company related to the timing, nature, and amount of deductions and the allocation of income among various jurisdictions. In its routine evaluations of the exposure associated with various tax filing positions, the Company recognizes a liability, when necessary, for estimated potential tax owed by the Company in accordance with applicable accounting standards. Resolution of the related tax positions, through negotiations with relevant tax authorities or through litigation, may take years to complete. Therefore, it is difficult to predict the timing for resolution of tax positions and the Company cannot predict or provide assurance as to the ultimate outcome of these ongoing or future examinations. However, the Company does not anticipate that the total amount of unrecognized tax benefits will increase or decrease significantly in the next twelve months. Given the long periods of time involved in resolving tax positions, the Company does not expect that the recognition of unrecognized tax benefits will have a material impact on the Company's effective income tax rate in any given period. If the total amount of unrecognized tax benefits were recognized by the Company at one time, there would be a reduction of \$107 million on the tax expense for that period.

The Company's wholly-owned subsidiary, ADM do Brasil Ltda. (ADM do Brasil), has received three separate tax assessments from the Brazilian Federal Revenue Service (BFRS) challenging the tax deductibility of commodity hedging losses and related expenses for the tax years 2004, 2006 and 2007. These assessments totaled approximately \$109 million in tax and \$308 million in interest and penalties as of December 31, 2018 (adjusted for variation in currency exchange rates). The statute of limitations for tax years 2005 and 2008 to 2011 has expired. The Company does not expect to receive any additional tax assessments with respect to this issue.

ADM do Brasil enters into commodity hedging transactions that can result in gains, which are included in ADM do Brasil's calculation of taxable income in Brazil, and losses, which ADM do Brasil deducts from its taxable income in Brazil. The Company has evaluated its tax position regarding these hedging transactions and concluded, based upon advice from Brazilian legal counsel, that it was appropriate to recognize both gains and losses resulting from hedging transactions when determining its Brazilian income tax expense. Therefore, the Company has continued to recognize the tax benefit from hedging losses in its financial statements and has not recorded any tax liability for the amounts assessed by the BFRS.

ADM do Brasil filed an administrative appeal for each of the assessments. The appeal panel found in favor of the BFRS on these assessments and ADM do Brasil filed a second level administrative appeal. The second administrative appeal panel continues to conduct customary procedural activities, including ongoing dialogue with the BFRS auditor. If ADM do Brasil continues to be unsuccessful in the administrative appellate process, the Company intends to file appeals in the Brazilian federal courts. While the Company believes its consolidated financial statements properly reflect the tax deductibility of these hedging losses, the ultimate resolution of this matter could result in the future recognition of additional payments of, and expense for, income tax and the associated interest and penalties. The Company intends to vigorously defend its position against the current assessment.

In 2012, the Company's subsidiaries in Argentina, ADM Argentina and Alfred Toepfer Argentina, received tax assessments challenging transfer prices used to price grain exports for the tax years 2004 through 2010. As of December 31, 2018, these assessments totaled \$17 million in tax and \$58 million in interest and penalties (adjusted for variation in currency exchange rates). The Argentine tax authorities conducted a review of income and other taxes paid by large exporters and processors of cereals and other agricultural commodities resulting in allegations of income tax evasion. The Company strongly believes that it has complied with all Argentine tax laws. To date, the Company has not received assessments for tax years subsequent to 2010. However, it cannot rule out receiving additional assessments challenging transfer prices used to price grain exports for these years, and estimates that these potential assessments could be approximately \$52 million in tax and \$58 million in interest (adjusted for variation in currency exchange rates). The Company believes that it has appropriately evaluated the transactions underlying these assessments, and has concluded, based on Argentine tax law, that its tax position would be sustained, and accordingly, has not recorded a tax liability for these assessments. The Company intends to vigorously defend its position against the current assessments and any similar assessments that may be issued for years subsequent to 2010.

Archer-Daniels-Midland Company

Notes to Consolidated Financial Statements (Continued)

Note 13. Income Taxes (Continued)

In accordance with the accounting requirements for uncertain tax positions, the Company has not recorded an uncertain tax liability for these assessments because it has concluded that it is more likely than not to prevail on the Brazil and Argentina matters based upon their technical merits and because the taxing jurisdictions' processes do not provide a mechanism for settling at less than the full amount of the assessment. The Company's consideration of these tax assessments requires judgments about the application of income tax regulations to specific facts and circumstances. The final outcome of these matters cannot reliably be predicted, may take many years to resolve, and could result in financial impacts of up to the entire amount of these assessments.

In 2014, the Company's wholly-owned subsidiary in the Netherlands, ADM Europe B.V., received a tax assessment from the Netherlands tax authority challenging the transfer pricing aspects of a 2009 business reorganization which involved two of its subsidiary companies in the Netherlands. As of December 31, 2018, this assessment was \$93 million in tax and \$31 million in interest (adjusted for variation in currency exchange rates). The Company has appealed the assessment and carefully evaluated the underlying transactions and has concluded that the amount of the gain recognized on the reorganization for tax purposes was appropriate. While the Company plans to vigorously defend its position against the assessment, it has accrued an amount it believes would be the likely outcome of the litigation. The Company's defense of the judicial appeal may take an extended period of time and could result in additional financial impacts of up to the entire amount of this assessment.

Note 14. Leases

The Company leases manufacturing and warehouse facilities, real estate, transportation assets, and other equipment under non-cancelable operating leases, the majority of which expire at various dates through the year 2038. Rent expense for the years ended December 31, 2018, 2017, and 2016 was \$310 million, \$249 million, and \$253 million, respectively. Future minimum rental payments for non-cancellable operating leases, including time charters of ocean going vessels, with initial or remaining terms in excess of one year are as follows:

	Minimum Rental Payments
	(In millions)
2019	\$ 214
2020	149
2021	121
2022	95
2023	52
Thereafter	177
Total minimum lease payments	<u>\$ 808</u>

Note 15. Employee Benefit Plans

The Company provides substantially all U.S. employees and employees at certain foreign subsidiaries with retirement benefits including defined benefit pension plans and defined contribution plans. The Company provides certain eligible U.S. employees who retire under qualifying conditions with subsidized postretirement health care coverage or Health Care Reimbursement Accounts.

In October 2018, the Company amended the ADM Retirement Plan (the "Plan") and entered into a binding agreement to purchase a group annuity contract from The Prudential Insurance Company of America ("Prudential"), irrevocably transferring the future benefit obligations and annuity administration for approximately 3,800 retirees from the Plan to Prudential. The purchase of the group annuity contract, which was funded directed by the Plan's assets, was completed on November 2, 2018 and reduced the Company's pension obligations by approximately \$528 million. As a result of the transaction, the Company recognized a non-cash pension settlement charge of approximately \$117 million in the fourth quarter of 2018.

Archer-Daniels-Midland Company

Notes to Consolidated Financial Statements (Continued)

Note 15. Employee Benefit Plans (Continued)

In July 2017, the Company announced that all participants in the Company's U.S. salaried pension plan and the Supplemental Executive Retirement Plan (SERP) will begin accruing benefits under the cash balance formula effective January 1, 2022. Benefits for participants who were accruing under the final average pay formula will be frozen as of December 31, 2021, including pay and service through that date. This change, along with other changes in participation associated with divestitures and restructuring, triggered a remeasurement of the salaried pension plan and the SERP resulting in decreases in the fiscal 2017 pension expense, accumulated other comprehensive loss, and underfunded status by \$18 million, \$164 million, and \$182 million, respectively.

In 2017, the Company also changed the method used to estimate the service and interest cost components of the net periodic pension and postretirement benefit costs for its U.S., Canadian, and U.K. plans. The new method uses the spot rate yield curve approach to estimate the service and interest costs. Previously, those costs were determined using a single weighted-average discount rate applied to all future cash outflows. The change does not affect the measurement of the Company's benefit obligations and was accounted for as a change in accounting estimate in accordance with the guidance of ASC Topic 250, *Accounting Estimates and Error Corrections*, thereby impacting the current and future periods. The impact of this change on after-tax earnings and diluted earnings per share for the year ended December 31, 2017 was immaterial.

In December 2016, the Company announced a change to the U.S. retiree medical program which affected employees with less than 30 years of service at January 1, 2017. The change resulted in a curtailment gain of \$38 million for the year ended December 31, 2016.

The Company maintains 401(k) plans covering substantially all U.S. employees. The Company contributes cash to the plans to match qualifying employee contributions, and also provides a non-matching employer contribution of 1% of pay to eligible participants. Under an employee stock ownership component of the 401(k) plans, employees may choose to invest in the Company's stock as part of their own investment elections. The employer contributions are expensed when paid. Assets of the Company's 401(k) plans consist primarily of listed common stocks and pooled funds. The Company's 401(k) plans held 9 million shares of Company common stock at December 31, 2018, with a market value of \$388 million. Cash dividends received on shares of Company common stock by these plans during the year ended December 31, 2018 were \$13 million.

The following table sets forth the components of retirement plan expense for the years ended December 31, 2018, 2017, and 2016:

(In millions)	Pension Benefits			Postretirement Benefits		
	Year Ended December 31			Year Ended December 31		
	2018	2017	2016	2018	2017	2016
Retirement plan expense						
Defined benefit plans:						
Service cost (benefits earned during the period)	\$ 66	\$ 78	\$ 82	\$ 2	\$ 2	\$ 3
Interest cost	93	106	113	5	6	8
Expected return on plan assets	(146)	(145)	(137)	—	—	—
Settlement charges	117	—	(5)	—	—	—
Curtailments	(1)	—	—	—	—	(38)
Amortization of actuarial loss	55	65	56	3	4	3
Amortization of prior service cost (credit)	(19)	(7)	2	(15)	(13)	(17)
Net periodic defined benefit plan expense	165	97	111	(5)	(1)	(41)
Defined contribution plans	50	57	57	—	—	—
Total retirement plan expense	\$ 215	\$ 154	\$ 168	\$ (5)	\$ (1)	\$ (41)

Archer-Daniels-Midland Company

Notes to Consolidated Financial Statements (Continued)

Note 15. Employee Benefit Plans (Continued)

The following tables set forth changes in the defined benefit obligation and the fair value of defined benefit plan assets for the years ended December 31, 2018 and 2017 :

	Pension Benefits		Postretirement Benefits	
	December 31 2018	December 31 2017	December 31 2018	December 31 2017
	(In millions)		(In millions)	
Benefit obligation, beginning	\$ 3,109	\$ 2,992	\$ 154	\$ 171
Service cost	66	78	2	2
Interest cost	93	106	5	6
Actuarial loss (gain)	(278)	129	(4)	(4)
Employee contributions	2	2	—	—
Curtailments	(1)	—	—	—
Acquisitions	—	3	—	—
Settlements	(528)	(6)	—	—
Benefits paid	(99)	(86)	(13)	(11)
Plan amendments	2	(180)	—	(10)
Actual expenses	—	(2)	—	—
Foreign currency effects	(43)	73	—	—
Benefit obligation, ending	<u>\$ 2,323</u>	<u>\$ 3,109</u>	<u>\$ 144</u>	<u>\$ 154</u>
Fair value of plan assets, beginning	\$ 2,448	\$ 2,131	\$ —	\$ —
Actual return on plan assets	(122)	340	—	—
Employer contributions	66	29	13	11
Employee contributions	2	2	—	—
Settlements	(528)	(6)	—	—
Benefits paid	(99)	(86)	(13)	(11)
Actual expenses	—	(2)	—	—
Foreign currency effects	(31)	40	—	—
Fair value of plan assets, ending	<u>\$ 1,736</u>	<u>\$ 2,448</u>	<u>\$ —</u>	<u>\$ —</u>
Funded status	<u>\$ (587)</u>	<u>\$ (661)</u>	<u>\$ (144)</u>	<u>\$ (154)</u>
Prepaid benefit cost	\$ 53	\$ 55	\$ —	\$ —
Accrued benefit liability – current	(17)	(17)	(13)	(12)
Accrued benefit liability – long-term	(623)	(699)	(131)	(142)
Net amount recognized in the balance sheet	<u>\$ (587)</u>	<u>\$ (661)</u>	<u>\$ (144)</u>	<u>\$ (154)</u>

Included in AOCI for pension benefits at December 31, 2018 , are the following amounts that have not yet been recognized in net periodic pension cost: unrecognized prior service credit of \$150 million and unrecognized actuarial loss of \$517 million . The prior service credit and actuarial loss included in AOCI expected to be recognized in net periodic pension cost during 2018 is \$19 million and \$20 million , respectively.

Included in AOCI for postretirement benefits at December 31, 2018 , are the following amounts that have not yet been recognized in net periodic postretirement benefit cost: unrecognized prior service credit of \$31 million and unrecognized actuarial loss of \$27 million . Prior service credit of \$15 million and actuarial loss of \$2 million included in AOCI are expected to be recognized in net periodic benefit cost during 2018.

Archer-Daniels-Midland Company

Notes to Consolidated Financial Statements (Continued)

Note 15. Employee Benefit Plans (Continued)

The following table sets forth the principal assumptions used in developing net periodic pension cost:

	Pension Benefits		Postretirement Benefits	
	December 31 2018	December 31 2017	December 31 2018	December 31 2017
Discount rate	3.4%	3.7%	3.7%	3.9%
Expected return on plan assets	6.8%	6.8%	N/A	N/A
Rate of compensation increase	4.7%	4.6%	N/A	N/A

The following table sets forth the principal assumptions used in developing the year-end actuarial present value of the projected benefit obligations:

	Pension Benefits		Postretirement Benefits	
	December 31 2018	December 31 2017	December 31 2018	December 31 2017
Discount rate	3.9%	3.4%	4.3%	3.7%
Rate of compensation increase	4.9%	4.7%	N/A	N/A

The projected benefit obligation, accumulated benefit obligation, and fair value of plan assets for the pension plans with projected benefit obligations in excess of plan assets were \$2.0 billion, \$1.9 billion, and \$1.4 billion, respectively as of December 31, 2018, and \$2.7 billion, \$2.6 billion, and \$2.0 billion, respectively, as of December 31, 2017. The projected benefit obligation, accumulated benefit obligation, and fair value of plan assets for the pension plans with accumulated benefit obligations in excess of plan assets were \$1.9 billion, \$1.8 billion, and \$1.3 billion, respectively, as of December 31, 2018 and \$2.7 billion, \$2.5 billion, and \$1.9 billion, respectively, as of December 31, 2017. The accumulated benefit obligation for all pension plans as of December 31, 2018 and 2017, was \$2.2 billion and \$3.0 billion, respectively.

For postretirement benefit measurement purposes, a 7.30% annual rate of increase in the per capita cost of covered health care benefits was assumed for the year ended December 31, 2018. The rate was assumed to decrease gradually to 4.5% by 2026 and remain at that level thereafter.

A 1% change in assumed health care cost trend rates would have the following effects:

	1% Increase	1% Decrease
	(In millions)	
Effect on accumulated postretirement benefit obligations	\$ 4	\$ (5)

The effect on combined service and interest cost components is immaterial.

Archer-Daniels-Midland Company

Notes to Consolidated Financial Statements (Continued)

Note 15. Employee Benefit Plans (Continued)

Plan Assets

The Company's employee benefit plan assets are principally comprised of the following types of investments:

Common stock:

Equity securities are valued based on quoted exchange prices and are classified within Level 1 of the valuation hierarchy.

Mutual funds:

Mutual funds are valued at the closing price reported on the active market on which they are traded and are classified within Level 1 of the valuation hierarchy.

Common collective trust (CCT) funds:

The fair values of the CCTs are valued using net asset value (NAV). The investments in CCTs are comprised of international equity and short-term investments. The investments are valued at NAV provided by administrators of the funds.

Corporate debt instruments:

Corporate debt instruments are valued using third-party pricing services and are classified within Level 2 of the valuation hierarchy.

U.S. Treasury instruments:

U.S. Treasury instruments are valued at the closing price reported on the active market on which they are traded and are classified within Level 1 of the valuation hierarchy.

U.S. government agency, state, and local government bonds:

U.S. government agency obligations and state and municipal debt securities are valued using third-party pricing services and are classified within Level 2 of the valuation hierarchy.

The methods described above may produce a fair value calculation that may not be indicative of net realizable value or reflective of future fair values. Furthermore, while the Company believes its valuation methods are appropriate and consistent with other market participants' methods, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different fair value measurement at the reporting date.

Archer-Daniels-Midland Company

Notes to Consolidated Financial Statements (Continued)

Note 15. Employee Benefit Plans (Continued)

The following tables set forth, by level within the fair value hierarchy, the fair value of plan assets as of December 31, 2018 and 2017.

Fair Value Measurements at December 31, 2018				
	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total
	(In millions)			
Common stock	\$ 152	\$ —	\$ —	\$ 152
Mutual funds	540	—	—	540
Corporate bonds	—	406	—	406
U.S. Treasury instruments	112	—	—	112
U.S. government agency, state and local government bonds	—	31	—	31
Other	—	7	—	7
Total assets	\$ 804	\$ 444	\$ —	\$ 1,248
Common collective trust funds at NAV				
U.S. equity				351
International equity				137
Total assets at fair value				\$ 1,736

Fair Value Measurements at December 31, 2017				
	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total
	(In millions)			
Common stock	\$ 261	\$ —	\$ —	\$ 261
Mutual funds	750	—	—	750
Corporate bonds	—	601	—	601
U.S. Treasury instruments	98	—	—	98
U.S. government agency, state and local government bonds	—	29	—	29
Other	—	19	—	19
Total assets	\$ 1,109	\$ 649	\$ —	\$ 1,758
Common collective trust funds at NAV				
U.S. equity				327
International equity				363
Total assets at fair value				\$ 2,448

Level 3 Gains and Losses:

There are no Plan assets classified as Level 3 in the fair value hierarchy; therefore there are no gains or losses associated with Level 3 assets.

Archer-Daniels-Midland Company

Notes to Consolidated Financial Statements (Continued)

Note 15. Employee Benefit Plans (Continued)

The following table sets forth the actual asset allocation for the Company's global pension plan assets as of the measurement date:

	December 31 2018 (1)(2)	December 31 2017 (2)
Equity securities	48%	58%
Debt securities	40%	40%
Other	12%	2%
Total	100%	100%

(1) The Company's U.S. pension plans contain approximately 73% of the Company's global pension plan assets. The actual asset allocation for the Company's U.S. pension plans as of the measurement date consists of 55% equity securities and 45% debt. The target asset allocation for the Company's U.S. pension plans is approximately the same as the actual asset allocation. The Company's U.S. pensions plans' assets and asset allocation reflect the impact of the \$528 million purchase of the group annuity contract, which was funded directed by the Plan's assets, transferring the future benefit obligations and annuity administration for approximately 3,800 retirees from the Plan to Prudential on November 2, 2018. The actual asset allocation for the Company's foreign pension plans as of the measurement date consists of 32% equity securities, 26% debt securities, and 42% in other investments. The target asset allocation for the Company's foreign pension plans is approximately the same as the actual asset allocation.

(2) The Company's pension plans did not directly hold any shares of Company common stock as of the December 31, 2018 and 2017 measurement dates.

Investment objectives for the Company's plan assets are to:

- Optimize the long-term return on plan assets at an acceptable level of risk.
- Maintain a broad diversification across asset classes and among investment managers.
- Maintain careful control of the risk level within each asset class.

Asset allocation targets promote optimal expected return and volatility characteristics given the long-term time horizon for fulfilling the obligations of the pension plans. Selection of the targeted asset allocation for plan assets was based upon a review of the expected return and risk characteristics of each asset class, as well as the correlation of returns among asset classes. The U.S. pension plans target asset allocation is also based on an asset and liability study that is updated periodically.

Investment guidelines are established with each investment manager. These guidelines provide the parameters within which the investment managers agree to operate, including criteria that determine eligible and ineligible securities, diversification requirements, and credit quality standards, where applicable. In some countries, derivatives may be used to gain market exposure in an efficient and timely manner; however, derivatives may not be used to leverage the portfolio beyond the market value of underlying investments.

The Company uses external consultants to assist in monitoring the investment strategy and asset mix for the Company's plan assets. To develop the Company's expected long-term rate of return assumption on plan assets, the Company generally uses long-term historical return information for the targeted asset mix identified in asset and liability studies. Adjustments are made to the expected long-term rate of return assumption when deemed necessary based upon revised expectations of future investment performance of the overall investment markets.

Contributions and Expected Future Benefit Payments

Based on actuarial calculations, the Company expects to contribute \$27 million to the pension plans and \$13 million to the postretirement benefit plan during 2019. The Company may elect to make additional discretionary contributions during this period.

Archer-Daniels-Midland Company

Notes to Consolidated Financial Statements (Continued)

Note 15. Employee Benefit Plans (Continued)

The following benefit payments, which reflect expected future service, are expected to be paid by the benefit plans:

	Pension Benefits	Postretirement Benefits
	(In millions)	
2019	\$ 65	\$ 13
2020	72	13
2021	80	12
2022	88	12
2023	96	11
2024-2028	585	53

Note 16. Shareholders' Equity

The Company has authorized one billion shares of common stock and 500,000 shares of preferred stock, each with zero par value. No preferred stock has been issued. At December 31, 2018 and 2017, the Company had approximately 157.1 million shares and 158.7 million shares, respectively, of its common shares in treasury. Treasury stock of \$5.3 billion and \$5.5 billion at December 31, 2018 and 2017, respectively, is recorded at cost as a reduction of common stock.

At December 31, 2018 and 2017, the foreign currency translation adjustment component of AOCI included \$40 million and \$59 million of after-tax losses, respectively, pertaining to foreign currency-denominated debt designated as a net investment hedge (see Note 5 for more information).

The following tables set forth the changes in AOCI by component and the reclassifications out of AOCI for the years ended December 31, 2018 and 2017 :

	Foreign Currency Translation Adjustment	Deferred Gain (Loss) on Hedging Activities	Pension and Other Postretirement Benefit Liabilities Adjustment	Unrealized Gain (Loss) on Investments	Accumulated Other Comprehensive Income (Loss)
	(In millions)				
Balance at December 31, 2016	\$ (2,102)	\$ 6	\$ (521)	\$ 19	\$ (2,598)
Other comprehensive income before reclassifications	690	(35)	243	—	898
Amounts reclassified from AOCI	—	47	55	(1)	101
Tax effect	59	(1)	(98)	2	(38)
Net of tax amount	<u>749</u>	<u>11</u>	<u>200</u>	<u>1</u>	<u>961</u>
Balance at December 31, 2017	\$ (1,353)	\$ 17	\$ (321)	\$ 20	\$ (1,637)
Other comprehensive income before reclassifications	(580)	(19)	124	(2)	(477)
Amounts reclassified from AOCI	(1)	76	32	(2)	105
Tax effect	(28)	(13)	(55)	(1)	(97)
Net of tax amount	<u>(609)</u>	<u>44</u>	<u>101</u>	<u>(5)</u>	<u>(469)</u>
Balance at December 31, 2018	<u><u>\$ (1,962)</u></u>	<u><u>\$ 61</u></u>	<u><u>\$ (220)</u></u>	<u><u>\$ 15</u></u>	<u><u>\$ (2,106)</u></u>

Archer-Daniels-Midland Company

Notes to Consolidated Financial Statements (Continued)

Note 16. Shareholders' Equity (Continued)

The change in foreign currency translation adjustment in 2018 is primarily due to the U.S. dollar appreciation, impacting the Euro and British Pound-denominated equities of the Company's foreign subsidiaries while the change in 2017 is primarily due to the U.S. dollar depreciation, impacting the Euro and British Pound-denominated equities of the Company's foreign subsidiaries.

Details about AOCI components	Amounts reclassified from AOCI Year Ended December 31			Affected line item in the consolidated statement of earnings
	2018	2017	2016	
	(In millions)			
<u>Foreign currency translation adjustment</u>				
	\$ (1)	\$ —	\$ (75)	Other income/expense
	—	—	—	Tax
	<u>\$ (1)</u>	<u>\$ —</u>	<u>\$ (75)</u>	Net of tax
<u>Deferred loss (gain) on hedging activities</u>				
	\$ 113	\$ 45	\$ 82	Cost of products sold
	(36)	2	18	Other income/expense
	(1)	(1)	2	Interest expense
	—	1	35	Revenues
	<u>76</u>	<u>47</u>	<u>137</u>	Total before tax
	<u>(18)</u>	<u>(18)</u>	<u>(52)</u>	Tax on reclassifications
	<u>\$ 58</u>	<u>\$ 29</u>	<u>\$ 85</u>	Net of tax
<u>Pension liability adjustment</u>				
Amortization of defined benefit pension items:				
Prior service losses (credit)	\$ (33)	\$ (57)	\$ (17)	Other (income) expense - net
Actuarial losses	65	112	44	Other (income) expense - net
	<u>32</u>	<u>55</u>	<u>27</u>	Total before tax
	<u>(8)</u>	<u>(29)</u>	<u>(5)</u>	Tax on reclassifications
	<u>\$ 24</u>	<u>\$ 26</u>	<u>\$ 22</u>	Net of tax
<u>Unrealized loss (gain) on investments</u>				
	\$ (2)	\$ (1)	\$ —	Other income/expense
	—	—	6	Asset impairment, exit, and restructuring costs
	—	—	—	Tax on reclassifications
	<u>\$ (2)</u>	<u>\$ (1)</u>	<u>\$ 6</u>	Net of tax

Archer-Daniels-Midland Company

Notes to Consolidated Financial Statements (Continued)

Note 17. Segment and Geographic Information

The Company is principally engaged in procuring, transporting, storing, processing, and merchandising agricultural commodities, products, and ingredients. The Company's operations are organized, managed, and classified into four reportable business segments: Origination, Oilseeds, Carbohydrate Solutions, and Nutrition. Each of these segments is organized based upon the nature of products and services offered. The Company's remaining operations are not reportable segments, as defined by the applicable accounting standard, and are classified as Other.

Effective January 1, 2018, the Company changed its segment reporting to reflect changes in its operating structure. The Company new segments are Origination (formerly Agricultural Services), Oilseeds (formerly Oilseeds Processing), Carbohydrate Solutions (formerly Corn Processing), and Nutrition (formerly Wild Flavors and Specialty Ingredients). The European origination business previously reported in Oilseeds is now managed by leaders in Origination to better coordinate continental trading activities. Carbohydrate Solutions now includes the results of ADM Milling, which were previously reported in Origination. In addition, the Company also moved the segment reporting of its renewable chemicals business from Carbohydrate Solutions to Oilseeds effective July 1, 2018. Nutrition now includes the results of Animal Nutrition and certain product lines previously reported in Carbohydrate Solutions as well as certain product lines previously reported in Oilseeds.

Prior period results have been reclassified to conform to the current period presentation.

The Origination segment utilizes its extensive global grain elevator and transportation networks and port operations to buy, store, clean, and transport agricultural commodities, such as oilseeds, corn, wheat, milo, oats, rice, and barley, and resells these commodities primarily as food and feed ingredients and as raw materials for the agricultural processing industry. The Origination segment also includes international agricultural commodities merchandising and handling activities managed through a global trade desk based in Rolle, Switzerland. The Origination segment's grain sourcing, handling, and transportation network provides reliable and efficient services to the Company's customers and agricultural processing operations. The Origination segment's transportation network capabilities include barge, ocean-going vessel, truck, rail, and container freight services. The Origination segment also includes the activities related to structured trade finance, the import and distribution of agricultural feed products, and the Company's share of the results of its Pacifcor joint venture.

The Oilseeds segment includes global activities related to the origination, merchandising, crushing, and further processing of oilseeds such as soybeans and soft seeds (cottonseed, sunflower seed, canola, rapeseed, and flaxseed) into vegetable oils and protein meals. Oilseeds products produced and marketed by the Company include ingredients for the food, feed, energy, and industrial products industries. Crude vegetable oils produced by the segment's crushing activities are sold "as is" or are further processed by refining, blending, bleaching, and deodorizing into salad oils. Salad oils are sold "as is" or are further processed by hydrogenating and/or interesterifying into margarine, shortening, and other food products. Partially refined oils are used to produce biodiesel and glycols or are sold to other manufacturers for use in chemicals, paints, and other industrial products. Oilseed protein meals are principally sold to third parties to be used as ingredients in commercial livestock and poultry feeds. In South America, the Oilseeds segment includes origination and merchandising activities as adjuncts to its oilseeds processing assets. These activities include a network of grain elevators, port facilities, and transportation assets used to buy, store, clean, and transport grains and oilseeds. The Oilseeds segment is a major supplier of peanuts, tree nuts, and peanut-derived ingredients to both the U.S. and export markets. In North America, cottonseed flour is produced and sold primarily to the pharmaceutical industry and cotton cellulose pulp is manufactured and sold to the chemical, paper, and other industrial markets. The Oilseeds segment also includes the Company's share of the results of its equity investment in Wilmar International Limited (Wilmar) and its share of the results of its Stratas Foods LLC, Edible Oils Limited, and Olenex Sarl (Olenex) joint ventures. In June 2018, the Company invested in SoyVen, a 50% joint venture with Cargill, to provide soybean meal and oil for customers in Egypt. In July 2018, the Company completed the sale of its oilseeds operations in Bolivia to Inversiones Piuranas S.A. In December 2018, the Company completed the acquisition of certain assets of Brazil-based Algar Agro.

Archer-Daniels-Midland Company

Notes to Consolidated Financial Statements (Continued)

Note 17. Segment and Geographic Information (Continued)

The Company's Carbohydrate Solutions segment is engaged in corn and wheat wet and dry milling and other activities. The Carbohydrate Solutions segment converts corn and wheat into sweeteners, corn and wheat starches, wheat flour, and bioproducts. Its products include ingredients used in the food and beverage industry including sweeteners, starch, syrup, glucose, flour, and dextrose. Dextrose and starch are used by the Carbohydrate Solutions segment as feedstocks for its bioproducts operations. By fermentation of dextrose, the Carbohydrate Solutions segment produces alcohol and other food and animal feed ingredients. Ethyl alcohol is produced by the Company for industrial use as ethanol or as beverage grade. Ethanol, in gasoline, increases octane and is used as an extender and oxygenate. Corn gluten feed and meal, as well as distillers' grains, are produced for use as animal feed ingredients. Corn germ, a by-product of the wet milling process, is further processed into vegetable oil and protein meal. Other Carbohydrate Solutions products include citric acids which are used in various food and industrial products. This segment also includes the Company's share of the results of its equity investments in Hungrana Ltd., Almidones Mexicanos S.A., and Red Star Yeast Company, LLC. In June 2018, the Company completed the acquisition of a 50% equity stake in the starches and sweeteners business of Russian-based Aston Foods and Food Ingredients.

The Nutrition segment engages in the manufacturing, sales, and distribution of specialty products including natural flavor ingredients, flavor systems, natural colors, proteins, emulsifiers, soluble fiber, polyols, hydrocolloids, natural health and nutrition products, and other specialty food and feed ingredients. The Nutrition segment includes the activities related to the procurement, processing, and distribution of edible beans. The Nutrition segment also includes activities related to the processing and distribution of formula feeds and animal health and nutrition products and the manufacture of contract and private label pet treats and foods. In August 2018, the Company completed the acquisition of Probiotics International Limited, a British-based provider of probiotic supplements for human, pet, and production-animal uses and Rodelle Inc., a premium originator, processor and supplier of vanilla products.

Other includes the Company's remaining operations, primarily its financial business units, related to futures commission and insurance activities. On May 1, 2017, the Company completed the sale of its crop risk services business to Validus Holdings, a global group of insurance and reinsurance companies.

Intersegment sales have been recorded at amounts approximating market. Operating profit for each segment is based on net sales less identifiable operating expenses. Also included in operating profit for each segment is equity in earnings of affiliates based on the equity method of accounting. Specified items included in total segment operating profit and certain corporate items are not allocated to the Company's individual business segments because operating performance of each business segment is evaluated by management exclusive of these items. Corporate results principally include the impact of LIFO-related adjustments, unallocated corporate expenses, interest cost net of investment income, and the Company's share of the results of its equity investment in Compagnie Industrielle et Financiere des Produits Amylaces SA (Luxembourg) (CIP).

Archer-Daniels-Midland Company

Notes to Consolidated Financial Statements (Continued)

Note 17. Segment and Geographic Information (Continued)

Segment Information

(In millions)	Year Ended December 31		
	2018	2017	2016
Gross revenues			
Origination	\$ 29,622	\$ 28,300	\$ 29,812
Oilseeds	29,092	26,424	25,235
Carbohydrate Solutions	11,421	11,314	11,549
Nutrition	3,835	3,562	3,540
Other	381	387	408
Intersegment elimination	(10,010)	(9,159)	(8,198)
Total	<u>\$ 64,341</u>	<u>\$ 60,828</u>	<u>\$ 62,346</u>
Intersegment revenues			
Origination	\$ 4,562	\$ 4,176	\$ 4,066
Oilseeds	4,261	4,036	3,281
Carbohydrate Solutions	1,142	908	834
Nutrition	45	39	17
Total	<u>\$ 10,010</u>	<u>\$ 9,159</u>	<u>\$ 8,198</u>
Revenues from external customers			
Origination			
Merchandising and Handling	\$ 24,816	\$ 23,915	\$ 25,522
Transportation	244	209	224
Total Origination	<u>25,060</u>	<u>24,124</u>	<u>25,746</u>
Oilseeds			
Crushing and Origination	16,943	14,171	14,034
Refining, Packaging, Biodiesel, and Other	7,888	8,217	7,920
Total Oilseeds	<u>24,831</u>	<u>22,388</u>	<u>21,954</u>
Carbohydrate Solutions			
Starches and Sweeteners	6,696	6,565	6,413
Bioproducts	3,583	3,841	4,302
Total Carbohydrate Solutions	<u>10,279</u>	<u>10,406</u>	<u>10,715</u>
Nutrition			
Wild Flavors and Specialty Ingredients	2,571	2,367	2,466
Animal Nutrition	1,219	1,156	1,057
Total Nutrition	<u>3,790</u>	<u>3,523</u>	<u>3,523</u>
Other	381	387	408
Total	<u>\$ 64,341</u>	<u>\$ 60,828</u>	<u>\$ 62,346</u>

Archer-Daniels-Midland Company

Notes to Consolidated Financial Statements (Continued)

Note 17. Segment and Geographic Information (Continued)

(In millions)	Year Ended December 31		
	2018	2017	2016
Depreciation			
Origination	\$ 165	\$ 168	\$ 169
Oilseeds	207	202	194
Carbohydrate Solutions	328	322	322
Nutrition	80	75	70
Other	6	6	5
Corporate	26	29	27
Total	<u>\$ 812</u>	<u>\$ 802</u>	<u>\$ 787</u>
Long-lived asset abandonments and write-downs ⁽¹⁾			
Origination	\$ 25	\$ 11	\$ 3
Oilseeds	15	6	8
Carbohydrate Solutions	—	63	4
Nutrition	11	21	—
Corporate	49	—	2
Total	<u>\$ 100</u>	<u>\$ 101</u>	<u>\$ 17</u>
Interest income			
Origination	\$ 16	\$ 12	\$ 21
Oilseeds	29	27	27
Carbohydrate Solutions	1	1	2
Nutrition	2	2	3
Other	100	57	35
Corporate	14	7	4
Total	<u>\$ 162</u>	<u>\$ 106</u>	<u>\$ 92</u>
Equity in earnings of affiliates			
Origination	\$ 10	\$ 23	\$ 16
Oilseeds	411	368	208
Carbohydrate Solutions	62	78	82
Nutrition	17	14	16
Other	—	—	10
Corporate	18	(27)	(40)
Total	<u>\$ 518</u>	<u>\$ 456</u>	<u>\$ 292</u>

⁽¹⁾ See Note 18 for total asset impairment, exit, and restructuring costs.

Archer-Daniels-Midland Company

Notes to Consolidated Financial Statements (Continued)

Note 17. Segment and Geographic Information (Continued)

(In millions)	Year Ended December 31		
	2018	2017	2016
Segment Operating Profit			
Origination	\$ 546	\$ 404	\$ 362
Oilseeds	1,474	825	853
Carbohydrate Solutions	945	1,078	1,001
Nutrition	339	312	273
Other	58	51	134
Specified Items:			
Gains on sales of assets and businesses ⁽¹⁾	13	22	114
Impairment, restructuring, exit, and settlement charges ⁽²⁾	(102)	(160)	(32)
Hedge timing effects ⁽³⁾	—	4	(1)
Total segment operating profit	<u>3,273</u>	<u>2,536</u>	<u>2,704</u>
Corporate	<u>(1,213)</u>	<u>(927)</u>	<u>(882)</u>
Earnings before income taxes	<u>\$ 2,060</u>	<u>\$ 1,609</u>	<u>\$ 1,822</u>

⁽¹⁾ The gains in 2018 related to the sale of businesses and assets. The gains in 2017 related to the sale of the crop risk services business and disposals of other individually insignificant assets in the ordinary course of business, partially offset by an adjustment of the proceeds of the 2015 sale of the cocoa business. The gains in 2016 primarily related to recovery of loss provisions and gain related to the sale of the Company's Brazilian sugar ethanol facilities, realized contingent consideration on the December 2012 sale of the Company's equity investment in Gruma S.A. de C.V., and revaluation of the remaining interest to settlement value in conjunction with the acquisition of the remaining interest in Amazon Flavors, partially offset by a loss on sale of asset.

⁽²⁾ The charges in 2018 consisted of impairment of certain assets, restructuring, and settlement charges. The charges in 2017 consisted of asset impairments related to the closure of a facility and the reconfiguration of the Company's Peoria, Illinois ethanol complex, settlement charges, and several individually insignificant asset impairments and restructuring charges. The charges in 2016 consisted of several individually insignificant asset impairments and restructuring charges.

⁽³⁾ Hedge timing effects relate to hedge ineffectiveness associated with documented hedge programs.

Archer-Daniels-Midland Company

Notes to Consolidated Financial Statements (Continued)

Note 17. Segment and Geographic Information (Continued)

(In millions)	December 31	
	2018	2017
Investments in and advances to affiliates		
Origination	\$ 360	\$ 359
Oilseeds	4,189	3,961
Carbohydrate Solutions	375	373
Nutrition	63	57
Corporate	330	338
Total	<u>\$ 5,317</u>	<u>\$ 5,088</u>
Identifiable assets		
Origination	\$ 8,461	\$ 8,311
Oilseeds	12,195	11,992
Carbohydrate Solutions	5,895	6,085
Nutrition	7,158	5,568
Other	5,131	5,658
Corporate	1,993	2,349
Total	<u>\$ 40,833</u>	<u>\$ 39,963</u>

(In millions)	December 31	
	2018	2017
Gross additions to property, plant, and equipment		
Origination	\$ 93	\$ 203
Oilseeds	223	262
Carbohydrate Solutions	267	326
Nutrition	182	234
Other	3	12
Corporate	77	63
Total	<u>\$ 845</u>	<u>\$ 1,100</u>

Archer-Daniels-Midland Company

Notes to Consolidated Financial Statements (Continued)

Note 17. Segment and Geographic Information (Continued)

Geographic information: The following geographic data include revenues attributed to the countries based on the location of the subsidiary making the sale and long-lived assets based on physical location. Long-lived assets represent the net book value of property, plant, and equipment.

(In millions)	Year Ended December 31		
	2018	2017	2016
Revenues			
United States	\$ 28,726	\$ 27,894	\$ 29,419
Switzerland	12,911	14,095	13,413
Cayman Islands	5,724	4,189	3,617
Germany	2,179	2,090	2,341
Other Foreign	14,801	12,560	13,556
	<u>\$ 64,341</u>	<u>\$ 60,828</u>	<u>\$ 62,346</u>

(In millions)	December 31	
	2018	2017
Long-lived assets		
United States	\$ 6,615	\$ 6,767
Brazil	802	731
Other Foreign	2,536	2,640
	<u>\$ 9,953</u>	<u>\$ 10,138</u>

Archer-Daniels-Midland Company

Notes to Consolidated Financial Statements (Continued)

Note 18. Asset Impairment, Exit, and Restructuring Costs

The following table sets forth the charges included in asset impairment, exit, and restructuring costs.

(In millions)	Year Ended December 31		
	2018	2017	2016
Restructuring and exit costs ⁽¹⁾	\$ 29	\$ 72	\$ 21
Impairment charge - equity method investment ⁽²⁾	12	—	—
Impairment charge - equity securities ⁽³⁾	—	—	6
Impairment charge - goodwill and intangible assets ⁽⁴⁾	9	—	11
Impairment charge - other long-lived assets ⁽⁵⁾	121	101	17
Total asset impairment, exit, and restructuring costs	<u>\$ 171</u>	<u>\$ 173</u>	<u>\$ 55</u>

- (1) Restructuring and exit costs for the year ended December 31, 2018 consisted of restructuring charges of \$24 million in Corporate primarily related to the reorganization of IT services in Corporate and several individually insignificant restructuring charges presented as specified items within segment operating profit. Restructuring and exit costs for the year ended December 31, 2017 consisted of restructuring charges of \$54 million in Corporate primarily related to the reduction of certain positions within the Company's global workforce and several individually insignificant restructuring charges presented as specified items within segment operating profit. Restructuring and exit costs for the year ended December 31, 2016 consisted of restructuring charges of \$4 million in Corporate and several individually insignificant charges presented as specified items within segment operating profit.
- (2) Impairment charge - equity method investment consisted of an impairment charge on an equity investment presented as a specified item within segment operating profit.
- (3) Impairment charge - equity securities consisted of other-than-temporary impairment charges on the Company's investment in two available for sale equity securities in Corporate.
- (4) Impairment charge - goodwill and intangible assets for the year ended December 31, 2018 consisted of an intangible impairment presented as a specified item within segment operating profit. Impairment charge - goodwill and intangible assets for the year ended December 31, 2016 consisted of software impairment in Corporate.
- (5) Impairment charge - other long-lived assets for the year ended December 31, 2018 consisted of \$36 million of asset impairments related to a long-term receivable and certain long-lived assets in Oilseeds, \$25 million of asset impairments related to certain long-lived assets in Origination, and \$11 million of asset impairments related to certain long-lived assets in Nutrition presented as specified items within segment operating profit and a \$49 million charge related to a discontinued software project in Corporate. Impairment charge - other long-lived assets for the year ended December 31, 2017 consisted of \$63 million of asset impairments primarily related to the configuration of the Company's Peoria, Illinois ethanol complex, \$20 million of asset impairments related to the closure of a facility, and several individually insignificant asset charges presented as specified items within segment operating profit. Impairment charge - other long-lived assets for the year ended December 31, 2016 consisted of fixed asset impairment charges of \$2 million in Corporate and several individually insignificant fixed asset impairments presented as specified items within segment operating profit.

Note 19. Sale of Accounts Receivable

Since March 2012, the Company has had an accounts receivable securitization program (the "Program") with certain commercial paper conduit purchasers and committed purchasers (collectively, the "Purchasers"). Under the Program, certain U.S.-originated trade accounts receivable are sold to a wholly-owned bankruptcy-remote entity, ADM Receivables, LLC ("ADM Receivables"). ADM Receivables in turn transfers such purchased accounts receivable in their entirety to the Purchasers pursuant to a receivables purchase agreement. In exchange for the transfer of the accounts receivable, ADM Receivables receives a cash payment of up to \$1.2 billion and an additional amount upon the collection of the accounts receivable (deferred consideration). The Program terminates on June 20, 2019, unless extended.

Archer-Daniels-Midland Company

Notes to Consolidated Financial Statements (Continued)

Note 19. Sale of Accounts Receivable (Continued)

In March 2014, the Company entered into a second accounts receivable securitization program (the "Second Program") with certain commercial paper conduit purchasers and committed purchasers (collectively, the "Second Purchasers"). Under the Second Program, certain non-U.S.-originated trade accounts receivable are sold to a wholly-owned bankruptcy-remote entity, ADM Ireland Receivables Company ("ADM Ireland Receivables"). ADM Ireland Receivables in turn transfers such purchased accounts receivable in their entirety to the Second Purchasers pursuant to a receivables purchase agreement. In exchange for the transfer of the accounts receivable, ADM Ireland Receivables receives a cash payment of up to \$0.6 billion (€0.5 billion) and an additional amount upon the collection of the accounts receivable (deferred consideration). The Second Program terminates on March 15, 2019, unless extended.

Under the Program and Second Program (collectively, the "Programs"), ADM Receivables and ADM Ireland Receivables use the cash proceeds from the transfer of receivables to the Purchasers and Second Purchasers (collectively, the "Purchasers") and other consideration to finance the purchase of receivables from the Company and the ADM subsidiaries originating the receivables.

The Company accounts for these transfers as sales. The Company has no retained interests in the transferred receivables, other than collection and administrative responsibilities and its right to the deferred consideration. At December 31, 2018 and 2017, the Company did not record a servicing asset or liability related to its retained responsibility, based on its assessment of the servicing fee, market values for similar transactions, and its cost of servicing the receivables sold.

As of December 31, 2018 and 2017, the fair value of trade receivables transferred to the Purchasers under the Programs and derecognized from the Company's consolidated balance sheet was \$1.9 billion and \$1.7 billion, respectively. In exchange for the transfer as of December 31, 2018 and 2017, the Company received cash of \$1.5 billion and \$1.4 billion and recorded a receivable for deferred consideration included in other current assets of \$379 million and \$307 million, respectively. Cash collections from customers on receivables sold were \$34.8 billion, \$33.5 billion, and \$34.3 billion for the years ended December 31, 2018, 2017, and 2016, respectively. Of this amount, \$14.8 billion, \$12.5 billion, and \$11.9 billion were cash collections on the deferred consideration reflected as cash inflows from investing activities for the years ended December 31, 2018, 2017, and 2016, respectively. Deferred consideration is paid to the Company in cash on behalf of the Purchasers as receivables are collected; however, as this is a revolving facility, cash collected from the Company's customers is reinvested by the Purchasers daily in new receivable purchases under the Programs.

The Company's risk of loss following the transfer of accounts receivable under the Programs is limited to the deferred consideration outstanding. The Company carries the deferred consideration at fair value determined by calculating the expected amount of cash to be received and is principally based on observable inputs (a Level 2 measurement under the applicable accounting standards) consisting mainly of the face amount of the receivables adjusted for anticipated credit losses and discounted at the appropriate market rate. Payment of deferred consideration is not subject to significant risks other than delinquencies and credit losses on accounts receivable transferred under the Programs which have historically been insignificant.

Transfers of receivables under the Programs during the years ended December 31, 2018, 2017, and 2016 resulted in an expense for the loss on sale of \$18 million, \$10 million, and \$6 million, respectively, which is classified as selling, general, and administrative expenses in the consolidated statements of earnings.

The Company reflects all cash flows related to the Programs as operating activities in its consolidated statements of cash flows because the cash received from the Purchasers upon both the sale and collection of the receivables is not subject to significant interest rate risk given the short-term nature of the Company's trade receivables.

Archer-Daniels-Midland Company

Notes to Consolidated Financial Statements (Continued)

Note 20. Legal Proceedings

The Company is routinely involved in a number of actual or threatened legal actions, including those involving alleged personal injuries, employment law, product liability, intellectual property, environmental issues, alleged tax liability (see Note 13 for information on income tax matters), and class actions. The Company also routinely receives inquiries from regulators and other government authorities relating to various aspects of our business, and at any given time, the Company has matters at various stages of resolution with the applicable government authorities. The outcomes of these matters are not within our complete control and may not be known for prolonged periods of time. In some actions, claimants seek damages, as well as other relief including injunctive relief, that could require significant expenditures or result in lost revenues. In accordance with applicable accounting standards, the Company records a liability in its consolidated financial statements for material loss contingencies when a loss is known or considered probable and the amount can be reasonably estimated. If the reasonable estimate of a known or probable loss is a range, and no amount within the range is a better estimate than any other, the minimum amount of the range is accrued. If a material loss contingency is reasonably possible but not known or probable, and can be reasonably estimated, the estimated loss or range of loss is disclosed in the notes to the consolidated financial statements. When determining the estimated loss or range of loss, significant judgment is required to estimate the amount and timing of a loss to be recorded. Estimates of probable losses resulting from litigation and governmental proceedings involving the Company are inherently difficult to predict, particularly when the matters are in early procedural stages, with incomplete facts or legal discovery; involve unsubstantiated or indeterminate claims for damages; potentially involve penalties, fines, disgorgement, or punitive damages; or could result in a change in business practice.

The Company has been a party to numerous lawsuits pending in various U.S. state and federal courts arising out of Syngenta Corporation's (Syngenta) marketing and distribution of genetically modified corn products, Agrisure Viptera and Agrisure Duracade, in the U.S. First, the Company brought a state court action in Louisiana against Syngenta in 2014, alleging Syngenta was negligent in commercializing its products before the products were approved in China. In December 2017, the Company and Syngenta reached a confidential settlement of this action. Second, Syngenta brought third-party claims against the Company in 2015 in a federal multidistrict litigation (MDL) in Kansas City, Kansas, a state court MDL in Minneapolis, Minnesota, and other courts, seeking contribution in the event Syngenta is held liable in class actions by farmers and other parties. In the December 2017 settlement, Syngenta agreed to dismiss all of these third-party claims against the Company. Third, farmers and other parties have sued the Company and other grain companies in numerous individual and purported class action suits in Illinois state and federal courts beginning in the fourth quarter of 2015, alleging the Company and other grain companies were negligent in failing to screen for genetically modified corn. On January 4, 2017, a federal court in the Southern District of Illinois dismissed, subject to appeal, all of the pending federal complaints against the Company, and thus the Company remains a defendant only in certain Illinois state court actions by farmers and other parties, which actions the Company has moved to dismiss as well. The Company denies liability in all of the actions in which it has been named as a third-party defendant or defendant and is vigorously defending itself in these cases. All of these actions are in pretrial proceedings. At this time, the Company is unable to predict the final outcome of this matter with any reasonable degree of certainty, but believes the outcome will not have a material adverse effect on its financial condition, results of operations, or cash flows.

Archer-Daniels-Midland Company

Notes to Consolidated Financial Statements (Continued)

Note 21. Quarterly Financial Data (Unaudited)

	Quarter Ended				Year
	March 31	June 30	September 30	December 31	
(In millions, except per share amounts)					
Fiscal Year Ended December 31, 2018					
Revenues	\$ 15,526	\$ 17,068	\$ 15,800	\$ 15,947	\$ 64,341
Gross Profit	889	1,181	1,058	1,053	4,181
Net Earnings Attributable to Controlling Interests	393	566	536	315	1,810
Basic Earnings Per Common Share	0.70	1.00	0.95	0.56	3.21
Diluted Earnings Per Common Share	0.70	1.00	0.94	0.55	3.19

	Quarter Ended				Year
	March 31	June 30	September 30	December 31	
(In millions, except per share amounts)					
Fiscal Year Ended December 31, 2017					
Revenues	\$ 14,988	\$ 14,943	\$ 14,827	\$ 16,070	\$ 60,828
Gross Profit	872	892	812	942	3,518
Net Earnings Attributable to Controlling Interests	339	276	192	788	1,595
Basic Earnings Per Common Share	0.59	0.48	0.34	1.40	2.80
Diluted Earnings Per Common Share	0.59	0.48	0.34	1.39	2.79

Net earnings attributable to controlling interests for the first quarter of the year ended December 31, 2018 included after-tax charges of \$12 million (equal to \$0.02 per share), primarily related to the impairment of an equity investment and several individually insignificant asset impairments and restructuring charges and a \$14 million (equal to \$0.03 per share) provisional tax benefit adjustment related to the enactment of the Tax Cuts and Jobs Act.

Net earnings attributable to controlling interests for the second quarter of the year ended December 31, 2018 included after-tax charges of \$16 million (equal to \$0.03 per share), primarily related to the impairment of a long-term financing receivable and several individually insignificant restructuring charges and a \$7 million (equal to \$0.01 per share) provisional tax expense adjustment related to the enactment of the Tax Cuts and Jobs Act and certain discrete items.

Net earnings attributable to controlling interests for the third quarter of the year ended December 31, 2018 included after-tax gains of \$20 million (equal to \$0.04 per share) related to the sale of a business and an equity investment and a \$3 million (equal to \$0.01 per share) provisional tax expense adjustment related to the enactment of the Tax Cuts and Jobs Acts.

Net earnings attributable to controlling interests for the fourth quarter of the year ended December 31, 2018 included after-tax losses \$7 million (equal to \$0.02 per share), primarily related to the sale of an asset and a business; after-tax charges of \$196 million (equal to 0.35 per share), consisting of a non-cash pension settlement charge related to the transfer of future benefit obligations and annuity administration for certain retirees under the Company's ADM Retirement Plan, a charge related to a discontinued software project in Corporate, asset impairments related to certain long-lived assets, restructuring charges primarily related to the reorganization of IT services in Corporate, and other settlement charges; after-tax charges of \$9 million (equal to \$0.01 per share) related to acquisition expenses and net losses on foreign currency derivative contracts to economically hedge certain acquisitions; and a \$29 million (equal to \$0.05 per share) provisional tax benefit adjustment related to the enactment of the Tax Cuts and Jobs Act and certain discrete items.

Archer-Daniels-Midland Company

Notes to Consolidated Financial Statements (Continued)

Note 21. Quarterly Financial Data (Unaudited) (Continued)

Net earnings attributable to controlling interests for the first quarter of the year ended December 31, 2017 included after-tax charges of \$8 million (equal to \$0.01 per share), related to several individually insignificant asset impairments and restructuring charges and certain discrete tax adjustments of \$4 million (equal to \$0.01 per share), related to valuation allowances.

Net earnings attributable to controlling interests for the second quarter of the year ended December 31, 2017 included after-tax charges of \$21 million (equal to \$0.04 per share), related to impairment of certain long-lived assets, restructuring, and a settlement, and after-tax losses of \$22 million (equal to \$0.04 per share), related to an adjustment of the proceeds of the 2015 sale of the cocoa business partially offset by the gain on sale of the crop risk business .

Net earnings attributable to controlling interests for the third quarter of the year ended December 31, 2017 included after-tax charges of \$69 million (equal to \$0.12 per share), for asset impairments related to the reconfiguration of the Company's Peoria, Illinois ethanol complex and restructuring related to the reduction of certain positions within the Company's global workforce; after-tax gains of \$10 million (equal to \$0.02 per share), related to an adjustment of the proceeds of the 2015 sale of the cocoa business and a gain on sale of asset; and an after-tax debt extinguishment charge of \$7 million (equal to \$0.01 per share), related to the early redemption of the \$559 million notes due on March 15, 2018.

Net earnings attributable to controlling interests for the fourth quarter of the year ended December 31, 2017 included after-tax charges of \$46 million (equal to \$0.08 per share), related to a legal settlement, asset impairments primarily related to the closure of a facility and several individually insignificant asset impairments and restructuring charges, and a net tax adjustment of \$370 million (equal to \$0.65 per share) related to the estimated impact of the Tax Cuts and Jobs Act U.S. tax and certain discrete items.

Note 22. Subsequent Events

The Company announced three significant portfolio actions. The Company:

- signed an agreement to purchase Florida Chemical Company (FCC), one of the world's largest producers of citrus oils and ingredients, for \$175 million , subject to regulatory approval;
- signed an agreement to purchase the remaining 50% interest owned by Invivo in Gleadell Agriculture Ltd. (Gleadell), a current joint venture with Invivo, subject to regulatory approval; and
- completed the acquisition of Neovia, a French-based global provider of value-added animal nutrition solutions, with 72 production facilities and a presence in 25 countries, for \$1.8 billion (€1.5 billion).

The FCC and Gleadell transactions are expected to close in the first quarter of 2019.

The Board of Directors and Shareholders
Archer-Daniels-Midland Company

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Archer-Daniels-Midland Company (the Company) as of December 31, 2018 and 2017 , and the related consolidated statements of earnings, comprehensive income (loss), shareholders' equity, and cash flows, for each of the three years in the period ended December 31, 2018 , and the related notes and financial statement schedule listed in the Index at Item 15(a)(2) (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the consolidated financial position of the Company at December 31, 2018 and 2017 , and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 2018 , in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2018 , based on criteria established in *Internal Control - Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 Framework) and our report dated February 19, 2019 , expressed an unqualified opinion thereon.

Basis for Opinion

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

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

/s/ Ernst & Young LLP

We have served as the Company's auditor since 1930.

Saint Louis, Missouri
February 19, 2019

The Board of Directors and Shareholders
Archer-Daniels-Midland Company

Opinion on Internal Control over Financial Reporting

We have audited Archer-Daniels-Midland Company's internal control over financial reporting as of December 31, 2018, based on criteria established in *Internal Control - Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 Framework) (the COSO criteria). In our opinion, Archer-Daniels-Midland Company (the Company) maintained, in all material respects, effective internal control over financial reporting as of December 31, 2018, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of Archer-Daniels-Midland Company as of December 31, 2018 and 2017, and the related consolidated statements of earnings, comprehensive income (loss), shareholders' equity, and cash flows for each of the three years in the period ended December 31, 2018, and the related notes and financial statement schedule listed in the Index at Item 15(a)(2), and our report dated February 19, 2019, expressed an unqualified opinion thereon.

Basis for Opinion

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

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

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

Definition and Limitations of Internal Control Over Financial Reporting

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

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

/s/ Ernst & Young LLP

Saint Louis, Missouri
February 19, 2019

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

None.

Item 9A. CONTROLS AND PROCEDURES

As of December 31, 2018, an evaluation was performed under the supervision and with the participation of the Company's management, including the Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation of the Company's "disclosure controls and procedures" (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934 (the "Exchange Act")). Based on that evaluation, the Company's management, including the Chief Executive Officer and Chief Financial Officer, concluded the Company's disclosure controls and procedures were effective to ensure that information required to be disclosed by the Company in reports that it files or submits under the Exchange Act is (i) recorded, processed, summarized and reported within the time periods specified in Securities and Exchange Commission rules and forms and (ii) accumulated and communicated to the Company's management, including the Chief Executive Officer and Chief Financial Officer, to allow timely decisions regarding required disclosure.

The Company is implementing a new enterprise resource planning (ERP) system on a worldwide basis as part of its ongoing business transformation program, which is expected to improve the efficiency and effectiveness of certain financial and business transaction processes. The implementation is expected to occur in phases over the next several years. The Company has currently implemented changes to certain processes in corporate finance and in over 200 locations including two processing businesses, and will continue to implement process and system changes over the next several years. The Company has appropriately considered these changes in its design of and testing for effectiveness of internal controls over financial reporting and concluded, as part of the evaluation described in the above paragraph, that the implementation of the new ERP in these circumstances has not materially affected its internal control over financial reporting.

MANAGEMENT'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

Archer-Daniels-Midland Company's management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rules 13a-15(f). The Company's internal control system is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements in accordance with generally accepted accounting principles.

Under the supervision and with the participation of management, including its Chief Executive Officer and Chief Financial Officer, the Company's management assessed the design and operating effectiveness of internal control over financial reporting as of December 31, 2018 based on the framework set forth in *Internal Control-Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 Framework). Based on this assessment, management concluded that the Company's internal control over financial reporting was effective as of December 31, 2018.

Ernst & Young LLP, an independent registered public accounting firm, has issued an attestation report on the Company's internal control over financial reporting as of December 31, 2018. That report is included herein.

/s/ Juan R. Luciano
Juan R. Luciano
Chairman, Chief Executive Officer, and President

/s/ Ray G. Young
Ray G. Young
Executive Vice President and Chief Financial Officer

Item 9B. OTHER INFORMATION

None.

PART III

Item 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Information with respect to directors, code of conduct, audit committee and audit committee financial experts of the Company, and Section 16(a) beneficial ownership reporting compliance is set forth in “Proposal No. 1 - Election of Directors for a One-Year Term,” “Director Experiences, Qualifications, Attributes and Skills; Board Diversity,” “Code of Conduct,” “Information Concerning Committees and Meetings – Audit Committee,” “Report of the Audit Committee,” and “Section 16(a) Beneficial Ownership Reporting Compliance,” of the definitive proxy statement for the Company’s annual meeting of stockholders to be held on May 2, 2019 and is incorporated herein by reference.

Officers of the Company are elected by the Board of Directors for terms of one year and until their successors are duly elected and qualified.

Information with respect to executive officers and certain significant employees of the Company is set forth below. Except as otherwise indicated, all positions are with the Company.

Name	Titles	Age
Benjamin I. Bard	Global Chief Compliance Officer since January 2014. Ethics and Compliance Counsel, The Coca-Cola Company from 2006 to January 2014.	45
Donald Chen	President, Asia Pacific since July 2017. President, North Asia from January 2016 to July 2017. Vice President, Sadara Chemical Company from February 2012 to December 2015.	56
Christopher M. Cuddy	Senior Vice President of the Company since May 2015. President, Carbohydrate Solutions business unit since March 2015. President, Corn Sweeteners and Starches from December 2012 to February 2015.	45
Michael D’Ambrose	Senior Vice President, Human Resources since October 2006.	61
Pierre Duprat	President, Animal Nutrition since August 2018. President, ADM Europe, Middle East, and Africa (EMEA) from June 2016 to August 2018. President, ADM Corn EMEA and Asia since November 2015. Director, International Business Development - Corn from February 2014 to November 2015. CEO of Cereal Transformation Division, Tereos from September 2007 to February 2013.	51
D. Cameron Findlay	Senior Vice President, General Counsel, and Secretary since July 2013.	59
Kristy Folkwein	Senior Vice President and Chief Information Officer since March 2018. Vice President and Chief Information Officer from June 2016 to March 2018. Senior Vice President and Chief Information Officer, Global Business Services at Dow Corning from June 2010 to June 2016.	56
Shannon Herzfeld	Vice President of the Company since February 2005, with responsibility for the Company’s Government Affairs function.	66
Domingo Lastra	President, South America since July 2017. Vice President, Integration and Strategy from March 2016 to July 2017. Managing Director, Agricultural Services International from June 2014 to February 2016. Chairman of the Management Board of Alfred C. Toepfer International G.m.b.H. from December 2012 to June 2014.	50
Patricia L. Logan	Chief Audit Executive since August 2014. Director, Internal Audit from September 2005 to August 2014.	59
Juan R. Luciano	Chairman of the Board of Directors since January 2016. Chief Executive Officer and President since January 2015. President and Chief Operating Officer from February 2014 to December 2014. Executive Vice President and Chief Operating Officer from April 2011 to February 2014.	57
Vikram Luthar	Senior Vice President of the Company since March 2015. President, Health & Wellness since March 2018. President, Bioactives from February 2017 to March 2018. President, Enzymes from December 2015 to February 2017. CFO, Corn Processing business unit from March 2014 to February 2017. Senior Vice President, Strategy from March 2015 to December 2015. Group Vice President, Finance from January 2012 to March 2015.	52

Item 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE (Continued)

Vincent F. Macciocchi	Senior Vice President of the Company and President, Nutrition business unit since May 2015. Global President, WILD Flavors from October 2014 until May 2015. Chief Operating Officer for North American entity at WILD Flavors and Specialty Ingredients from June 2012 until October 2014.	53
Gregory A. Morris	Senior Vice President of the Company since November 2014. President, Global Oilseeds Processing business unit since May 2015. President, WILD Flavors and Specialty Ingredients business unit from October 2014 to May 2015. President, North American Oilseeds Processing business unit from 2008 to December 2014.	47
Ian Pinner	Vice President, Growth and Strategy since August 2018. Chief Growth Officer from July 2017 to August 2018. President, Southeast Asia and Global Destination Marketing from December 2015 to July 2017. President, Global Cocoa from June 2014 to December 2015. Vice President, Corporate Strategic and Financial Planning from February 2014 to June 2014. President, Global Grain Division from January 2012 to February 2014. General Manager, European Softseed Division from January 2008 to January 2014.	46
Stefano Rettore	Senior Vice President of the Company and President, Origination business unit since March 2018. Chief Risk Officer since September 2017. President, International at CHS, Inc. from September 2014 to February 2017. Senior Vice President and Head of South America at CHS, Inc. from December 2002 to September 2014.	45
Ismael Roig	Senior Vice President of the Company since December 2015. President, ADM Europe, Middle East, and Africa (EMEA) since August 2018. Chief Strategy Officer from December 2015 to August 2018. Chief Sustainability Officer since May 2015. Vice President of the Company from December 2004 until December 2015. President, Asia Pacific from August 2011 to December 2015.	51
John P. Stott	Group Vice President, Finance and Corporate Controller since August 2014. Vice President and Controller of the Company from December 2006 to August 2014.	51
Joseph D. Taets	Senior Vice President of the Company since August 2011. President, Global Business Readiness since March 2018. President, Agricultural business unit from August 2011 to March 2018. President, ADM Europe, Middle East, and Africa (EMEA) from August 2013 to June 2016.	53
Thuy-Nga T. Vo	Chief Counsel, Corporate, Securities, and Mergers and Acquisitions and Assistant Secretary since January 2017. Chief Counsel, Mergers and Acquisitions from May 2013 to January 2017.	54
Todd Werpy	Senior Vice President and Chief Technology Officer since March 2015. Senior Vice President, Research and Development from August 2012 to October 2013.	56
Ray G. Young	Executive Vice President of the Company since March 2015. Senior Vice President of the Company from November 2010 to March 2015. Chief Financial Officer since December 2010.	57

Item 11. EXECUTIVE COMPENSATION

Information responsive to this Item is set forth in “Compensation Discussion and Analysis,” “Compensation/Succession Committee Report,” “Compensation/Succession Committee Interlocks and Insider Participation,” “Summary Compensation Table,” “Grants of Plan-Based Awards During Fiscal Year 2018,” “Outstanding Equity Awards at Fiscal Year 2018 Year-End,” “Option Exercises and Stock Vested During Fiscal Year 2018,” “Pension Benefits,” “Nonqualified Deferred Compensation,” “Termination of Employment and Change-in-Control Arrangements,” “CEO Pay Ratio,” and “Director Compensation” of the definitive proxy statement for the Company’s annual meeting of stockholders to be held on May 2, 2019, and is incorporated herein by reference.

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

Information responsive to this Item is set forth in “Principal Holders of Voting Securities,” “Proposal No. 1 - Election of Directors for a One-Year Term,” “Executive Officer Stock Ownership,” and “Equity Compensation Plan Information at December 31, 2018” of the definitive proxy statement for the Company’s annual meeting of stockholders to be held on May 2, 2019, and is incorporated herein by reference.

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

Information responsive to this Item is set forth in “Certain Relationships and Related Transactions,” “Review and Approval of Certain Relationships and Related Transactions,” and “Independence of Directors” of the definitive proxy statement for the Company’s annual meeting of stockholders to be held on May 2, 2019, and is incorporated herein by reference.

Item 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

Information responsive to this Item is set forth in “Fees Paid to Independent Auditors” and “Audit Committee Pre-Approval Policies” of the definitive proxy statement for the Company’s annual meeting of stockholders to be held on May 2, 2019, and is incorporated herein by reference.

PART IV

Item 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

- (a)(1) See Item 8, “Financial Statements and Supplementary Data,” for a list of financial statements.
- (a)(2) Financial statement schedules

SCHEDULE II - VALUATION AND QUALIFYING ACCOUNTS AND RESERVES

	Balance at Beginning of Year	Additions	Deductions ⁽¹⁾	Other ⁽²⁾	Balance at End of Year
	(In millions)				
Allowance for doubtful accounts					
December 31, 2016	\$ 70	16	(16)	2	\$ 72
December 31, 2017	\$ 72	3	(6)	4	\$ 73
December 31, 2018	\$ 73	44	(26)	(7)	\$ 84

⁽¹⁾ Uncollectible accounts written off

⁽²⁾ Impact of reclassifications, foreign exchange translation, and other adjustments

All other schedules are either not required, not applicable, or the information is otherwise included.

- (a)(3) List of exhibits

- (3) (i) [Composite Certificate of Incorporation, as amended \(incorporated by reference to Exhibit \(3\)\(i\) to the Company's Form 10-Q for the quarter ended September 30, 2001 \(File No. 1-44\)\).](#)
- (ii) [Bylaws, as amended through February 9, 2017 \(incorporated by reference to Exhibit 3 to the Company's Form 8-K filed on February 13, 2017 \(File No. 1-44\)\).](#)
- (4) Instruments defining the rights of security holders, including:
- (i) Indenture, dated as of June 1, 1986, by and between the Company and The Bank of New York Mellon (successor to JPMorgan Chase, The Chase Manhattan Bank, Chemical Bank, and Manufacturers Hanover Trust Company), as Trustee (incorporated by reference to Exhibit 4(a) to the Company's Registration Statement on Form S-3 (File No. 33-6721)), as amended and supplemented by Supplemental Indenture, dated as of August 1, 1989, by and between the Company and The Bank of New York Mellon (successor to JPMorgan Chase, The Chase Manhattan Bank, Chemical Bank and Manufacturers Hanover Trust Company), as Trustee (incorporated by reference to Exhibit 4(c) to Post Effective Amendment No. 3 to the Company's Registration Statement on Form S-3 (No. 33-6721)), relating to:
- the \$350,000,000 – 7 1/2% Debentures due March 15, 2027,
the \$200,000,000 – 6 3/4% Debentures due December 15, 2027,
the \$300,000,000 – 6 5/8% Debentures due May 1, 2029,
the \$400,000,000 – 7% Debentures due February 1, 2031,
the \$500,000,000 – 5.935% Debentures due October 1, 2032,
the \$600,000,000 – 5.375% Debentures due September 15, 2035, and
the \$250,000,000 – 6.95% Debentures due December 15, 2097.
- (ii) [Indenture, dated as of September 20, 2006, by and between the Company and The Bank of New York Mellon, as successor to JPMorgan Chase Bank, N.A., as Trustee \(incorporated by reference to Exhibit 4 to the Company's Registration Statement on Form S-3 \(File No. 333-137541\)\), as amended and](#)

Item 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES (Continued)

supplemented by [First Supplemental Indenture, dated as of June 3, 2008, by and between the Company and The Bank of New York Mellon \(formerly known as The Bank of New York\) \(incorporated by reference to Exhibit 4.6 to the Company's Current Report on Form 8-K filed on June 3, 2008 \(File No. 1-44\)\)](#), [Second Supplemental Indenture, dated as of November 29, 2010, by and between the Company and The Bank of New York Mellon \(incorporated by reference to Exhibit 4.3 to the Company's Current Report on Form 8-K filed on November 30, 2010 \(File No. 1-44\)\)](#), and [Third Supplemental Indenture, dated as of April 4, 2011, between the Company and The Bank of New York Mellon \(incorporated by reference to Exhibit 4.4 to the Company's Current Report on Form 8-K filed on April 8, 2011 \(File No. 1-44\)\)](#), relating to:

the \$500,000,000 – 6.45% Debentures due January 15, 2038,
the \$750,000,000 – 4.479% Notes due March 1, 2021,
the \$1,000,000,000 – 5.765% Debentures due March 1, 2041, and
the \$527,688,000 – 4.535% Debentures due March 26, 2042.

- (iii) [Indenture, dated as of October 16, 2012, by and between the Company and The Bank of New York Mellon, as Trustee \(incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed on October 17, 2012 \(File No. 1-44\)\)](#), relating to:

the \$570,425,000 – 4.016% Debentures due April 16, 2043,
the €600,000,000 – 1.750% Notes due June 23, 2023,
the €500,000,000 – Floating Rate Notes due June 24, 2019,
the \$1,000,000,000 – 2.500% Notes due August 11, 2026,
the \$500,000,000 – 3.750% Notes due September 15, 2047,
the €650,000,000 – 1.00% Notes due September 12, 2025,
the \$400,000,000 – 3.375% Notes due March 15, 2022, and
the \$600,000,000 – 4.500% Notes due March 15, 2049.

- (iv) Copies of constituent instruments defining rights of holders of long-term debt of the Company and its Subsidiaries, other than the indentures specified herein, are not filed herewith, pursuant to Instruction (b)(4)(iii)(A) to Item 601 of Regulation S-K, because the total amount of securities authorized under any such instrument does not exceed 10% of the total assets of the Company and Subsidiaries on a consolidated basis. The Company hereby agrees that it will, upon request by the SEC, furnish to the SEC a copy of each such instrument.

- (10) Copies of the Company's equity compensation plans, deferred compensation plans and agreements with executive officers are incorporated herein by reference pursuant to Instruction (b)(10)(iii)(A) to Item 601 of Regulation S-K, each of which is a management contract or compensation plan or arrangement required to be filed as an exhibit pursuant to Item 15(b) of Form 10-K, as follows:

- (i) [The Archer-Daniels-Midland Company Deferred Compensation Plan for Selected Management Employees I, as amended \(incorporated by reference to Exhibit 10\(iii\) to the Company's Annual Report on Form 10-K for the year ended June 30, 2010 \(File No. 1-44\)\)](#).
- (ii) [The Archer-Daniels-Midland Company Deferred Compensation Plan for Selected Management Employees II, as amended and restated \(incorporated by reference to Exhibit 10\(ii\) to the Company's Annual Report on Form 10-K for the year ended December 31, 2013 \(File No. 1-44\)\)](#).
- (iii) [The Archer-Daniels-Midland Company Supplemental Retirement Plan, as amended and restated \(incorporated by reference to Exhibit 10\(vi\) to the Company's Annual Report on Form 10-K for the year ended June 30, 2010 \(File No. 1-44\)\)](#).
- (iv) [Second Amendment to ADM Supplemental Retirement Plan \(incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the quarter ended December 31, 2010 \(File No. 1-44\)\)](#).

Item 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES (Continued)

- (v) [The Archer-Daniels-Midland Company Amended and Restated Stock Unit Plan for Nonemployee Directors, as amended \(incorporated by reference to Exhibit 10\(v\) to the Company's Annual Report on Form 10-K for the year ended December 31, 2016 \(File No. 1-44\)\).](#)
- (vi) [The Archer-Daniels-Midland 2002 Incentive Compensation Plan \(incorporated by reference to Exhibit A to the Company's Definitive Proxy Statement filed on September 25, 2002 \(File No. 1-44\)\).](#)
- (vii) [Form of Stock Option Agreement under the Company's 2002 Incentive Compensation Plan \(incorporated by reference to Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2005 \(File No. 1-44\)\).](#)
- (viii) [Form of Restricted Stock Agreement under the Company's 2002 Incentive Compensation Plan \(incorporated by reference to Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2005 \(File No. 1-44\)\).](#)
- (ix) [Form of Performance Share Unit Award Agreement under the Company's 2002 Incentive Compensative Plan \(incorporated by reference to Exhibit 10\(xii\) to the Company's Annual Report on Form 10-K for the year ended June 30, 2010 \(File No. 1-44\)\).](#)
- (x) [Form of Restricted Stock Unit Award Agreement under the Company's 2002 Incentive Compensation Plan \(incorporated by reference to Exhibit 10\(xiii\) to the Company's Annual Report on Form 10-K for the year ended June 30, 2010 \(File No. 1-44\)\).](#)
- (xi) [The Archer-Daniels-Midland Company 2009 Incentive Compensation Plan \(incorporated by reference to Exhibit A to the Company's Definitive Proxy Statement filed on September 25, 2009 \(File No. 1-44\)\).](#)
- (xii) [Form of Stock Option Agreement for U.S. Employees under the Company's 2009 Incentive Compensation Plan \(incorporated by reference to Exhibit 10\(i\) to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2013 \(File No. 1-44\)\).](#)
- (xiii) [Form of Restricted Stock Unit Award Agreement for U.S. Employees under the Company's 2009 Incentive Compensation Plan \(incorporated by reference to Exhibit 10\(ii\) to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2013 \(File No. 1-44\)\).](#)
- (xiv) [Form of Stock Option Agreement for Named Executive Officers under the Company's 2009 Incentive Compensation Plan \(incorporated by reference to Exhibit 10\(iii\) to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2013 \(File No. 1-44\)\).](#)
- (xv) [Form of Restricted Stock Unit Award Agreement for Named Executive Officers under the Company's 2009 Incentive Compensation Plan \(incorporated by reference to Exhibit 10\(iv\) to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2013 \(File No. 1-44\)\).](#)
- (xvi) [Form of Stock Option Agreement for International Employees under the Company's 2009 Incentive Compensation Plan \(incorporated by reference to Exhibit 10\(v\) to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2013 \(File No. 1-44\)\).](#)
- (xvii) [Form of Restricted Stock Unit Award Agreement for International Employees under the Company's 2009 Incentive Compensation Plan \(incorporated by reference to Exhibit 10\(vi\) to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2013 \(File No. 1-44\)\).](#)
- (xviii) [Form of Performance Share Unit Award Agreement under the Company's 2009 Incentive Compensation Plan \(incorporated by reference to Exhibit 10\(vii\) to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2013 \(File No. 1-44\)\).](#)

Item 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES (Continued)

- (xix) [Form of Performance Share Unit Award Agreement under the Company's 2009 Incentive Compensation Plan for grant to J. Luciano \(incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on March 25, 2011 \(File No. 1-44\)\).](#)
- (xx) [Form of Nonqualified Stock Option Award Agreement for Executive Officers under the Company's 2009 Incentive Compensation Plan \(incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2016 \(File No. 1-44\)\).](#)
- (xxi) [Form of Nonqualified Stock Option Award Agreement for U.S. Employees under the Company's 2009 Incentive Compensation Plan \(incorporated by reference to Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2016 \(File No. 1-44\)\).](#)
- (xxii) [Form of Restricted Stock Unit Award Agreement for Executive Officers under the Company's 2009 Incentive Compensation Plan \(incorporated by reference to Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2016 \(File No. 1-44\)\).](#)
- (xxiii) [Form of Restricted Stock Unit Award Agreement for U.S. Employees under the Company's 2009 Incentive Compensation Plan \(incorporated by reference to Exhibit 10.4 to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2016 \(File No. 1-44\)\).](#)
- (xxiv) [Form of Restricted Stock Unit Award Agreement under the Company's 2009 Incentive Compensation Plan \(incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2017 \(File No. 1-44\)\).](#)
- (xxv) [Form of Performance Share Unit Award Agreement under the Company's 2009 Incentive Compensation Plan \(incorporated by reference to Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2017 \(File No. 1-44\)\).](#)
- (xxvi) [ADM Employee Stock Purchase Plan \(incorporated by reference to Exhibit 4.3 to the Company's Registration Statement on Form S-8 filed on May 15, 2018 \(File No. 333-224944\)\).](#)
- (21) [Subsidiaries of the Company.](#)
- (23) [Consent of Independent Registered Public Accounting Firm.](#)
- (24) [Powers of Attorney.](#)
- (31.1) [Certification of Chief Executive Officer pursuant to Rule 13a-14\(a\) and Rule 15d-14\(a\) of the Securities Exchange Act of 1934, as amended.](#)
- (31.2) [Certification of Chief Financial Officer pursuant to Rule 13a-14\(a\) and Rule 15d-14\(a\) of the Securities Exchange Act of 1934, as amended.](#)
- (32.1) [Certification of Chief Executive Officer pursuant to 18 U.S.C. 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.](#)
- (32.2) [Certification of Chief Financial Officer pursuant to 18 U.S.C. 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.](#)
- (101) Interactive Data File.

Item 16. Form 10-K Summary

Not Applicable.

SIGNATURES

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

Date: February 19, 2019

ARCHER-DANIELS-MIDLAND COMPANY

By: /s/ D. C. Findlay
D. C. Findlay
Senior Vice President, General Counsel
and Secretary

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below on February 19, 2019, by the following persons on behalf of the Registrant and in the capacities indicated.

/s/ J. R. Luciano
J. R. Luciano*,
Chairman, Chief Executive Officer,
President, and Director
(Principal Executive Officer)

/s/ R. G. Young
R. G. Young
Executive Vice President and
Chief Financial Officer
(Principal Financial Officer)

/s/ J. P. Stott
J. P. Stott
Group Vice President, Finance and
Corporate Controller
(Principal Accounting Officer)

/s/ A. L. Boeckmann
A. L. Boeckmann*,
Director

/s/ M.S. Burke
M. S. Burke*,
Director

/s/ T. K. Crews
T. K. Crews*,
Director

/s/ P. Dufour
P. Dufour*,
Director

/s/ D. E. Felsing
D. E. Felsing*,
Director

/s/ S. F. Harrison
S. F. Harrison*,
Director

/s/ P. J. Moore
P. J. Moore*,
Director

/s/ F. J. Sanchez
F. J. Sanchez*,
Director

/s/ D. A. Sandler
D. A. Sandler*,
Director

/s/ D. T. Shih
D. T. Shih*,
Director

/s/ K. R. Westbrook
K. R. Westbrook*,
Director

/s/ D. C. Findlay
D. C. Findlay
Attorney-in-Fact

*Powers of Attorney authorizing R. G. Young, J. P. Stott, and D. C. Findlay, and each of them, to sign the Form 10-K on behalf of the above-named officers and directors of the Company, copies of which are being filed with the Securities and Exchange Commission.

EXHIBIT 21--SUBSIDIARIES OF THE REGISTRANT

Archer-Daniels-Midland Company
Subsidiaries of the Registrant
December 31, 2018

The following is a list of the Company's subsidiaries as of December 31, 2018, except for unnamed subsidiaries which, considered in the aggregate as a single subsidiary, would not constitute a "significant subsidiary" as defined in Regulation S-X of the United States Securities and Exchange Commission (17 CFR 210.1-02(w)).

Entity Name	Country	Domestic Jurisdiction
ADM (Shanghai) Management Co., Ltd.	China	
ADM (Thailand) Ltd.	Thailand	
ADM Ag Holding Limited	British Virgin Islands	
ADM Agri-Industries Company	Canada	
ADM Agro Iberica S.L.U.	Spain	
ADM Agro Industries India Private Limited	India	
ADM Agro Industries Kota & Akola Private Limited	India	
ADM Agro S.R.L.	Argentina	
ADM AgroInvestimentos Ltda.	Brazil	
ADM Alliance Nutrition of Puerto Rico, LLC	Puerto Rico	
ADM Americas S. de R.L.	Panama	
ADM Andina Peru S.R.L.	Peru	
ADM ANTWERP NV	Belgium	
ADM Arkady Ireland Limited	Ireland	
ADM Arkady Limited	United Kingdom	
ADM Asia-Pacific Trading Pte. Ltd.	Singapore	
ADM Australia Holdings I Pty Limited	Australia	
ADM Bio Science & Technology (Tianjin) Co. Ltd.	China	
ADM Bio-Productos, S.A. de C.V.	Mexico	
ADM Bulgaria Trading EOOD	Bulgaria	
ADM Caribbean Inc.	St. Lucia	
ADM Chile Comercial Limitada	Chile	
ADM Clinton BioProcessing, Inc.	United States	Delaware
ADM Czernin S.A.	Poland	
ADM Direct Polska Sp. z o.o.	Poland	
ADM do Brasil Ltda.	Brazil	
ADM Dominican Holdings, Inc.	United States	Delaware
ADM Edible Bean Specialties, Inc.	United States	Michigan
ADM Europe Holdco S.L.	Spain	
ADM European Holdings, LLC	United States	Delaware
ADM European Management Holding B.V. & Co. KG	Germany	
ADM Expatriate Services, Inc.	United States	Delaware
ADM Export Co.	United States	Delaware
ADM Germany GmbH	Germany	

Entity Name	Country	Domestic Jurisdiction
ADM Grain River System, Inc.	United States	Delaware
ADM Hamburg Aktiengesellschaft	Germany	
ADM Holding (Thailand) Ltd.	Thailand	
ADM Holdings LLC	United States	Delaware
ADM Hungary Agro Trading LLC	Hungary	
ADM Industries Centers Ltd.	Israel	
ADM International Holdings, Inc.	United States	Delaware
ADM International Sàrl	Switzerland	
ADM Interoceanic Ltd	Mauritius	
ADM Investments Limited	Cayman Islands	
ADM Investor Services International Limited	United Kingdom	
ADM Investor Services, Inc.	United States	Delaware
ADM Ireland Holdings Ltd.	Ireland	
ADM Ireland Receivables Company Limited	Ireland	
ADM Japan Ltd.	Japan	
ADM Mainz GmbH	Germany	
ADM Malbork S.A.	Poland	
ADM Management Ltd.	Cayman Islands	
ADM Medsofts Sarl	Switzerland	
ADM Mexico S.A. de C.V.	Mexico	
ADM Mexico, Inc.	United States	Delaware
ADM Milling Co.	United States	Minnesota
ADM Milling Limited	United Kingdom	
ADM New Zealand Ltd.	New Zealand	
ADM Olomouc S.R.O.	Czech Republic	
ADM Paraguay S.R.L.	Paraguay	
ADM Protexin Limited	United Kingdom	
ADM Pura Limited	United Kingdom	
ADM Receivables, LLC	United States	Delaware
ADM Rice, Inc.	United States	Delaware
ADM Ringaskiddy Unlimited Company	Ireland	
ADM ROMANIA LOGISTICS SRL	Romania	
ADM Romania Trading SRL	Romania	
ADM Specialty Ingredients (Europe) B.V.	Netherlands	
ADM Spyck GmbH	Germany	
ADM Szamotuly Sp. z o.o.	Poland	
ADM Trading Australia Pty. Ltd.	Australia	
ADM Transportation Company	United States	Delaware
ADM Trucking, Inc.	United States	Delaware
ADM WILD Europe GmbH & Co. KG	Germany	
ADM WILD Ingredients GmbH	Germany	
ADM WILD Nauen GmbH	Germany	

Entity Name	Country	Domestic Jurisdiction
ADM Wild Netherlands BV	Netherlands	
ADM WILD Valencia	Spain	
ADM Worldwide Holdings L.P.	Cayman Islands	
ADMIS Holding Company, Inc.	United States	Delaware
ADMIS Hong Kong Limited	Hong Kong	
ADMIS Singapore Pte. Limited	Singapore	
Agri Port Services Investments Ltd.	Cayman Islands	
Agri Port Services, LLC	United States	Delaware
Agrinational Insurance Company	United States	Vermont
Agrinational Ltd	Cayman Islands	
Agrograin, Ltd.	Cayman Islands	
Alfrebro, LLC	United States	Ohio
Alfred C. Toepfer International Netherlands B.V.	Netherlands	
American River Transportation Co., LLC	United States	Delaware
Amylum Bulgaria EAD	Bulgaria	
Amylum Nisasta Sanayi Ve Ticaret Anonim Sirketi	Turkey	
Archer Daniels Midland (UK) Limited	United Kingdom	
Archer Daniels Midland Asia-Pacific Limited	Hong Kong	
Archer Daniels Midland Erith Limited	United Kingdom	
Archer Daniels Midland Europe B.V.	Netherlands	
Archer Daniels Midland Europoort B.V.	Netherlands	
Archer Daniels Midland Nederland B.V.	Netherlands	
Archer Daniels Midland Singapore, Pte. Ltd.	Singapore	
Arinos Unlimited	Trinidad	
AT Holdings II Company	United States	Delaware
Barbados Mills Limited	Barbados	
Bela Vista Bio Etanol Participacoes Ltda.	Brazil	
BIOPOLIS, S.L.	Spain	
Chamtor	France	
CI ADM Colombia Ltda.	Colombia	
Controladora ADM, S.A. DE C.V.	Mexico	
Cronos Industria e Comercio Ltda	Brazil	
Crosswind Industries, Inc.	United States	Kansas
Crosswind Petfoods, Inc.	United States	Kansas
Eatem Corporation	United States	New Jersey
Global Cocoa Holdings Ltd.	Cayman Islands	
Golden Peanut and Tree Nut Seed SA (Pty) Ltd.	South Africa	
Golden Peanut and Tree Nuts S.A.	Argentina	
Golden Peanut Company, LLC	United States	Georgia
GP Blanching, Inc.	United States	Georgia
	The Republic of the Marshall Islands	
HFR Shipping Company Ltd.		

Entity Name	Country	Domestic Jurisdiction
HRA Shipping Company Ltd.	The Republic of the Marshall Islands	
HTI Shipping Company Ltd.	The Republic of the Marshall Islands	
Jamaica Flour Mills Limited	Jamaica	
LLC ADM Trading Ukraine	Ukraine	
Master Mix of Trinidad Limited	Trinidad	
Medsofts for Import Co,	Egypt	
Medsofts Investment Co.	Egypt	
Medsofts L.L.C.O.	Egypt	
Medsofts Trading Co.	Egypt	
Mepla Comercio e Navegacoes Ltda.	Brazil	
Minmetal S.R.L.	Romania	
Naviera Chaco S.R.L.	Paraguay	
NRG, Inc.	United States	Illinois
Olenex C.V.	Netherlands	
Premiere Agri Technologies Asia, Inc.	United States	Delaware
Premiere Agri Technologies of Mexico, Inc.	United States	Delaware
Pura Foods Limited	United Kingdom	
Rodelle Inc.	United States	Colorado
Societe Industrielle des Oleagineux-SIO	France	
Southern Cellulose Products, Inc.	United States	Tennessee
Soy Investors, LLC	United States	Iowa
Specialty Commodities, Inc.	United States	North Dakota
Szabadegyhazi Szolgaltato es Vagyonkezekelo KFT	Hungary	
Wild Affiliated Holdings, Inc.	United States	Nevada
Wild Amazon Flavors Ltda.	Brazil	
Wild Flavors (Beijing) Ltd.	China	
Wild Flavors International GmbH	Switzerland	
Wild Flavors Singapore Pte. Ltd.	Singapore	
Wild Flavors, Inc.	United States	Delaware
Wild Intermare GmbH	Germany	
Wild Russia LLC	Russia	

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the following Registration Statements of Archer-Daniels-Midland Company and in the related prospectuses of our reports dated February 19, 2019, with respect to the consolidated financial statements of Archer-Daniels-Midland Company, and the effectiveness of internal control over financial reporting of Archer-Daniels-Midland Company, included in this Annual Report (Form 10-K) for the year ended December 31, 2018.

Registration Statement No. 333-51381 on Form S-8, dated April 30, 1998, relating to the Archer-Daniels-Midland Company 1996 Stock Option Plan.

Registration Statement No. 333-75073 on Form S-8, dated March 26, 1999, relating to the ADM Employee Stock Ownership Plan for Salaried Employees and the ADM Employee Stock Ownership Plan for Hourly Employees.

Registration Statement No. 333-37690 on Form S-8, dated May 24, 2000, relating to the Archer-Daniels-Midland Company Incentive Compensation Plan.

Registration Statement No. 333-37694 on Form S-8, dated May 24, 2000, relating to the ADM Employee Stock Ownership Plan for Salaried Employees and the ADM Employee Stock Ownership Plan for Hourly Employees.

Registration Statement No. 333-42612 on Form S-8, dated July 31, 2000, as amended by Post-Effective Amendment No. 1 dated August 8, 2000, relating to the ADM 401(k) Plan for Salaried Employees and the ADM 401(k) Plan for Hourly Employees.

Registration Statement No. 333-67962 on Form S-8, dated August 20, 2001, relating to the ADM Deferred Compensation Plan for Selected Management Employees.

Registration Statement No. 333-86344 on Form S-8, dated April 16, 2002, relating to the ADM Voluntary Employee Payroll Deduction Stock Purchase Plan.

Registration Statement No. 333-117206 on Form S-8, dated July 7, 2004, relating to the Archer-Daniels-Midland Company 2002 Incentive Compensation Plan.

Registration Statement No. 333-121616 on Form S-8, dated December 23, 2004, relating to the ADM Deferred Compensation Plan for Selected Management Employees I.

Registration Statement No. 333-121631 on Form S-8, dated December 23, 2004, relating to the ADM Deferred Compensation Plan for Selected Management Employees II.

Registration Statement No. 333-169133 on Form S-8, dated August 31, 2010, relating to the Archer-Daniels-Midland 2009 Incentive Compensation Plan.

Registration Statement No. 333-188544 on Form S-3, dated May 10, 2013, relating to debt securities and warrants to purchase debt securities, common stock and warrants to purchase common stock, and stock purchase contracts and stock purchase units of Archer-Daniels-Midland Company.

Registration Statement No. 333-197958 on Form S-3, dated September 22, 2014, relating to debt securities and warrants to purchase debt securities, preferred stock, common stock and warrants to purchase common stock, and stock purchase contracts and stock purchase units of Archer-Daniels-Midland Company.

Registration Statement No. 333-219723 on Form S-3, dated August 4, 2017, relating to debt securities and warrants to purchase debt securities, preferred stock, common stock and warrants to purchase common stock, and stock purchase contracts and stock purchase units of Archer-Daniels-Midland Company.

/s/ Ernst & Young LLP

Saint Louis, Missouri
February 19, 2019

ARCHER-DANIELS-MIDLAND COMPANY

Power of Attorney of Director

The undersigned, a director of ARCHER-DANIELS-MIDLAND COMPANY, a Delaware corporation, does hereby make, constitute and appoint R. G. YOUNG, J. P. STOTT and D. C. FINDLAY, and each or any one of them, the undersigned's true and lawful attorneys-in-fact, with power of substitution, for the undersigned and in the undersigned's name, place and stead, to sign and affix the undersigned's name as a director of said company to the Form 10-K for the fiscal year ended December 31, 2018, and all amendments thereto, to be filed by said company with the Securities and Exchange Commission, Washington, D.C., and to file the same, with all exhibits thereto and other supporting documents, with said Commission, granting unto said attorneys-in-fact, and each of them, full power and authority to do and perform any and all acts necessary or incidental to the performance and execution of the powers therein expressly granted.

The undersigned has hereunto set the undersigned's hand as of this 5th day of February, 2019.

/s/ A. L. Boeckmann

A. L. Boeckmann

ARCHER-DANIELS-MIDLAND COMPANY

Power of Attorney of Director

The undersigned, a director of ARCHER-DANIELS-MIDLAND COMPANY, a Delaware corporation, does hereby make, constitute and appoint R. G. YOUNG, J. P. STOTT and D. C. FINDLAY, and each or any one of them, the undersigned's true and lawful attorneys-in-fact, with power of substitution, for the undersigned and in the undersigned's name, place and stead, to sign and affix the undersigned's name as a director of said company to the Form 10-K for the fiscal year ended December 31, 2018, and all amendments thereto, to be filed by said company with the Securities and Exchange Commission, Washington, D.C., and to file the same, with all exhibits thereto and other supporting documents, with said Commission, granting unto said attorneys-in-fact, and each of them, full power and authority to do and perform any and all acts necessary or incidental to the performance and execution of the powers therein expressly granted.

The undersigned has hereunto set the undersigned's hand as of this 5th day of February, 2019.

/s/ M. S. Burke
M. S. Burke

ARCHER-DANIELS-MIDLAND COMPANY

Power of Attorney of Director

The undersigned, a director of ARCHER-DANIELS-MIDLAND COMPANY, a Delaware corporation, does hereby make, constitute and appoint R. G. YOUNG, J. P. STOTT and D. C. FINDLAY, and each or any one of them, the undersigned's true and lawful attorneys-in-fact, with power of substitution, for the undersigned and in the undersigned's name, place and stead, to sign and affix the undersigned's name as a director of said company to the Form 10-K for the fiscal year ended December 31, 2018, and all amendments thereto, to be filed by said company with the Securities and Exchange Commission, Washington, D.C., and to file the same, with all exhibits thereto and other supporting documents, with said Commission, granting unto said attorneys-in-fact, and each of them, full power and authority to do and perform any and all acts necessary or incidental to the performance and execution of the powers therein expressly granted.

The undersigned has hereunto set the undersigned's hand as of this 5th day of February, 2019.

/s/ T. K. Crews

T. K. Crews

ARCHER-DANIELS-MIDLAND COMPANY

Power of Attorney of Director

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The undersigned has hereunto set the undersigned's hand as of this 5th day of February, 2019.

/s/ P. Dufour

P. Dufour

ARCHER-DANIELS-MIDLAND COMPANY

Power of Attorney of Director

The undersigned, a director of ARCHER-DANIELS-MIDLAND COMPANY, a Delaware corporation, does hereby make, constitute and appoint R. G. YOUNG, J. P. STOTT and D. C. FINDLAY, and each or any one of them, the undersigned's true and lawful attorneys-in-fact, with power of substitution, for the undersigned and in the undersigned's name, place and stead, to sign and affix the undersigned's name as a director of said company to the Form 10-K for the fiscal year ended December 31, 2018, and all amendments thereto, to be filed by said company with the Securities and Exchange Commission, Washington, D.C., and to file the same, with all exhibits thereto and other supporting documents, with said Commission, granting unto said attorneys-in-fact, and each of them, full power and authority to do and perform any and all acts necessary or incidental to the performance and execution of the powers therein expressly granted.

The undersigned has hereunto set the undersigned's hand as of this 5th day of February, 2019.

/s/ D. E. Felsinger
D. E. Felsinger

ARCHER-DANIELS-MIDLAND COMPANY

Power of Attorney of Director

The undersigned, a director of ARCHER-DANIELS-MIDLAND COMPANY, a Delaware corporation, does hereby make, constitute and appoint R. G. YOUNG, J. P. STOTT and D. C. FINDLAY, and each or any one of them, the undersigned's true and lawful attorneys-in-fact, with power of substitution, for the undersigned and in the undersigned's name, place and stead, to sign and affix the undersigned's name as a director of said company to the Form 10-K for the fiscal year ended December 31, 2018, and all amendments thereto, to be filed by said company with the Securities and Exchange Commission, Washington, D.C., and to file the same, with all exhibits thereto and other supporting documents, with said Commission, granting unto said attorneys-in-fact, and each of them, full power and authority to do and perform any and all acts necessary or incidental to the performance and execution of the powers therein expressly granted.

The undersigned has hereunto set the undersigned's hand as of this 5th day of February, 2019.

/s/ S. F. Harrison
S. F. Harrison

ARCHER-DANIELS-MIDLAND COMPANY

Power of Attorney of Director

The undersigned, a director of ARCHER-DANIELS-MIDLAND COMPANY, a Delaware corporation, does hereby make, constitute and appoint R. G. YOUNG, J. P. STOTT and D. C. FINDLAY, and each or any one of them, the undersigned's true and lawful attorneys-in-fact, with power of substitution, for the undersigned and in the undersigned's name, place and stead, to sign and affix the undersigned's name as a director of said company to the Form 10-K for the fiscal year ended December 31, 2018, and all amendments thereto, to be filed by said company with the Securities and Exchange Commission, Washington, D.C., and to file the same, with all exhibits thereto and other supporting documents, with said Commission, granting unto said attorneys-in-fact, and each of them, full power and authority to do and perform any and all acts necessary or incidental to the performance and execution of the powers therein expressly granted.

The undersigned has hereunto set the undersigned's hand as of this 5th day of February, 2019.

/s/ J. R. Luciano
J. R. Luciano

ARCHER-DANIELS-MIDLAND COMPANY

Power of Attorney of Director

The undersigned, a director of ARCHER-DANIELS-MIDLAND COMPANY, a Delaware corporation, does hereby make, constitute and appoint R. G. YOUNG, J. P. STOTT and D. C. FINDLAY, and each or any one of them, the undersigned's true and lawful attorneys-in-fact, with power of substitution, for the undersigned and in the undersigned's name, place and stead, to sign and affix the undersigned's name as a director of said company to the Form 10-K for the fiscal year ended December 31, 2018, and all amendments thereto, to be filed by said company with the Securities and Exchange Commission, Washington, D.C., and to file the same, with all exhibits thereto and other supporting documents, with said Commission, granting unto said attorneys-in-fact, and each of them, full power and authority to do and perform any and all acts necessary or incidental to the performance and execution of the powers therein expressly granted.

The undersigned has hereunto set the undersigned's hand as of this 5th day of February, 2019.

/s/ P. J. Moore

P. J. Moore

ARCHER-DANIELS-MIDLAND COMPANY

Power of Attorney of Director

The undersigned, a director of ARCHER-DANIELS-MIDLAND COMPANY, a Delaware corporation, does hereby make, constitute and appoint R. G. YOUNG, J. P. STOTT and D. C. FINDLAY, and each or any one of them, the undersigned's true and lawful attorneys-in-fact, with power of substitution, for the undersigned and in the undersigned's name, place and stead, to sign and affix the undersigned's name as a director of said company to the Form 10-K for the fiscal year ended December 31, 2018, and all amendments thereto, to be filed by said company with the Securities and Exchange Commission, Washington, D.C., and to file the same, with all exhibits thereto and other supporting documents, with said Commission, granting unto said attorneys-in-fact, and each of them, full power and authority to do and perform any and all acts necessary or incidental to the performance and execution of the powers therein expressly granted.

The undersigned has hereunto set the undersigned's hand as of this 5th day of February, 2019.

/s/ F. J. Sanchez

F. J. Sanchez

ARCHER-DANIELS-MIDLAND COMPANY

Power of Attorney of Director

The undersigned, a director of ARCHER-DANIELS-MIDLAND COMPANY, a Delaware corporation, does hereby make, constitute and appoint R. G. YOUNG, J. P. STOTT and D. C. FINDLAY, and each or any one of them, the undersigned's true and lawful attorneys-in-fact, with power of substitution, for the undersigned and in the undersigned's name, place and stead, to sign and affix the undersigned's name as a director of said company to the Form 10-K for the fiscal year ended December 31, 2018, and all amendments thereto, to be filed by said company with the Securities and Exchange Commission, Washington, D.C., and to file the same, with all exhibits thereto and other supporting documents, with said Commission, granting unto said attorneys-in-fact, and each of them, full power and authority to do and perform any and all acts necessary or incidental to the performance and execution of the powers therein expressly granted.

The undersigned has hereunto set the undersigned's hand as of this 5th day of February, 2019.

/s/ D. A. Sandler

D. A. Sandler

ARCHER-DANIELS-MIDLAND COMPANY

Power of Attorney of Director

The undersigned, a director of ARCHER-DANIELS-MIDLAND COMPANY, a Delaware corporation, does hereby make, constitute and appoint R. G. YOUNG, J. P. STOTT and D. C. FINDLAY, and each or any one of them, the undersigned's true and lawful attorneys-in-fact, with power of substitution, for the undersigned and in the undersigned's name, place and stead, to sign and affix the undersigned's name as a director of said company to the Form 10-K for the fiscal year ended December 31, 2018, and all amendments thereto, to be filed by said company with the Securities and Exchange Commission, Washington, D.C., and to file the same, with all exhibits thereto and other supporting documents, with said Commission, granting unto said attorneys-in-fact, and each of them, full power and authority to do and perform any and all acts necessary or incidental to the performance and execution of the powers therein expressly granted.

The undersigned has hereunto set the undersigned's hand as of this 5th day of February, 2019.

/s/ D. T. Shih

D. T. Shih

ARCHER-DANIELS-MIDLAND COMPANY

Power of Attorney of Director

The undersigned, a director of ARCHER-DANIELS-MIDLAND COMPANY, a Delaware corporation, does hereby make, constitute and appoint R. G. YOUNG, J. P. STOTT and D. C. FINDLAY, and each or any one of them, the undersigned's true and lawful attorneys-in-fact, with power of substitution, for the undersigned and in the undersigned's name, place and stead, to sign and affix the undersigned's name as a director of said company to the Form 10-K for the fiscal year ended December 31, 2018, and all amendments thereto, to be filed by said company with the Securities and Exchange Commission, Washington, D.C., and to file the same, with all exhibits thereto and other supporting documents, with said Commission, granting unto said attorneys-in-fact, and each of them, full power and authority to do and perform any and all acts necessary or incidental to the performance and execution of the powers therein expressly granted.

The undersigned has hereunto set the undersigned's hand as of this 5th day of February, 2019.

/s/ K. R. Westbrook

K. R. Westbrook

RULE 13a – 14(a)/15d-14(a) CERTIFICATION

I, J. R. Luciano, certify that:

1. I have reviewed this annual report on Form 10-K of Archer-Daniels-Midland Company;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15(d)-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 19, 2019

/s/ J. R. Luciano

J. R. Luciano

Chairman, Chief Executive Officer, and President

RULE 13a – 14(a)/15d-14(a) CERTIFICATION

I, R. G. Young, certify that:

1. I have reviewed this annual report on Form 10-K of Archer-Daniels-Midland Company;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15(d)-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 19, 2019

/s/ R. G. Young

R. G. Young

Executive Vice President and Chief Financial Officer

SECTION 1350 CERTIFICATION

In connection with the Annual Report of Archer-Daniels-Midland Company (the “Company”) on Form 10-K for the fiscal year ended December 31, 2018 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, J. R. Luciano, Chairman, Chief Executive Officer, and President of the Company, certify that:

- (i) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (ii) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: February 19, 2019

/s/ J. R. Luciano

J. R. Luciano

Chairman, Chief Executive Officer, and President

SECTION 1350 CERTIFICATION

In connection with the Annual Report of Archer-Daniels-Midland Company (the “Company”) on Form 10-K for the fiscal year ended December 31, 2018 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, R. G. Young, Executive Vice President and Chief Financial Officer of the Company, certify that:

- (i) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (ii) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: February 19, 2019

/s/ R. G. Young

R. G. Young

Executive Vice President and Chief Financial Officer