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

FORM 10-K

(Mark one)

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the fiscal year ended November 3, 2019
or
☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the transition period from ____ to ____

Commission file number 1-4121

DEERE & COMPANY
(Exact name of registrant as specified in its charter)

Delaware	**36-2382580**
(State of incorporation)	(IRS Employer Identification No.)

One John Deere Place, Moline, Illinois	**61265**	**(309) 765-8000**
(Address of principal executive offices)	(Zip Code)	(Telephone Number)

SECURITIES REGISTERED PURSUANT TO SECTION 12(b) OF THE ACT

Title of each class	Trading symbol	Name of each exchange on which registered
Common stock, $1 par value	DE	New York Stock Exchange
8½% Debentures Due 2022	DE22	New York Stock Exchange
6.55% Debentures Due 2028	DE28	New York Stock Exchange

SECURITIES REGISTERED PURSUANT TO SECTION 12(g) OF THE ACT: NONE

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

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

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

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files).
Yes ☒ No ☐

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

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

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

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

The aggregate quoted market price of voting stock of registrant held by non-affiliates at April 26, 2019 was $52,198,315,583. At November 30, 2019, 313,275,755 shares of common stock, $1 par value, of the registrant were outstanding. *Documents Incorporated by Reference*. Portions of the proxy statement for the annual meeting of stockholders to be held on February 26, 2020 are incorporated by reference into Part III of this Form 10-K.

TABLE OF CONTENTS

		Page
PART I		
ITEM 1.	BUSINESS	2
ITEM 1A.	RISK FACTORS	10
ITEM 1B.	UNRESOLVED STAFF COMMENTS	17
ITEM 2.	PROPERTIES	17
ITEM 3.	LEGAL PROCEEDINGS	18
ITEM 4.	MINE SAFETY DISCLOSURES	18
PART II		
ITEM 5.	MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES	18
ITEM 6.	SELECTED FINANCIAL DATA	19
ITEM 7.	MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS	19
ITEM 7A.	QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK	19
ITEM 8.	FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA	19
ITEM 9.	CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE	19
ITEM 9A.	CONTROLS AND PROCEDURES	19
ITEM 9B.	OTHER INFORMATION	20
PART III		
ITEM 10.	DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE	20
ITEM 11.	EXECUTIVE COMPENSATION	20
ITEM 12.	SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS	20
ITEM 13.	CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE	20
ITEM 14.	PRINCIPAL ACCOUNTANT FEES AND SERVICES	20
PART IV		
ITEM 15.	EXHIBITS AND FINANCIAL STATEMENT SCHEDULES	21
ITEM 16.	FORM 10-K SUMMARY	21

ITEM 1. BUSINESS.

This Annual Report on Form 10-K contains forward-looking statements that are subject to risks and uncertainties. All statements other than statements of historical fact included in this Annual Report on Form 10-K are forward-looking statements. Forward-looking statements give our current expectations and projections relating to our financial condition, results of operations, plans, objectives, future performance and business. All forward-looking statements are subject to risks and uncertainties that may cause actual results to differ materially from those that we expected. Important factors that could cause actual results to differ materially from our expectations, or cautionary statements, and other important information about forward-looking statements are disclosed under Item 1A, "Risk Factors" and Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations—Safe Harbor Statement" in this Annual Report on Form 10-K.

Products

Deere & Company (the Company) and its subsidiaries (collectively, John Deere) have operations that are categorized into three major business segments.

The *agriculture and turf* segment primarily manufactures and distributes a full line of agriculture and turf equipment and related service parts, including: large, medium, and utility tractors; tractor loaders; combines, cotton pickers, cotton strippers, and sugarcane harvesters; harvesting front-end equipment; sugarcane loaders and pull-behind scrapers; tillage, seeding and application equipment, including sprayers, nutrient management and soil preparation machinery; hay and forage equipment, including self-propelled forage harvesters and attachments, balers and mowers; turf and utility equipment, including riding lawn equipment and walk-behind mowers, golf course equipment, utility vehicles, and commercial mowing equipment, along with a broad line of associated implements; integrated agricultural management systems technology and solutions; and other outdoor power products.

The *construction and forestry* segment primarily manufactures and distributes a broad range of machines and service parts used in construction, earthmoving, road building, material handling and timber harvesting, including: backhoe loaders; crawler dozers and loaders; four-wheel-drive loaders; excavators; motor graders; articulated dump trucks; landscape loaders; skid-steer loaders; milling machines; recyclers; slipform pavers; surface miners; asphalt pavers; compactors; tandem and static rollers; mobile crushers and screens; mobile and stationary asphalt plants; log skidders; feller bunchers; log loaders; log forwarders; log harvesters and related logging attachments.

The products and services produced by the segments above are marketed primarily through independent retail dealer networks and major retail outlets.

The *financial services* segment primarily finances sales and leases by John Deere dealers of new and used agriculture and turf equipment and construction and forestry equipment. In addition, the financial services segment provides wholesale financing to dealers of the foregoing equipment, finances retail revolving charge accounts and offers extended equipment warranties.

John Deere's worldwide agriculture and turf operations and construction and forestry operations are sometimes collectively referred to as the "equipment operations." The financial services segment is sometimes referred to as the "financial services operations."

Additional information is presented in the discussion of business segment and geographic area results on pages 23 – 24. The John Deere enterprise has manufactured agricultural machinery since 1837. The present Company was incorporated under the laws of Delaware in 1958.

The Company's internet address is http://www.JohnDeere.com. Through that address, the Company's Annual Report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to those reports are available free of charge as soon as reasonably practicable after they are filed with the United States Securities and Exchange Commission (Securities and Exchange Commission or Commission). The information contained on the Company's website is not included in, nor incorporated by reference into, this Annual Report on Form 10-K.

Market Conditions and Outlook

Net income attributable to Deere & Company for fiscal 2020 is forecast to be in a range of $2.7 billion to $3.1 billion.

Agriculture & Turf. The Company's worldwide sales of agriculture and turf equipment are forecast to be down about 5 to 10 percent for fiscal-year 2020, including price realization of 2 percent and a negative currency-translation effect of 1 percent. Industry sales of agricultural equipment in the U.S. and Canada are forecast to be down about 5 percent, driven by lower demand for large equipment. Full-year industry sales in the European Union (EU28) member nations are forecast to be about the same as are South American industry sales of tractors and combines. Asian sales are forecast to be about the same as 2019. Industry sales of turf and utility equipment in the U.S. and Canada are expected to be about the same for 2020.

Construction & Forestry. The Company's worldwide sales of construction and forestry equipment are anticipated to be down about 10 to 15 percent for 2020, with price realization having a favorable effect of 1 percent and foreign-currency translation having an unfavorable effect of 1 percent. The outlook reflects slowing construction activity as well as the Company's efforts to assist dealers to manage their inventory levels. In forestry, global industry sales are expected to be about the same as 2019.

Financial Services. Fiscal-year 2020 net income attributable to the Company for the financial services operations is expected to be approximately $600 million. Net income is expected to benefit from lower losses on lease residual values as well as income earned on a higher average portfolio. These items are forecast to be partially offset by a higher provision for credit losses, less-favorable financing spreads, and higher selling and administrative expenses.

2019 Consolidated Results Compared with 2018

For fiscal 2019, worldwide net income attributable to the Company was $3.253 billion, or $10.15 per share, compared with $2.368 billion, or $7.24 per share, in 2018. Worldwide net sales and revenues increased 5 percent to $39.258 billion in 2019, compared with $37.358 billion in 2018. Net sales of worldwide equipment operations increased in fiscal 2019 to $34.886 billion, compared with $33.351 billion last year. Wirtgen results are included for the full year while 2018 contained ten months of Wirtgen activity. The two additional months added about 1 percent to the Company's 2019 net sales. Agriculture & Turf sales increased for 2019 due to price realization and higher shipment volumes, partially offset by the unfavorable effects of currency translation. Construction & Forestry sales were higher for 2019 primarily due to higher shipment volumes and price realization, partially offset by the unfavorable effects of currency translation. The inclusion of Wirtgen's sales for two additional months in 2019 accounted for about 4 percent of Construction & Forestry's net sales increase.

Worldwide equipment operations had an operating profit of $3.721 billion in fiscal 2019, compared with $3.684 billion in fiscal 2018. Operating profit for Agricultural & Turf decreased for 2019, largely due to higher productions costs, the unfavorable effects of currency exchange, increased research and development costs, higher selling, administrative, and general expenses, and a less-favorable sales mix, partially offset by price realization and higher shipment volumes. Wirtgen's operating profit was $343 million for 2019, compared with $116 million for 2018. Excluding Wirtgen, Construction & Forestry's operating profit was higher in 2019 primarily driven by price realization and higher shipment volumes, partially offset by higher production costs and a less-favorable sales mix.

Net income of the Company's equipment operations was $2.698 billion for fiscal 2019, compared with $1.404 billion in fiscal 2018. Net income was favorably affected by discrete adjustments to the provision for income taxes of $65 million related to U.S. tax reform legislation (tax reform), while adjustments related to tax reform had an unfavorable impact of $1.045 billion for fiscal 2018.

The financial services operations reported net income attributable to the Company of $539 million for fiscal 2019 compared with $942 million in fiscal 2018. Excluding tax-reform adjustments, the decrease was mainly due to impairments and higher losses on operating-lease residual values and unfavorable financing spreads, partially offset by income earned on a higher average portfolio.

The cost of sales to net sales ratio for 2019 was 76.8 percent, compared with 76.7 percent for 2018. The cost of sales to net sales ratio increased compared to 2018 mainly due to higher production costs, the unfavorable effects of foreign currency exchange, and a less favorable product mix, partially offset by price realization.

Additional information on fiscal 2019 results is presented on pages 22 – 24.

EQUIPMENT OPERATIONS

Agriculture and Turf

The John Deere agriculture and turf segment manufactures and distributes a full line of agriculture and turf equipment and related service parts. The segment consolidates all markets into four geographical customer focus areas to facilitate deep customer understanding and deliver world-class customer service. The segment's operations are consolidated into five product platforms — crop harvesting (combines, cotton pickers, cotton strippers, and sugarcane harvesters, related harvesting front-end equipment, sugarcane loaders and pull-behind scrapers); turf and utility (utility vehicles, riding lawn equipment, walk-behind mowers, commercial mowing equipment, golf course equipment, implements for mowing, tilling, snow and debris handling, aerating and many other residential, commercial, golf and sports turf care applications and other outdoor power products); hay and forage (self-propelled forage harvesters and attachments, balers and mowers); crop care (tillage, seeding and application equipment, including sprayers, nutrient management and soil preparation machinery); and tractors (loaders and large, medium and utility tractors and related attachments). John Deere also purchases certain products from other manufacturers for resale.

The segment also provides integrated precision agriculture technologies across its portfolio of large equipment. John Deere has developed a leading approach to precision agriculture technology through advanced communications and telematics, on board sensors and computers, and precise global navigation satellite systems technology to enable farmers to better control input costs and yields, improve soil conservation, minimize chemical use, and to gather information. John Deere's advanced telematics systems remotely

connect agricultural equipment owners, business managers and dealers to agricultural equipment in the field, providing real-time alerts and information about equipment location, utilization, performance and maintenance to improve productivity and efficiency.

In addition to the John Deere brand, the agriculture and turf segment purchases and sells a variety of equipment attachments under the Frontier, Kemper and Green Systems brand names. The segment also manufactures and sells sprayers under the Hagie and Mazzotti brand names, planters and cultivators under the Monosem brand name, sprayers and planters under the PLA brand name, carbon fiber sprayer booms under the King Agro brand name, and walk-behind mowers and scarifiers in select European countries under the SABO brand name. John Deere manufactures its agriculture and turf equipment for sale primarily through independent retail dealer networks, and also builds turf products for sale by mass retailers, including The Home Depot and Lowe's.

Sales of agricultural equipment are affected by total farm cash receipts, which reflect levels of farm commodity prices, acreage planted, crop yields and government policies, including global trade policies and the amount and timing of government payments. Sales are also influenced by general economic conditions, farm land prices, farmers' debt levels and access to financing, interest and exchange rates, agricultural trends, including the production of and demand for renewable fuels, labor availability and costs, energy costs, tax policies and other input costs associated with farming. Other important factors affecting new agricultural equipment sales are the value and level of used equipment, including tractors, harvesting equipment, self-propelled sprayers, hay and forage equipment and seeding equipment. Weather and climatic conditions can also affect buying decisions of agricultural equipment purchasers.

Innovations in machinery and technology also influence agricultural equipment purchasing. For example, larger, more productive equipment is well accepted where farmers are striving for more efficiency in their operations. Large, cost-efficient, highly-mechanized agricultural operations account for an important share of worldwide farm output. The large-size agricultural equipment used on such farms has been particularly important to John Deere. A large proportion of the equipment operations' total agricultural equipment sales in the U.S. and Canada, and a significant proportion of sales in many countries outside the U.S. and Canada, are comprised of tractors over 100 horsepower, self-propelled combines, self-propelled cotton pickers, self-propelled forage harvesters, self-propelled sprayers and seeding equipment. However, small tractors are an increasingly important part of our global tractor business. Further, John Deere offers a number of harvesting solutions to support development of the mechanized harvesting of grain, oilseeds, cotton, sugar and biomass.

Retail sales of lawn and garden tractors, compact utility tractors, residential and commercial mowers, utility vehicles, and golf and turf equipment are influenced by weather conditions, consumer spending patterns and general economic conditions.

Seasonality. Seasonal patterns in retail demand for agricultural equipment result in substantial variations in the volume and mix of products sold to retail customers during the year. Seasonal demand must be estimated in advance, and equipment must be manufactured in anticipation of such demand in order to achieve efficient utilization of manpower and facilities throughout the year. For certain equipment, John Deere offers early order discounts to retail customers. Production schedules are based, in part, on these early order programs. The segment incurs substantial seasonal variation in cash flows to finance production and inventory of agricultural equipment. The segment also incurs costs to finance sales to dealers in advance of seasonal demand. New combine and cotton harvesting equipment has been sold under early order programs with waivers of retail finance charges available to customers who take delivery of machines during off-season periods. In Australia, Canada, and the U.S., there are typically several used equipment trade-in transactions as part of most new agricultural equipment sales. To provide support to its dealers for these used equipment trade-ins, John Deere provides dealers in these countries with pools of funds, awarded to dealers as a percentage of the dealer cost for eligible new equipment sales. Dealers can use these funds to defray the costs of carrying or marketing used equipment inventory or to provide financing incentives to customers purchasing the used equipment.

Retail demand for turf and utility equipment is normally higher in the second and third fiscal quarters. John Deere has pursued a strategy of building and shipping such equipment as close to retail demand as possible. Consequently, to increase asset turnover and reduce the average level of field inventories through the year, production and shipment schedules of these product lines are normally proportionately higher in the second and third fiscal quarters of each year, corresponding closely to the seasonal pattern of retail sales.

Construction and Forestry

John Deere's construction and forestry equipment includes a broad range of backhoe loaders, crawler dozers and loaders, four-wheel-drive loaders, excavators, motor graders, articulated dump trucks, landscape loaders, skid-steer loaders, milling machines, pavers, compactors, rollers, crushers, screens, asphalt plants, log skidders, log feller bunchers, log loaders, log forwarders, log harvesters, and a variety of attachments. John Deere provides a broad line of construction equipment and the most complete line of forestry machines and attachments available in the world. John Deere also manufactures and distributes road building equipment through its wholly-owned subsidiaries of the Wirtgen Group. The construction and forestry machines are distributed under the John Deere brand name, except for the Wirtgen Group products, which are manufactured and distributed under six brand names: Wirtgen, Vögele, Hamm,

Kleeman, Benninghoven, and Ciber. Forestry attachments are distributed under the John Deere and Waratah brand names. In addition to the equipment manufactured by the construction and forestry segment, John Deere purchases certain products from other manufacturers for resale. The segment also provides comprehensive fleet management telematics solutions designed to improve customer productivity and efficiency through access to fleet location, utilization, and maintenance information.

The prevailing levels of residential, commercial and public construction, and the condition of the forestry products industry influence retail sales of John Deere construction, earthmoving, road building, material handling, and forestry equipment. General economic conditions, the level of interest rates, the availability of credit and certain commodity prices, such as those applicable to pulp, paper and saw logs also influence sales.

John Deere licenses Bell Equipment Limited (Bell) to manufacture and sell certain John Deere-designed construction equipment in specified territories of Africa. Bell is also the distributor of certain John Deere-manufactured construction equipment under the Bell brand and forestry equipment under the John Deere brand in certain territories of Africa.

John Deere and Hitachi Construction Machinery Co. (Hitachi) have a joint venture for the manufacture of hydraulic excavators and tracked forestry equipment in the U.S., Canada, and Brazil. John Deere distributes Hitachi brands of construction and mining equipment in North, Central, and South America.

The segment has a number of initiatives in the rent-to-rent, or short-term rental, market for construction, earthmoving, road building, and material handling equipment. These include specially designed rental programs for John Deere dealers and expanded cooperation with major, national equipment rental companies.

John Deere also owns Nortrax, Inc., an authorized John Deere dealer for construction, earthmoving, material handling and forestry equipment in the U.S. John Deere also owns retail forestry sales operations in Australia, Brazil, Finland, Ireland, New Zealand, Norway, Sweden and the United Kingdom. In addition, in many markets worldwide (most significantly in the European Union, India and Australia), the Wirtgen Group sells its products primarily through company-owned sales and service subsidiaries.

Competition

The equipment operations sell products and services into a variety of highly competitive global and regional markets. The principal competitive factors in all markets include product performance, innovation and quality, distribution, customer service and price. In North America and many other parts of the world, John Deere's brand recognition is a competitive factor.

The competitive environment for the agriculture and turf segment includes some global competitors, including AGCO Corporation, CLAAS KGaA mbH, CNH Global N.V., Kubota Tractor Corporation, Mahindra, and The Toro Company and many regional and local competitors. These competitors have varying numbers of product lines competing with the segment's products and each has varying degrees of regional focus. Additional competition within the agricultural equipment industry has come from a variety of short-line and specialty manufacturers, as well as indigenous regional competitors, with differing manufacturing and marketing methods. Because of industry conditions, including the merger of certain large integrated competitors and the emergence and expanding global capability of many competitors, particularly in emerging and high potential markets such as Brazil, China, and India where John Deere seeks to increase market share, the agricultural equipment business continues to undergo significant change and is becoming even more competitive. The segment's turf equipment is sold primarily in the highly competitive North American and Western European markets.

Global competitors of the construction and forestry segment include Caterpillar Inc., CNH Global N.V., Doosan Infracore Co., Ltd. and its subsidiary Doosan Bobcat Inc., Fayat Group, Komatsu Ltd., Kubota Tractor Corporation, Ponsse Plc, Terex, Tigercat Industries Inc., Volvo Construction Equipment (part of Volvo Group AB) and XCMG. The construction business operates in highly competitive markets in North and South America and other global markets, including China and Russia. The forestry and road building businesses operate globally. The segment manufactures over 90 percent of the types of construction equipment used in the U.S. and Canada, including construction, forestry, earthmoving, road building, and material handling equipment.

Manufacturing

Manufacturing Plants. In the U.S. and Canada, the equipment operations own and operate 21 factory locations and lease and operate another two locations. Of these 23 factories, 13 are devoted primarily to agriculture and turf equipment, four to construction and forestry equipment, one to engines, two to engine and component remanufacturing, two to hydraulic and power train components, and one to electronic components. Outside the U.S. and Canada, the equipment operations own or lease and operate 47 factories, including: agriculture and turf equipment factories in Argentina, Brazil, China, France, Germany, India, Israel, Italy, Mexico, the Netherlands, Russia, and Spain; construction equipment factories in Brazil, China, and Germany; engine, engine/power train, hydraulic, or electronic component factories in Argentina, China, France, India, and Mexico; road building equipment factories in Brazil, China, Germany, and India; and forestry equipment factories in Finland and New Zealand. The engine factories referred to above manufacture non-road, heavy duty diesel engines.

The equipment operations also have financial interests in other manufacturing organizations, which include agricultural equipment manufacturers in the U.S., Bell in South Africa, the Hitachi joint venture that builds hydraulic excavators and tracked forestry equipment in the U.S., Canada, and Brazil, and ventures that manufacture transaxles and transmissions used in certain agriculture and turf segment products.

John Deere's facilities are well maintained, in good operating condition and suitable for their present purposes. These facilities, together with both short-term and long-term planned capital expenditures, are expected to meet John Deere's manufacturing needs in the foreseeable future.

Existing capacity is sufficient to satisfy John Deere's current expectations for retail market demand. The equipment operations' manufacturing strategy involves the implementation of appropriate levels of technology and automation to allow manufacturing processes to remain profitable at varying production levels. Operations are also designed to be flexible enough to accommodate the product design changes required to meet market conditions and changing customer requirements. Common manufacturing facilities and techniques are employed in the production of components for agriculture and turf equipment and construction and forestry equipment.

In order to utilize manufacturing facilities and technology more effectively, the equipment operations pursue continuous improvements in manufacturing processes. These include steps to streamline manufacturing processes and enhance responsiveness to customers. John Deere's flexible assembly lines can accommodate a wider product mix and deliver products in line with dealer and customer demand. Additionally, considerable effort is being directed to manufacturing cost reduction through process improvement and improvements in product design, advanced manufacturing technology, supply management and logistics, and environment, health, and safety management systems, as well as compensation incentives related to productivity and organizational structure. John Deere has experienced volatility in the price of many raw materials. John Deere has responded to cost pressures by implementing the cost-reduction measures described above and by increasing prices. Significant cost increases, if they occur, could have an adverse effect on the Company's operating results. The equipment operations also pursue external sales of selected parts and components that can be manufactured and supplied to third parties on a competitive basis, including engines, power train components, and electronic components.

Patents, Trademarks, and Trade Secrets

John Deere owns a significant number of patents, trade secrets, licenses, and trademarks related to John Deere products and services, and expects the number to grow as John Deere continues to pursue technological innovations. John Deere's policy is to further its competitive position by filing patent applications in the U.S. and internationally to protect technology and improvements considered important to the business. John Deere believes that, in the aggregate, the rights under these patents and licenses are generally important to its operations and competitive position, but does not regard any of its businesses as being dependent upon any single patent or group of patents. However, certain John Deere trademarks, which contribute to John Deere's identity and the recognition of its products and services, including but not limited to the "John Deere" mark, the leaping deer logo, the "Nothing Runs Like a Deere" slogan, the prefix "JD" associated with many products, and the green and yellow equipment colors, are an integral part of John Deere's business, and their loss could have a material adverse effect on the Company. For additional information see Risk Factor—*The potential loss of John Deere intellectual property through trade secret theft, infringement of patents, trademark counterfeiting, or other loss of rights to exclusive use of John Deere intellectual property may have a material adverse effect on the Company. Infringement of the intellectual property rights of others by Deere may also have a material adverse effect on the Company*.

Marketing

In the U.S. and Canada, the equipment operations distribute equipment and service parts through the following facilities: two agriculture and turf equipment sales and administration offices located in Olathe, Kansas and Cary, North Carolina and one sales branch located in Grimsby, Ontario; one construction, earthmoving, material handling, and forestry equipment sales and administration office located in Moline, Illinois; and one road building equipment sales, service, and administration office located in Nashville, Tennessee. In addition, the equipment operations operate a centralized parts distribution warehouse in coordination with nine regional parts depots and distribution centers in the U.S. and Canada.

Through these U.S. and Canadian facilities, John Deere markets products to approximately 1,977 dealer locations, most of which are independently owned and operated. Of these, approximately 1,541 sell agricultural equipment, while approximately 436 sell construction, earthmoving, material handling and/or forestry equipment. Nortrax owns some of the 436 dealer locations. Turf equipment is sold at most John Deere agricultural equipment locations, a few construction, earthmoving, material handling, and forestry equipment locations and about 375 turf-only locations, many of which also sell dissimilar lines of non-John Deere products. In addition, certain lawn and garden product lines are sold through The Home Depot and Lowe's.

Outside the U.S. and Canada, John Deere agriculture and turf equipment is sold to distributors and dealers for resale in over 100 countries. Sales and administrative offices are located in Argentina, Australia, Brazil, China, France, Germany, India, Italy, Mexico, the Netherlands, Poland, Russia, Singapore, South Africa, Spain, Sweden, Switzerland, Thailand, Turkey, Ukraine, and the United Kingdom and administrative offices located in Ghana and Kenya. Turf equipment sales outside the U.S. and Canada occur primarily in Europe and Australia. Construction, earthmoving, material handling, and forestry equipment is sold to distributors and dealers primarily by sales offices located in Australia, Brazil, China, Finland, New Zealand, Russia, Singapore, and the United States. Some of these dealers are independently owned while John Deere owns others. Road building equipment is sold both directly to end customers as well as to independent distributors and dealers for resale. The Wirtgen Group operates company-owned sales and service subsidiaries in Australia, Austria, Belgium, Brazil, Bulgaria, China, Denmark, Estonia, Finland, France, Georgia, Germany, Hungary, India, Ireland, Italy, Japan, Latvia, Lithuania, Malaysia, the Netherlands, Norway, the Philippines, Poland, Romania, Russia, Serbia, Singapore, South Africa, Sweden, Taiwan, Thailand, Turkey, Ukraine, and the United Kingdom.

The equipment operations operate centralized parts distribution warehouses in Brazil, Germany, India, and Russia in coordination with regional parts depots and distribution centers in Argentina, Australia, China, Mexico, South Africa, Sweden, and the United Kingdom.

John Deere markets engines, power train, and electronic components worldwide through select sales branches or directly to regional and global original equipment manufacturers and independently owned engine distributors.

Raw Materials

John Deere purchases raw materials and some manufactured components and replacement parts for its equipment, engines, and other products from leading suppliers both domestically and internationally. These materials and components include a variety of steel products, steel and iron castings, forgings, plastics, electronics, and ready-to-assemble components made to certain specifications. John Deere also purchases various goods and services used in production, logistics, offices, and research and development processes. John Deere maintains strategic sourcing models to meet its production needs and build upon long-term supplier relationships. John Deere uses a variety of agreements with suppliers intended to drive innovation, ensure availability and delivery of industry-leading quality raw materials and components, manage costs on a globally competitive basis, protect John Deere's intellectual property, and minimize other supply-related risks. Supply chain risks monitored by John Deere to minimize the likelihood of the supply base causing business disruption include supplier financial viability, capacity, business continuity, quality, delivery and weather-related events, including natural disasters. In fiscal 2019, no significant work stoppages occurred due to shortages of raw materials or other commodities.

Backlog Orders

The dollar amount of backlog orders for the agriculture and turf segment believed to be firm was approximately $5.5 billion at November 3, 2019, compared with $6.5 billion at October 28, 2018. The agriculture and turf backlog is generally highest in the second and third quarters due to seasonal buying trends in these industries. By the end of fiscal 2019, John Deere produced and shipped its construction and forestry equipment on average within approximately 90 days after an order was deemed to become firm. Therefore, there was no significant amount of backlog orders for the construction and forestry segment at November 3, 2019, compared with approximately $3.0 billion at October 28, 2018.

Trade Accounts and Notes Receivable

Trade accounts and notes receivable arise primarily from sales of goods to independent dealers. Most trade receivables originated by the equipment operations are purchased by the financial services operations. The equipment operations compensate the financial services operations at approximate market rates of interest for these receivables. Additional information appears in Note 13 to the Consolidated Financial Statements.

FINANCIAL SERVICES

U.S. and Canada. The financial services segment primarily provides and administers financing for retail purchases from John Deere dealers of new equipment manufactured by John Deere's agriculture and turf and construction and forestry segments and used equipment taken in trade for this equipment.

The Company and John Deere Construction & Forestry Company (a wholly-owned subsidiary of the Company) are referred to as the "sales companies." John Deere Capital Corporation (Capital Corporation), a U.S. financial services subsidiary, generally purchases retail installment sales and loan contracts (retail notes) from the sales companies. These retail notes are acquired by the sales companies through John Deere retail dealers in the U.S. John Deere Financial Inc., a Canadian financial services subsidiary, purchases and finances retail notes acquired by John Deere Canada ULC, the Company's Canadian sales branch. The terms of retail notes and the basis on which the financial services operations acquire retail notes from the sales companies are governed by agreements with the sales companies. The financial services segment also finances and services revolving charge accounts, in most cases acquired from and

offered through merchants in the agriculture and turf and construction and forestry markets (revolving charge accounts). Additionally, the financial services operations provide wholesale financing for inventories of John Deere agriculture and turf equipment and construction and forestry equipment owned by dealers of those products (wholesale notes). The various financing options offered by the financial services operations are designed to enhance sales of John Deere products and generate financing income for the financial services operations. In the U.S. and Canada, certain subsidiaries included in the financial services segment offer extended equipment warranties.

Retail notes acquired by the sales companies are immediately sold to the financial services operations. The equipment operations are the financial services operations' major source of business, but many retail purchasers of John Deere products finance their purchases outside the John Deere organization through a variety of sources, including commercial banks and finance and leasing companies.

The financial services operations offer retail leases to equipment users in the U.S. A small number of leases are executed with units of local government. Leases are usually written for periods of four months to seventy-two months, and typically contain an option permitting the customer to purchase the equipment at the end of the lease term. Retail leases are also offered in a generally similar manner to customers in Canada through John Deere Financial Inc. and John Deere Canada ULC.

The financial services operations' terms for financing equipment retail sales (other than smaller items financed with unsecured revolving charge accounts) generally provide for retention of a security interest in the equipment financed. The financial services operations' guidelines for minimum down payments, which vary with the types of equipment and repayment provisions, are generally 10 percent to 30 percent of the purchase price. Finance charges are sometimes waived for specified periods or reduced on certain John Deere products sold or leased in advance of the season of use or in other sales promotions. The financial services operations generally receive compensation from the sales companies at approximate market interest rates for periods during which finance charges are waived or reduced on the retail notes or leases. The cost is accounted for as a deduction in arriving at net sales by the equipment operations.

The Company has an agreement with Capital Corporation to make payments to Capital Corporation such that its ratio of earnings to fixed charges is not less than 1.05 to 1 for any fiscal quarter. For fiscal 2019 and 2018, Capital Corporation's ratios were 1.51 to 1 and 1.78 to 1, respectively, and never less than 1.36 to 1 and 1.69 to 1 for any fiscal quarter of 2019 and 2018, respectively. The Company has also committed to continue to own, directly or through one or more wholly-owned subsidiaries, at least 51 percent of the voting shares of capital stock of Capital Corporation and to maintain Capital Corporation's consolidated tangible net worth at not less than $50 million. The Company's obligations to make payments to Capital Corporation under the agreement are independent of whether Capital Corporation is in default on its indebtedness, obligations or other liabilities. Further, the Company's obligations under the agreement are not measured by the amount of Capital Corporation's indebtedness, obligations, or other liabilities. The Company's obligations to make payments under this agreement are expressly stated not to be a guaranty of any specific indebtedness, obligation or liability of Capital Corporation and are enforceable only by or in the name of Capital Corporation. No payments were required under this agreement in fiscal 2019 or 2018.

Outside the U.S. and Canada. The financial services operations also offer financing, primarily for John Deere products, in Australia, Brazil, China, India, New Zealand, Russia, Thailand, and in several other countries in Africa, Asia, Europe, and Latin America. In certain areas, financing is offered through cooperation agreements or joint ventures. The manner in which the financial services operations offer financing in these countries is affected by a variety of country-specific laws, regulations, and customs, including those governing property rights and debtor obligations, that are subject to change and that may introduce greater risk to the financial services operations.

The financial services operations also offer to select customers and dealers credit enhanced international export financing for the purchase of John Deere products.

Additional information on the financial services operations appears on pages 22 – 24, and 28.

ENVIRONMENTAL MATTERS

John Deere is subject to a wide variety of local, state, and federal environmental laws and regulations in the U.S., as well as the environmental laws and regulations of other countries in which John Deere conducts business. John Deere strives to comply with applicable laws and regulations. However, failure to comply with these regulations could lead to fines and other penalties. John Deere is involved in the evaluation and clean-up of a limited number of sites but does not expect that these matters or other expenses or liabilities John Deere may incur in connection with any noncompliance with environmental laws or regulations or the cleanup of any additional properties, will have a material adverse effect on the consolidated financial position, results of operations, cash flows or competitive position of John Deere. With respect to acquired properties and businesses or properties and businesses acquired in the future, John Deere conducts due diligence into potential exposure to environmental liabilities, but cannot be certain that it has

identified or will identify all adverse environmental conditions. Compliance with these laws and regulations has added, and will continue to add, to the cost of John Deere's products.

The European Union has issued its Stage V Regulation, parts of which were effective in 2019 and will become effective in 2020, for non-road diesel engines across various power categories for machines used in construction, agriculture, materials handling, industrial use and generator applications. These standards continue the reduction of particulate and NOx emissions. Governmental agencies throughout the world are similarly enacting more stringent laws to reduce off-road engine emissions. John Deere has achieved and plans to continue to achieve compliance with these regulations through significant investments in the development of new engine technologies and after-treatment systems. Compliance with emissions regulations has added and will continue to add to the cost of John Deere's products.

Governments are also implementing laws regulating products across their life cycle, including raw material sourcing and the storage, distribution, sale, use, and disposal of products at their end-of-life. These laws and regulations include green chemistry, right-to-know, restriction of hazardous substances, and product take-back laws.

EMPLOYEES

At November 3, 2019, John Deere had approximately 73,500 employees, including approximately 30,000 employees in the U.S. and Canada. John Deere also retains consultants, independent contractors, and temporary and part-time workers. Unions are certified as bargaining agents for approximately 84 percent of John Deere's U.S. production and maintenance employees. Approximately 9,300 of John Deere's active U.S. production and maintenance workers are covered by a collective bargaining agreement with the United Auto Workers (UAW), with an expiration date of October 1, 2021. A small number of U.S. production employees are represented by the International Association of Machinists and Aerospace Workers (IAM).

Unions also represent the majority of employees at John Deere manufacturing facilities outside the U.S.

INFORMATION ABOUT OUR EXECUTIVE OFFICERS

Following are the names and ages of the executive officers of the Company, their positions with the Company and summaries of their backgrounds and business experience. All executive officers are elected or appointed by the Board of Directors and hold office until the annual meeting of the Board of Directors following the annual meeting of stockholders in each year.

Name, age and office (at December 1, 2019), and year elected to office				Principal occupation during last five years other than office of the Company currently held
Samuel R. Allen	66	Chairman	2010	2010 – 2019 Chairman and Chief Executive Officer
John C. May	50	Chief Executive Officer and President	2019	2019 President and Chief Operating Officer, 2018 – 2019 President, Worldwide Agriculture & Turf Division, Global Harvesting and Turf Platforms, Ag Solutions Americas and Australia, 2012 – 2018 President, Agricultural Solutions & Chief Information Officer
Ryan D. Campbell	45	Senior Vice President and Chief Financial Officer	2019	2018 Deputy Financial Officer, 2017 Vice President and Comptroller, 2016 Deputy Comptroller, 2014 – 2015 Director of Finance, Agricultural Division Regions 1 & 2 and Global Tractors
James M. Field	56	President, Worldwide Construction & Forestry and Power Systems	2019	2018 – 2019 President, Worldwide Construction & Forestry Division, 2012 – 2018 President, Agriculture & Turf Division-Global Harvesting & Turf Platforms, Americas and Australia
Marc A. Howze	56	Senior Vice President and Chief Administrative Officer	2016	2012 – 2016 Vice President, Global Human Resources & Employee Communications
Mary K.W. Jones	51	Senior Vice President, General Counsel & Public Affairs	2019	2013 – 2019 Senior Vice President and General Counsel
Rajesh Kalathur	51	President, John Deere Financial, and Chief Information Officer	2019	2018 – 2019 Senior Vice President, Chief Financial Officer and Chief Information Officer, 2012 – 2018 Senior Vice President and Chief Financial Officer
Cory J. Reed	49	President, Worldwide Agriculture & Turf Division, Americas and Australia, Global Harvesting and Turf Platforms, Agricultural Solutions	2019	2016 – 2019 President, John Deere Financial, 2013 – 2016 Senior Vice President, Intelligent Solutions Group
Markwart von Pentz	56	President, Worldwide Agriculture & Turf Division Tractor and Hay & Forage, Regions 1 & 2, and Advanced Engineering	2019	2018 – 2019 President, Worldwide Agriculture & Turf Division Global Tractor and Hay & Forage Platforms, Europe, CIS, Asia, Africa, 2012 – 2018 President, Agriculture & Turf Division-Europe, Asia, Africa, and Global Tractor Platform

ITEM 1A. RISK FACTORS.

The following risks are considered the most significant to John Deere's business based upon current knowledge, information and assumptions. This discussion of risk factors should be considered closely in conjunction with Management's Discussion and Analysis beginning on page 22, including the risks and uncertainties described in the Safe Harbor Statement on pages 24 – 26, and the Notes to Consolidated Financial Statements beginning on page 38. These risk factors and other forward-looking statements that relate to future events, expectations, trends and operating periods involve certain factors that are subject to change, and important risks and uncertainties that could cause actual results to differ materially. Some of these risks and uncertainties could affect particular lines of

business, while others could affect all of the Company's businesses. Although each risk is discussed separately, many are interrelated. The Company, except as required by law, undertakes no obligation to update or revise this risk factors discussion, whether as a result of new developments or otherwise. The risks described in this Annual Report on Form 10-K and the "Safe Harbor Statement" in this report are not the only risks faced by the Company.

International, national and regional trade laws, regulations and policies (particularly those related to or restricting global trade) and government farm programs and policies could significantly impair John Deere's profitability and growth prospects.

International, national and regional laws, regulations and policies directly or indirectly related to or restricting the import and export of John Deere's products, services and technology, including protectionist policies in particular jurisdictions or for the benefit of favored industries or sectors, could harm John Deere's multinational business and subject John Deere to civil and criminal sanctions for violations. John Deere's profitability and growth prospects are tied directly to the global marketplace. Restricted access to global markets impairs John Deere's ability to export goods and services from its various manufacturing locations around the world, and limits the ability to access raw materials and high quality parts and components at competitive prices on a timely basis. Trade restrictions, including withdrawal from or modification of existing trade agreements, the failure to ratify the United States-Mexico-Canada Agreement, negotiation of new trade agreements, and imposition of new (and retaliatory) tariffs against certain countries or covering certain products, including developments in U.S.-China trade relations, could limit John Deere's ability to capitalize on current and future growth opportunities in international markets and impair John Deere's ability to expand the business by offering new technologies, products and services. These trade restrictions, and changes in–or uncertainty surrounding–global trade policies may affect John Deere's competitive position. Furthermore, the ability to export agricultural and forestry commodities is critical to John Deere's agricultural and forestry customers. Policies impacting exchange rates and commodity prices or those limiting the export or import of commodities could have a material adverse effect on the international flow of agricultural and other commodities that may result in a corresponding negative effect on the demand for agricultural and forestry equipment in many areas of the world. John Deere's agricultural equipment sales could be especially harmed by such policies because farm income strongly influences sales of agricultural equipment around the world. Furthermore, trade restrictions could impede those in developing countries from achieving a higher standard of living, which could negatively impact John Deere's future growth opportunities arising from increasing global demand for food, fuel and infrastructure. Additionally, changes in government farm programs and policies, including direct payment and other subsidies, can significantly influence demand for agricultural equipment. Furthermore, sanctions and export controls imposed by the U.S. and other governments restricting or prohibiting transactions with certain persons, including financial institutions, to certain countries, or involving certain products expose John Deere to potential criminal and civil sanctions. Embargoes and sanctions laws are changing rapidly for certain geographies, including with respect to Russia, Venezuela, Nicaragua and Turkey. Although John Deere has a compliance program in place designed to reduce the likelihood of potential violations of import and export laws and sanctions, violations of these laws or sanctions could have an adverse effect on John Deere's reputation, business, results of operations and financial condition.

Changes in government banking, monetary and fiscal policies could have a negative effect on John Deere.

Policies of the U.S. and other governments regarding banking, monetary and fiscal policies intended to promote or maintain liquidity, stabilize financial markets and/or address local deficit or structural economic issues may not be effective and could have a material impact on John Deere's customers and markets. John Deere's operations and results could also be impacted by financial regulatory reform that could have an adverse effect on the financial services segment and on John Deere's customers by limiting their ability to enter into hedging transactions or to finance purchases of John Deere products. Government policies on spending can also affect John Deere, especially the construction and forestry segment due to the impact of government spending on infrastructure development. John Deere's operations, including those outside of the United States, may also be affected by non-U.S. regulatory reforms being implemented to further regulate non-U.S. financial institutions and markets.

Changes in tax rates, tax legislation, or exposure to additional tax liabilities could have a negative effect on John Deere.

John Deere is subject to income taxes in the U.S. and numerous foreign jurisdictions. The Company's domestic and international tax liabilities are dependent upon the location of earnings among these different jurisdictions. Tax rates in various jurisdictions may be subject to significant change. John Deere's effective tax rates could be affected by changes in the mix of earnings in countries with differing statutory tax rates, changes in the valuation of deferred tax assets and liabilities, or changes in tax laws or their interpretation. If the Company's effective tax rates were to increase, or if the ultimate determination of our taxes owed is for an amount in excess of amounts previously accrued, John Deere's operating results, cash flows and financial condition could be adversely affected.

Changing worldwide demand for food and different forms of bio-energy could have an effect on the price of farm commodities and consequently the demand for certain John Deere equipment and could also result in higher research and development costs related to changing machine fuel requirements.

Changing worldwide demand for farm outputs to meet the world's growing food and bio-energy demands, driven in part by government policies and a growing world population, are likely to result in fluctuating agricultural commodity prices, which directly affect sales of agricultural equipment. Lower farm commodity prices directly affect farm incomes, which could negatively affect sales of agricultural equipment. While higher commodity prices benefit John Deere's crop-producing agricultural equipment customers, higher commodity prices also could result in greater feed costs for livestock and poultry producers which in turn may result in lower levels of equipment purchased by these customers. Furthermore, changing bio-fuel demands may cause farmers to change the types or quantities of the crops they raise, with corresponding changes in equipment demands. Finally, changes in governmental policies regulating bio-fuel utilization could affect commodity demand and commodity prices, demand for John Deere's diesel-fueled equipment, and result in higher research and development costs related to equipment fuel standards.

As John Deere seeks to expand its business globally, growth opportunities may be impacted by greater political, economic and social uncertainty and the continuing and accelerating globalization of businesses could significantly change the dynamics of John Deere's competition, customer base and product offerings.

John Deere's efforts to grow its businesses depend to a large extent upon access to additional geographic markets, including, but not limited to, Argentina, Brazil, China, India and Russia, and its success in developing market share and operating profitably in such markets. In some cases, these countries have greater political and economic volatility, greater vulnerability to infrastructure and labor disruptions and differing local customer product preferences and requirements than John Deere's other markets. Negative market conditions resulting from economic and political uncertainties in these and other countries could reduce customer confidence, resulting in declines in demand and increases in delinquencies and default rates, which could affect write-offs and provisions for credit losses. Operating and seeking to expand business in a number of different regions and countries exposes John Deere to multiple and potentially conflicting cultural practices, business practices and legal and regulatory requirements that are subject to change, including those related to tariffs and trade barriers, investments, property ownership rights, taxation, sanctions and export control requirements, repatriation of earnings and advanced technologies. Expanding business operations globally also increases exposure to currency fluctuations which can materially affect the Company's financial results. As these emerging geographic markets become more important to John Deere, its competitors are also seeking to expand their production capacities and sales in these same markets. While John Deere maintains a positive corporate image and its brands are widely recognized and valued in its traditional markets, the brands are less well known in some emerging markets which could impede John Deere's efforts to successfully compete in these markets. Although John Deere is taking measures to adapt to these changing circumstances, John Deere's reputation and/or business results could be negatively affected should these efforts prove unsuccessful.

John Deere operates in highly competitive markets.

John Deere operates in a variety of highly competitive global and regional markets. John Deere competes worldwide with a number of other manufacturers and distributors that produce and sell similar products. John Deere competes on the basis of product performance, innovation and quality, distribution, customer service and price. Aggressive pricing or other strategies pursued by competitors, unanticipated product or manufacturing delays or John Deere's failure to price its products competitively could adversely affect John Deere's business, results of operations and financial condition.

John Deere's business results depend largely on its ability to understand its customers' specific preferences and requirements, and to develop, manufacture and market products that meet customer demand.

John Deere's ability to match new product offerings to diverse global customers' anticipated preferences for different types and sizes of equipment and various equipment features and functionality, at affordable prices, is critical to its success. This requires a thorough understanding of John Deere's existing and potential customers on a global basis, particularly in potentially high-growth and emerging markets, including Brazil, China, India and Russia. Failure to deliver quality products that meet customer needs at competitive prices ahead of competitors could have a significant adverse effect on John Deere's business.

Negative economic conditions and outlook can materially weaken demand for John Deere's equipment and services, limit access to funding and result in higher funding costs.

The demand for John Deere's products and services can be significantly reduced in an economic environment characterized by high unemployment, cautious consumer spending, lower corporate earnings, U.S. budget issues and lower business investment. Negative or uncertain economic conditions causing John Deere's customers to lack confidence in the general economic outlook can significantly reduce their likelihood of purchasing John Deere's equipment. Sustained negative economic conditions and outlook affect housing starts and other construction which dampens demand for certain construction equipment. John Deere's turf operations and its

construction and forestry business are dependent on construction activity and general economic conditions. Decreases in construction activity and housing starts could have a material adverse effect on John Deere's results of operations. If negative economic conditions affect the overall farm economy, there could be a similar effect on John Deere's agricultural equipment sales. In addition, uncertain or negative outlook with respect to ongoing U.S. budget issues as well as general economic conditions and outlook can cause significant changes in market liquidity conditions. Such changes could impact access to funding and associated funding costs, which could reduce the Company's earnings and cash flows. Additionally, the Company's investment management activities could be adversely affected by changes in the equity and bond markets, which would negatively affect earnings.

In addition, demand for John Deere's products and services can be significantly reduced by concerns regarding the diverse economic and political circumstances of the individual countries in the eurozone, the debt burden of certain eurozone countries and their ability to meet future financial obligations, uncertainty related to the anticipated withdrawal of the United Kingdom from the European Union, the risk that one or more other European Union countries could come under increasing pressure to leave the European Union, or the long term stability of the euro as a single common currency. Persistent disparity with respect to the widely varying economic conditions within the individual countries in the eurozone, and its implications for the euro as well as market perceptions concerning these and related issues, could adversely affect the value of the Company's euro-denominated assets and obligations, have an adverse effect on demand for John Deere's products and services in the eurozone and have an adverse effect on financial markets in Europe and globally. More specifically, it could affect the ability of John Deere's customers, suppliers and lenders to finance their respective businesses, to access liquidity at acceptable financing costs, if at all, and the availability of supplies and materials and on the demand for John Deere's products.

The Company's consolidated financial results are reported in U.S. dollars while certain assets and other reported items are denominated in the currencies of other countries, creating currency exchange and translation risk.

John Deere operates in many areas of the world, involving transactions denominated in a variety of currencies. John Deere is subject to currency exchange risk to the extent that its costs are denominated in currencies other than those in which John Deere earns revenues.

Additionally, the reporting currency for the Company's consolidated financial statements is the U.S. dollar. Certain of John Deere's assets, liabilities, expenses and revenues are denominated in other countries' currencies. Those assets, liabilities, expenses and revenues are translated into U.S. dollars at the applicable exchange rates to prepare the Company's consolidated financial statements. Therefore, increases or decreases in exchange rates between the U.S. dollar and those other currencies affect the value of those items as reflected in the Company's consolidated financial statements, even if their value remains unchanged in their original currency. Substantial fluctuations in the value of the U.S. dollar could have a significant impact on John Deere's results.

Because the financial services segment provides financing for a significant portion of John Deere's sales worldwide, John Deere's operations and financial results could be impacted materially should negative economic conditions affect the financial industry.

Negative economic conditions can have an adverse effect on the financial industry in which the financial services segment operates. The financial services segment provides financing for a significant portion of John Deere's sales worldwide. The financial services segment is exposed to the risk that customers and others will default on contractual obligations. The financial services segment may experience credit losses that exceed its expectations and adversely affect its financial condition and results of operations. The financial services segment's inability to access funds at cost-effective rates to support its financing activities could have a material adverse effect on John Deere's business. The financial services segment's liquidity and ongoing profitability depend largely on timely access to capital in order to meet future cash flow requirements and to fund operations and costs associated with engaging in diversified funding activities. Additionally, negative market conditions could reduce customer confidence levels, resulting in declines in credit applications and increases in delinquencies and default rates, which could materially impact the financial services segment's write-offs and provision for credit losses. The financial services segment may also experience residual value losses that exceed its expectations caused by lower pricing for used equipment and higher than expected equipment returns at lease maturity.

John Deere's equipment operations and financial services segments are subject to interest rate risks. Changes in interest rates can reduce demand for equipment, adversely affect interest margins and limit the ability to access capital markets while increasing borrowing costs.

Rising interest rates could have a dampening effect on overall economic activity and/or the financial condition of John Deere's customers, either or both of which could negatively affect customer demand for John Deere equipment and customers' ability to repay obligations to John Deere. In addition, credit market dislocations could have an impact on funding costs which are very important to John Deere's financial services segment because such costs affect the segment's ability to offer customers competitive financing rates. While the Company strives to match the interest rate characteristics of our financial assets and liabilities, changing interest rates could have an adverse effect on the Company's net interest rate margin—the difference between the yield the Company earns on its assets and the interest rates the Company pays for funding, which could in turn affect the Company's net interest income and

earnings. Actions by credit rating agencies, such as downgrades or negative changes to ratings outlooks, can affect the availability and cost of funding for the Company and can increase the Company's cost of capital and hurt its competitive position.

The potential loss of John Deere intellectual property through trade secret theft, infringement of patents, trademark counterfeiting, or other loss of rights to exclusive use of John Deere intellectual property may have a material adverse effect on the Company. Infringement of the intellectual property rights of others by Deere may also have a material adverse effect on the Company.

John Deere relies on a combination of patents, trademarks, trade secret laws, and confidentiality agreements to protect our intellectual property rights. In particular, we heavily rely on certain John Deere trademarks, which contribute to John Deere's identity and the recognition of its products and services, including but not limited to the "John Deere" mark, the leaping deer logo, the "Nothing Runs Like a Deere" slogan, the prefix "JD" associated with many products, and the green and yellow equipment colors. These trademarks, as well as the many patents used in our products, are integral to the John Deere business, and their loss could have a material adverse effect on the Company.

Additionally, third parties may initiate litigation to challenge the validity of our patents or allege that we infringe their patents. We may incur substantial costs if our competitors or other third parties initiate such litigation, or if we initiate any proceedings to protect our proprietary rights. If the outcome of any such litigation is unfavorable to us, our business could be adversely affected. Similarly, disputes may arise regarding whether our products or technologies infringe the proprietary rights of others. Any such infringement could cause third parties, including our competitors, to bring claims against us, resulting in significant costs, possible damages and substantial uncertainty.

John Deere is subject to extensive anti-corruption laws and regulations.

John Deere's global operations must comply with all applicable anti-corruption laws, including the U.S. Foreign Corrupt Practices Act and the UK Bribery Act. These anti-corruption laws generally prohibit companies and their intermediaries from making improper payments or providing anything of value to improperly influence government officials or private individuals for the purpose of obtaining or retaining a business advantage regardless of whether those practices are legal or culturally expected in a particular jurisdiction. Although John Deere has a compliance program in place designed to reduce the likelihood of potential violations of such laws, violations of these laws could result in criminal or civil sanctions and have an adverse effect on John Deere's reputation, business and results of operations and financial condition.

John Deere's business may be directly and indirectly affected by unfavorable weather conditions or natural calamities that reduce agricultural production and demand for agriculture and turf equipment.

Poor or unusual weather conditions, particularly during the planting and early growing season, can significantly affect the purchasing decisions of John Deere's customers, particularly the purchasers of agriculture and turf equipment. The timing and quantity of rainfall are two of the most important factors in agricultural production. Insufficient levels of rain prevent farmers from planting new crops and may cause growing crops to die or result in lower yields. Excessive rain or flooding can prevent planting from occurring at optimal times, and may cause crop loss through increased disease or mold growth. Temperatures outside normal ranges can also cause crop failure or decreased yields, and may also affect disease incidence. Temperature affects the rate of growth, crop maturity and crop quality. Natural calamities such as regional floods, hurricanes or other storms, droughts, diseases and pests can have significant negative effects on agricultural and livestock production. The resulting negative impact on farm income can strongly affect demand for agricultural equipment. Sales of turf equipment, particularly during the important spring selling season, can be dramatically impacted by weather. Adverse weather conditions in a particular geographic region may adversely affect sales of some turf equipment. Drought conditions can adversely affect sales of certain mowing equipment and unusually rainy weather can similarly cause lower sales volumes.

Changes in the availability and price of certain raw materials, components and whole goods could result in production disruptions or increased costs and lower profits on sales of John Deere products.

John Deere requires access to various raw materials, components and whole goods at competitive prices to manufacture and distribute its products. Changes in the availability and price of these raw materials, components and whole goods, which have fluctuated significantly in the past and are more likely to fluctuate during times of economic volatility, regulatory instability or change in import tariffs or trade agreements, can significantly increase the costs of production which could have a material negative effect on the profitability of the business, particularly if John Deere, due to pricing considerations or other factors, is unable to recover the increased costs from its customers. John Deere relies on suppliers to acquire raw materials, components and whole goods required to manufacture its products. Certain components and parts used in John Deere's products are available from a single supplier and cannot be alternatively sourced quickly. Supply chain disruptions due to supplier financial distress, capacity constraints, trade barriers, labor shortages, business continuity, quality, delivery issues or disruptions due to weather-related or natural disaster events could affect John Deere's operations and profitability.

John Deere's operations, suppliers and customers are subject to and affected by increasingly rigorous environmental, health and safety laws and regulations of federal, state and local authorities in the U.S. and various regulatory authorities with jurisdiction over John Deere's international operations. In addition, private civil litigation on these subjects has increased, primarily in the U.S.

Enforcement actions arising from violations of environmental, health and safety laws or regulations can lead to investigation and defense costs, and result in significant fines or penalties. In addition, new or more stringent requirements of governmental authorities could prevent or restrict John Deere's operations, or those of our suppliers and customers, require significant expenditures to achieve compliance and/or give rise to civil or criminal liability. There can be no assurance that violations of such legislation and/or regulations, or private civil claims for damages to property or personal injury arising from the environmental, health or safety impacts of John Deere's operations, or those of our suppliers and customers, would not have consequences that result in a material adverse effect on John Deere's business, financial condition or results of operations.

Increasingly stringent engine emission regulations could impact John Deere's ability to manufacture and distribute certain engines or equipment, which could negatively affect business results.

John Deere's equipment operations must meet increasingly stringent engine emission reduction regulations throughout the world, including the European Union's Stage V standard. In addition, governmental agencies throughout the world are enacting more stringent laws and regulations to reduce off-road engine emissions. These laws and regulations are applicable to engines manufactured by John Deere, including those used in John Deere agriculture and construction and forestry equipment. John Deere has incurred and continues to incur substantial research and development costs related to the implementation of these more rigorous laws and regulations. While John Deere has developed and is executing comprehensive plans to meet these requirements, these plans are subject to many variables that could delay or otherwise affect John Deere's ability to manufacture and distribute certain equipment or engines, which could negatively impact business results.

John Deere may incur increased costs due to new or more stringent greenhouse gas emission standards designed to address climate change and could be further impacted by physical effects attributed to climate change on its facilities, suppliers and customers.

There is global scientific consensus that emissions of greenhouse gases (GHG) continue to alter the composition of Earth's atmosphere in ways that are affecting and are expected to continue to affect the global climate. These considerations may lead to international, national, regional or local legislative or regulatory responses in the future. Various stakeholders, including legislators and regulators, shareholders and non-governmental organizations, as well as companies in many business sectors, including John Deere, are continuing to look for ways to reduce GHG emissions. The regulation of GHG emissions from certain stationary or mobile sources could result in additional costs to John Deere in the form of taxes or emission allowances, facilities improvements and energy costs, which would increase John Deere's operating costs through higher utility, transportation and materials costs. Increased input costs, such as fuel and fertilizer, and compliance-related costs could also impact customer operations and demand for John Deere equipment. Because the impact of any future GHG legislative, regulatory or product standard requirements on John Deere's global businesses and products is dependent on the timing and design of mandates or standards, John Deere is unable to predict its potential impact at this time.

Furthermore, the potential physical impacts of climate change on John Deere's facilities, suppliers and customers and therefore on John Deere's operations are highly uncertain and will be particular to the circumstances developing in various geographical regions. These may include long-term changes in temperature levels and water availability. These potential physical effects may adversely impact the demand for John Deere's products and the cost, production, sales and financial performance of John Deere's operations.

Security breaches and other disruptions to John Deere's information technology infrastructure could interfere with John Deere's operations and could compromise John Deere's and its customers' and suppliers' information, exposing John Deere to liability that would cause John Deere's business and reputation to suffer.

In the ordinary course of business, John Deere relies upon information technology networks and systems, some of which are managed by third parties, to process, transmit and store electronic information, and to manage or support a variety of business processes and activities, including supply chain, manufacturing, distribution, invoicing and collection of payments from dealers or other purchasers of John Deere equipment and from customers of John Deere's financial services operations. John Deere uses information technology systems to record, process and summarize financial information and results of operations for internal reporting purposes and to comply with regulatory financial reporting, legal and tax requirements. Additionally, John Deere collects and stores sensitive data, including intellectual property, proprietary business information and the proprietary business information of John Deere's customers and suppliers, as well as personally identifiable information of John Deere's customers and employees, in data centers and on information technology networks. The secure operation of these information technology networks and the processing and maintenance of this information is critical to John Deere's business operations and strategy. Despite security measures and business continuity plans, John Deere's information technology networks and infrastructure may be vulnerable to damage, disruptions or shutdowns due to attacks by cyber criminals or breaches due to employee or supplier error or malfeasance or other disruptions during

the process of upgrading or replacing computer software or hardware, power outages, computer viruses, telecommunication or utility failures, terrorist acts, natural disasters or other catastrophic events. The occurrence of any of these events could compromise John Deere's networks, and the information stored there could be accessed, publicly disclosed, lost or stolen. Any such access, disclosure or other loss of information could result in legal claims or proceedings, liability or regulatory penalties under laws protecting the privacy of personal information, disrupt operations, and damage John Deere's reputation, which could adversely affect John Deere's business, results of operations and financial condition. In addition, as security threats continue to evolve and increase in frequency and sophistication, we may need to invest additional resources to protect the security of our systems.

John Deere is subject to governmental laws, regulations and other legal obligations related to privacy and data protection.

The legislative and regulatory framework for privacy and data protection issues worldwide is rapidly evolving and is likely to remain uncertain for the foreseeable future. John Deere collects personally identifiable information (PII) and other data as integral parts of its business processes and activities. This data is subject to a variety of U.S. and foreign laws and regulations, including oversight by various regulatory or other governmental bodies. Many foreign countries and governmental bodies, including the European Union, Canada, and other relevant jurisdictions where we conduct business, have laws and regulations concerning the collection and use of PII and other data obtained from their residents or by businesses operating within their jurisdictions. The European Union General Data Protection Regulation imposes stringent data protection requirements and provides significant penalties for noncompliance. New privacy laws will continue to come into effect around the world in 2020, with one of the most significant being the California Consumer Privacy Act on January 1, 2020. Any inability, or perceived inability, to adequately address privacy and data protection concerns, even if unfounded, or comply with applicable laws, regulations, policies, industry standards, contractual obligations, or other legal obligations (including at newly acquired companies) could result in additional cost and liability to us or company officials, damage our reputation, inhibit sales, and otherwise adversely affect our business.

John Deere's ability to execute its strategy is dependent upon the ability to attract, train and retain qualified personnel.

John Deere's continued success depends, in part, on its ability to identify, attract, motivate, train and retain qualified personnel in key functions. In particular, John Deere is dependent on its ability to identify, attract, motivate, train and retain qualified personnel with the requisite education, background and industry experience. Failure to attract, train and retain qualified personnel, whether as a result of an insufficient number of qualified applicants, difficulty in recruiting new personnel, or the allocation of inadequate resources to training, integration and retention of qualified personnel, could impair John Deere's ability to execute its business strategy and could adversely affect John Deere's business. In addition, while John Deere strives to reduce the impact of the departure of employees, John Deere's operations or ability to execute its business strategy may be impacted by the loss of personnel.

Sustained increases in funding obligations under the Company's pension plans may impair the Company's liquidity or financial condition.

The Company maintains certain defined benefit pension plans for certain employees, which impose funding obligations. The Company uses many assumptions in calculating its future payment obligations under the plans. Significant adverse changes in credit or market conditions could result in actual rates of returns on pension investments being lower than expected. The Company may be required to make significant contributions to its pension plans in the future. These factors could significantly increase the Company's payment obligations under the plans and adversely affect its business, results of operations and financial condition.

Changes affecting the availability of the London Interbank Offered Rate ("LIBOR") may have consequences for John Deere that cannot yet reasonably be predicted.

The Company has outstanding debt, derivative and receivable transactions with variable interest rates based on LIBOR. The LIBOR benchmark has been subject of national, international, and other regulatory guidance and proposals for reform. In July 2017, the U.K. Financial Conduct Authority announced that it intends to stop persuading or compelling banks to submit rates for calculation of LIBOR after 2021. These reforms may cause LIBOR to perform differently than in the past and LIBOR may ultimately cease to exist after 2021. Alternative benchmark rate(s) may replace LIBOR and could affect the Company's debt securities, derivative instruments, receivables, debt payments and receipts. At this time, it is not possible to predict the effect of any changes to LIBOR, any phase out of LIBOR or any establishment of alternative benchmark rates. Any new benchmark rate will likely not replicate LIBOR exactly, which could impact our contracts which terminate after 2021. There is uncertainty about how applicable law, the courts or the Company will address the replacement of LIBOR with alternative rates on variable rate retail loan contracts and other contracts that do not include alternative rate fallback provisions. In addition, any changes to benchmark rates may have an uncertain impact on our cost of funds and our access to the capital markets, which could impact our results of operations and cash flows. Uncertainty as to the nature of such potential changes may also adversely affect the trading market for our securities.

John Deere may not realize all of the anticipated benefits of our acquisitions, joint ventures or divestitures, or these benefits may take longer to realize than expected.

From time to time, the Company makes strategic acquisitions and divestitures or participates in joint ventures. Acquisitions or joint ventures that the Company has entered into, or may enter into in the future, may involve significant challenges and risks, including that the acquisitions or joint ventures do not advance our business strategy, or fail to produce satisfactory returns on our investment. The Company may encounter difficulties in integrating acquisitions with its operations, in applying internal control processes to these acquisitions, in managing strategic investments, and in assimilating new capabilities to meet the future needs of the Company's business. Integrating acquisitions is often costly and may require significant attention from management. Furthermore, John Deere may not realize all of the anticipated benefits of acquisitions or joint ventures, or the realized benefits may be significantly delayed. While our evaluation of any potential transaction includes business, legal, and financial due diligence with the goal of identifying and evaluating the material risks involved, our due diligence reviews may not identify all of the issues necessary to accurately estimate the cost and potential risks of a particular acquisition or joint venture, including potential exposure to regulatory sanctions resulting from an acquisition target's or joint venture partner's previous activities or costs associated with any quality issues with an acquisition target's or joint venture's products or services. We may decide to divest ourselves of acquired businesses if we determine any such divestiture is in the best interests of our shareholders, and our joint ventures may be terminated at or before their stated terms. Divestitures of businesses or dissolutions of joint ventures may involve significant challenges and risks, including failure to advance our business strategy, costs or disruptions to the Company, or negative effects on the Company's product offerings, which may adversely affect our business, results of operations and financial condition. These divestitures of businesses or dissolutions of joint ventures may result in ongoing financial or legal involvement in the divested business, through indemnifications or other financial arrangements, such as retained liabilities, which could affect the Company's future financial results.

The reallocation of radio frequency (RF) spectrums could disrupt or degrade the reliability of John Deere's high precision augmented Global Positioning System (GPS) technology, which could impair John Deere's ability to develop and market GPS-based technology solutions as well as significantly reduce agricultural and construction customers' profitability.

John Deere's current and planned integrated agricultural business and equipment management systems, as well as its fleet management telematics solutions for construction equipment, depend upon the use of RF signals. These signals include, but are not limited to, GPS signals, other GPS-like satellite signals, augmented GPS services and other RF equipment which link equipment, operations, owners, dealers and technicians. These radio services depend on frequency allocations governed by international and national agencies. Any international or national reallocation of frequency bands, including frequency bands segmentation and band spectrum sharing, or other modifications concerning the regulation of frequency bands, could significantly disrupt or degrade the utility and reliability of John Deere's GPS-based products, which could negatively affect John Deere's ability to develop and market GPS-based technology solutions. For John Deere's agricultural customers, the inability to use high-precision augmented GPS signals or other RF signals could result in lower crop yields and higher equipment maintenance, seed, fertilizer, fuel and wage costs. For construction customers, disrupting GPS or RF applications could result in higher fuel and equipment maintenance costs, as well as lower construction design and project management efficiencies. These cost increases could significantly reduce customers' profitability and demand for John Deere products.

ITEM 1B. UNRESOLVED STAFF COMMENTS.

None.

ITEM 2. PROPERTIES.

See "Manufacturing" in Item 1.

The equipment operations own or lease eleven facilities comprised of two locations supporting centralized parts distribution and nine regional parts depots and distribution centers throughout the U.S. and Canada. Outside the U.S. and Canada, the equipment operations also own or lease and occupy 14 centralized parts distribution centers in Brazil, Germany, India and Russia and regional parts depots and distribution centers in Argentina, Australia, China, Mexico, South Africa, Sweden and the United Kingdom. John Deere also owns and leases 16 facilities for the manufacture and distribution of other brands of replacement parts.

The Company owns and leases 37 administrative offices and research facilities globally and many other smaller, miscellaneous facilities globally.

Overall, John Deere owns approximately 67.5 million square feet of facilities and leases approximately 10.3 million additional square feet in various locations.

ITEM 3. LEGAL PROCEEDINGS.

The Company is subject to various unresolved legal actions which arise in the normal course of its business, the most prevalent of which relate to product liability (including asbestos-related liability), retail credit, employment, patent, and trademark matters. Item 103 of Regulation S-K requires disclosure of certain environmental matters when a governmental authority is a party to the proceedings and the proceedings involve potential monetary sanctions that the Company reasonably believes could exceed $100,000. The following matter is disclosed solely pursuant to that requirement: on October 3, 2018, the Provincia Santa Fe Ministerio de Medio Ambiente issued a Notice of Violation to Industrias John Deere Argentina in connection with alleged groundwater contamination at the site; the Company continues to work with the appropriate authorities to implement corrective actions to remediate the site. The Company believes the reasonably possible range of losses for this and other unresolved legal actions would not have a material effect on its financial statements.

ITEM 4. MINE SAFETY DISCLOSURES.

Not applicable.

PART II

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

(a) The Company's common stock is listed on the New York Stock Exchange under the symbol "DE". See the information concerning the number of stockholders and the data on dividends declared and paid per share in Notes 30 and 31 to the Consolidated Financial Statements.

(b) Not applicable.

(c) The Company's purchases of its common stock during the fourth quarter of 2019 were as follows:

ISSUER PURCHASES OF EQUITY SECURITIES

Period	**Total Number of Shares Purchased (thousands) (2)**	**Average Price Paid Per Share**	**Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs (1) (thousands)**	**Maximum Number of Shares that May Yet Be Purchased under the Plans or Programs (1)(3) (millions)**
Jul 29 to Aug 25	596	$ 152.30	595	7.7
Aug 26 to Sept 29	1,082	158.80	1,082	6.7
Sept 30 to Nov 3	654	169.40	654	6.1
Total	2,332		2,331	

(1) During the fourth quarter of 2019, the Company had a share repurchase plan that was announced in December 2013 to purchase up to $8,000 million of shares of the Company's common stock. The maximum number of shares above that may yet be purchased under the $8,000 million plan was based on the end of the fourth quarter closing share price of $176.11 per share. At the end of the fourth quarter of 2019, $1,075 million of common stock remains to be purchased under this plan.

(2) In the fourth quarter of 2019, approximately 1 thousand shares were purchased from plan participants to pay payroll taxes on certain restricted stock awards. The shares were valued at a weighted-average market price of $158.70.

(3) In December 2019, the Board of Directors authorized the repurchase of up to $8,000 million of additional common stock. This additional repurchase amount may be repurchased after November 3, 2019 and is not included in the amounts above (see Note 31).

ITEM 6. SELECTED FINANCIAL DATA.

Financial Summary

(Millions of dollars except per share amounts)	November 3 2019	October 28 2018	October 29 2017	October 30 2016	November 1 2015
For the Years Ended:					
Total net sales and revenues	$ 39,258	$ 37,358	$ 29,738	$ 26,644	$ 28,863
Net income attributable to Deere & Company	$ 3,253	$ 2,368	$ 2,159	$ 1,524	$ 1,940
Net income per share — basic	$ 10.28	$ 7.34	$ 6.76	$ 4.83	$ 5.81
Net income per share — diluted	$ 10.15	$ 7.24	$ 6.68	$ 4.81	$ 5.77
Dividends declared per share	$ 3.04	$ 2.58	$ 2.40	$ 2.40	$ 2.40
At Year End:					
Total assets	$ 73,011	$ 70,108	$ 65,786	$ 57,918	$ 57,883
Long-term borrowings	$ 30,229	$ 27,237	$ 25,891	$ 23,703	$ 23,775

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

See the information under the caption "Management's Discussion and Analysis" on pages 22 – 32.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK.

The Company is exposed to a variety of market risks, including interest rates and currency exchange rates. The Company attempts to actively manage these risks. See the information under "Management's Discussion and Analysis" beginning on page 22 and in Note 28 to the Consolidated Financial Statements.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA.

See the Consolidated Financial Statements and notes thereto and supplementary data on pages 33 – 75.

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

Not applicable.

ITEM 9A. CONTROLS AND PROCEDURES.

Disclosure Controls and Procedures

The Company's principal executive officer and its principal financial officer have concluded that the Company's disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) of the Securities Exchange Act of 1934, as amended (the Exchange Act)) were effective as of November 3, 2019, based on the evaluation of these controls and procedures required by Rule 13a-15(b) or 15d-15(b) of the Exchange Act.

Management's Report on Internal Control Over Financial Reporting

The Company's management is responsible for establishing and maintaining adequate internal control over financial reporting. The Company's internal control system was designed to provide reasonable assurance regarding the preparation and fair presentation of published financial statements in accordance with generally accepted accounting principles.

All internal control systems, no matter how well designed, have inherent limitations. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation in accordance with generally accepted accounting principles.

Management assessed the effectiveness of the Company's internal control over financial reporting as of November 3, 2019, using the criteria set forth in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on that assessment, management believes that, as of November 3, 2019, the Company's internal control over financial reporting was effective.

The Company's independent registered public accounting firm has issued an audit report on the effectiveness of the Company's internal control over financial reporting. That report is included herein.

Changes in Internal Control Over Financial Reporting

During the fourth quarter, there were no changes that have materially affected or are reasonably likely to materially affect the Company's internal control over financial reporting.

ITEM 9B. OTHER INFORMATION.

Not applicable.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE.

The information regarding directors required by Item 401(a) of Regulation S-K in the definitive proxy statement for the annual meeting of stockholders to be held on February 26, 2020 (proxy statement), under the captions "Item 1 — Election of Directors" is incorporated herein by reference. The information in the proxy statement required by Items 407(d)(4) and 407(d)(5) of Regulation S-K under the caption “Corporate Governance — Board Committees — Audit Review Committee” is incorporated herein by reference. Information regarding executive officers is presented in Item 1 of this report under the caption "Information about our Executive Officers."

The Company has adopted a code of ethics that applies to its executives, including its principal executive officer, principal financial officer and principal accounting officer. This code of ethics and the Company's corporate governance policies are posted on the Company's website at http://www.JohnDeere.com/Governance. The Company intends to satisfy disclosure requirements regarding amendments to or waivers from its code of ethics by posting such information on this website. The charters of the Audit Review, Corporate Governance, Compensation and Finance committees of the Company's Board of Directors are available on the Company's website as well. This information is also available in print free of charge to any person who requests it.

ITEM 11. EXECUTIVE COMPENSATION.

The information required by Item 402 and 407(e)(4) and (e)(5) of Regulation S-K in the proxy statement under the captions "Compensation of Directors," "Compensation Discussion & Analysis," "Compensation Committee Report" and "Executive Compensation Tables" is incorporated herein by reference.

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

The information required by Item 201(d) of Regulation S-K in the proxy statement under the caption "Equity Compensation Plan Information" is incorporated herein by reference. The information required by Item 403 of Regulation S-K in the proxy statement under the caption "Security Ownership of Certain Beneficial Owners and Management" is incorporated herein by reference.

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

The information required by Item 404 of Regulation S-K in the proxy statement under the caption “Review and Approval of Related Person Transactions” is incorporated herein by reference. The information required by Item 407(a) of Regulation S-K in the proxy statement under the caption “Corporate Governance—Director Independence” is incorporated herein by reference.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES.

The information required by this Item 14 is set forth in the proxy statement under the captions "Ratification of Independent Registered Public Accounting Firm—Fees Paid to the Independent Registered Public Accounting Firm" and “Pre-approval of Services by the Independent Registered Public Accounting Firm” and incorporated herein by reference.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES.

(1) *Financial Statements*

	Page
Statement of Consolidated Income for the years ended November 3, 2019, October 28, 2018, and October 29, 2017	33
Statement of Consolidated Comprehensive Income for the years ended November 3, 2019, October 28, 2018, and October 29, 2017	34
Consolidated Balance Sheet as of November 3, 2019 and October 28, 2018	35
Statement of Consolidated Cash Flows for the years ended November 3, 2019, October 28, 2018, and October 29, 2017	36
Statement of Changes in Consolidated Stockholders' Equity for the years ended October 29, 2017, October 28, 2018, and November 3, 2019	37
Notes to Consolidated Financial Statements	38

(2) *Exhibits*

See the "Index to Exhibits" on pages 80 – 82 of this report

Certain instruments relating to long-term borrowings, constituting less than 10 percent of registrant's total assets, are not filed as exhibits herewith pursuant to Item 601(b)4(iii)(A) of Regulation S-K. Registrant agrees to file copies of such instruments upon request of the Commission.

Financial Statement Schedules Omitted

The following schedules for the Company and consolidated subsidiaries are omitted because of the absence of the conditions under which they are required: I, II, III, IV and V.

ITEM 16. FORM 10-K SUMMARY.

None.

RESULTS OF OPERATIONS FOR THE YEARS ENDED NOVEMBER 3, 2019, OCTOBER 28, 2018, AND OCTOBER 29, 2017

OVERVIEW

Organization

The company's equipment operations generate revenues and cash primarily from the sale of equipment to John Deere dealers and distributors. The equipment operations manufacture and distribute a full line of agricultural equipment; a variety of commercial and consumer equipment; and a broad range of equipment for construction, road building, and forestry. The company's financial services primarily provide credit services, which mainly finance sales and leases of equipment by John Deere dealers and trade receivables purchased from the equipment operations. In addition, financial services offers extended equipment warranties. The information in the following discussion is presented in a format that includes information grouped as consolidated, equipment operations, and financial services. The company also views its operations as consisting of two geographic areas, the U.S. and Canada, and outside the U.S. and Canada. The company's operating segments consist of agriculture and turf, construction and forestry, and financial services.

Trends and Economic Conditions

The company's agriculture and turf equipment sales increased 2 percent in 2019 and are forecast to decrease 5 to 10 percent for 2020. Industry agricultural machinery sales in the U.S. and Canada for 2020 are forecast to decline about 5 percent, compared to 2019. Industry sales in the European Union (EU)28 member nations and South American industry sales of tractors and combines are forecast to be about the same in 2020. Asian sales are also forecast to be about the same in 2020. Industry sales of turf and utility equipment in the U.S. and Canada are expected to be about the same. The company's construction and forestry sales increased 10 percent in 2019. The segment's sales are forecast to decrease 10 to 15 percent in 2020. Global forestry industry sales are expected to be about the same as 2019 sales. Net income of the company's financial services operations attributable to Deere & Company in 2020 is expected to be approximately $600 million.

Items of concern include trade agreements, the uncertainty of the effectiveness of governmental actions in respect to monetary and fiscal policies, the impact of sovereign debt, Eurozone and Argentine issues, capital market disruptions, changes in demand and pricing for used equipment, and geopolitical events. Significant fluctuations in foreign currency exchange rates and volatility in the price of many commodities could also impact the company's results.

The company's results reflected continued uncertainties in the agricultural sector. Trade tensions and difficult growing and harvesting conditions have caused farmers to become cautious about major equipment purchases. Financial services' results were also pressured by operating lease losses. The favorable general economic conditions supported demand for smaller equipment and led to strong sales and operating profit for the construction and forestry operations. Despite the present challenges, the longer-term outlook for the company's businesses remains positive. The company believes it is well positioned to be a leader in the delivery of smarter, more efficient, and sustainable solutions. In addition, a series of measures to create a leaner organization structure have been initiated that will allow the company to operate with more speed and agility.

2019 COMPARED WITH 2018

CONSOLIDATED RESULTS

The following table provides the net income attributable to Deere & Company in millions of dollars as well as diluted and basic earnings per share in dollars:

	2019	2018
Net income attributable to Deere & Company	$ 3,253	$ 2,368
Diluted earnings per share	10.15	7.24
Basic earnings per share	10.28	7.34

Net income in 2019 and 2018 was affected by discrete adjustments to the provision for income taxes, including those related to the U.S. tax reform legislation enacted on December 22, 2017 (tax reform) (see Note 9). The adjustments in 2019 related to tax reform reduced the provision for income taxes by $68 million and in 2018 increased the provision by $704 million.

The worldwide net sales and revenues, price realization, and the effect of currency translation for worldwide, U.S. and Canada, and outside U.S. and Canada in millions of dollars follows:

	2019	2018	% Change
Worldwide net sales and revenues	$ 39,258	$ 37,358	+5
Worldwide equipment operations net sales	34,886	33,351	+5
Price realization			+3
Currency translation (unfavorable)			-3
Wirtgen - two additional months			+1
U.S. and Canada equipment operations net sales	20,264	18,847	+8
Price realization			+4
Outside U.S. and Canada equipment operations net sales	14,622	14,504	+1
Price realization			+3
Currency translation (unfavorable)			-5
Wirtgen - two additional months			+3

The company's equipment operations operating profit and net income and financial services operations net income follow in millions of dollars:

	2019	2018	% Change
Equipment operations operating profit	$ 3,721	$ 3,684	+1
Equipment operations net income	2,698	1,404	+92
Financial services net income	539	942	-43

The discussion on net sales and operating profit are included in the Business Segment and Geographic Area Results below. The equipment operations' 2019 and 2018 net income included a discrete income tax benefit related to tax reform of $65 million and expense of $1,045 million, respectively (see Note 9). Financial

services' net income was affected by favorable income tax benefits related to tax reform of $3 million and $341 million for 2019 and 2018, respectively.

Excluding the tax reform adjustments, the financial services segment net income decreased compared to 2018 due to impairments and higher losses on operating lease residual values and unfavorable financing spreads, partially offset by income earned on a higher average portfolio. Additional information is presented in the following discussion of the "Worldwide Financial Services Operations."

The cost of sales to net sales ratio and other significant statement of consolidated income changes not previously discussed in millions of dollars follow:

	2019	2018	% Change
Cost of sales to net sales	76.8%	76.7%	
Finance and interest income	$ 3,493	$ 3,107	+12
Research and development expenses	1,783	1,658	+8
Selling, administrative and general expenses	3,551	3,455	+3
Interest expense	1,466	1,204	+22
Other operating expenses	1,578	1,399	+13

The cost of sales to net sales ratio increased compared to 2018 mainly due to higher production costs, the unfavorable effects of foreign currency exchange, and a less favorable product mix, partially offset by price realization. Finance and interest income increased in 2019 due to a larger average credit portfolio and higher average interest rates. Research and development expenses increased as a result of spending to support new, advanced products. Selling, administrative and general expenses increased primarily due to employee separation costs and acquisition related amortization, partially offset by the favorable effects of currency translation and lower incentive compensation. Interest expense increased in 2019 due to higher average borrowing rates and higher average borrowings. Other operating expenses increased in 2019 primarily due to impairments and higher losses on operating lease residual values and increased depreciation of equipment on operating leases, partially offset by lower pension and postretirement benefit costs excluding the service cost component.

The company has several funded and unfunded defined benefit pension plans and other postretirement benefit (OPEB) plans, primarily health care and life insurance plans. The company's costs for these plans in 2019 were $235 million, compared with $353 million in 2018. The long-term expected return on plan assets, which is reflected in these costs, was an expected gain of 6.5 percent in 2019 and 6.8 percent in 2018, or $838 million and $797 million, respectively. The actual return was a gain of $2,163 million in 2019 and $322 million in 2018. In 2020, the expected return will be approximately 6.4 percent. The company's costs under these plans in 2020 are expected to increase approximately $75 million. The company makes any required contributions to the plan assets under applicable regulations and voluntary contributions after evaluating the company's liquidity position and ability to make tax-deductible contributions. Total company contributions to the plans were $518 million in 2019 and $1,426 million in 2018, which included voluntary contributions and direct benefit payments. The voluntary contributions to plan assets were $306 million in 2019, which included $300 million to a U.S. OPEB plan, and $1,305 million in 2018, which included $1,300 million to the U.S. pension and OPEB plans. Total company contributions in 2020 are expected to be approximately $525 million. The anticipated contributions include a voluntary U.S. OPEB plan contribution of $300 million. The remaining contributions primarily include direct benefit payments from company funds. The company has no significant required contributions to U.S. pension plan assets in 2020 under applicable funding regulations. See the discussion in "Critical Accounting Policies" for more information about pension and OPEB benefit obligations.

BUSINESS SEGMENT AND GEOGRAPHIC AREA RESULTS

The following discussion relates to operating results by reportable segment and geographic area. Operating profit is income before certain external interest expense, certain foreign exchange gains or losses, income taxes, and corporate expenses. However, operating profit of the financial services segment includes the effect of interest expense and foreign currency exchange gains or losses.

Worldwide Agriculture and Turf Operations

The agriculture and turf segment results in millions of dollars follow:

	2019	2018	% Change
Net sales	$ 23,666	$ 23,191	+2
Operating profit	2,506	2,816	-11
Operating margin	10.6%	12.1%	

Segment sales increased due to price realization and higher shipment volumes, partially offset by the unfavorable effects of currency translation. Operating profit decreased largely due to higher production costs, the unfavorable effects of currency exchange, increased research and development costs, higher selling, administrative, and general expenses, and a less favorable sales mix, partially offset by price realization and higher shipment volumes.

Worldwide Construction and Forestry Operations

The construction and forestry segment results in millions of dollars follow:

	2019	2018	% Change
Net sales	$ 11,220	$ 10,160	+10
Operating profit	1,215	868	+40
Operating margin	10.8%	8.5%	

Segment sales increased in 2019 primarily due to higher shipment volumes and price realization, partially offset by the unfavorable effects of currency translation. The inclusion of Wirtgen's sales for two additional months in 2019 accounted for about 4 percent of the sales increase. Wirtgen's operating profit was $343 million in 2019, compared with $116 million in the prior year. Excluding Wirtgen, the operating profit improvement in 2019 was primarily

driven by price realization and higher shipment volumes, partially offset by higher production costs and a less favorable sales mix.

Worldwide Financial Services Operations

The financial services segment revenue, interest expense, and operating profit in millions of dollars, along with the ratio of earnings to fixed charges follow:

	2019	2018	% Change
Revenue (including intercompany revenue)	$ 3,969	$ 3,560	+11
Interest expense	1,234	936	+32
Operating profit	694	792	-12
Consolidated ratio of earnings to fixed charges	1.57	1.87	

Operating profit in 2019 declined mainly due to impairments and higher losses on operating lease residual values and unfavorable financing spreads, partially offset by income earned on a higher average portfolio. The average balance of receivables and leases financed was 8 percent higher in 2019, compared with 2018. Interest expense increased in 2019 as a result of higher average borrowing rates and higher average borrowings.

Equipment Operations in U.S. and Canada

The equipment operations in the U.S. and Canada results in millions of dollars follow:

	2019	2018	% Change
Net sales	$ 20,264	$ 18,847	+8
Operating profit	2,335	2,356	-1
Operating margin	11.5%	12.5%	

The operating profit decrease was due primarily to higher production costs, a less favorable sales mix, increased research and development expenses, and higher selling, administrative, and general expenses. The decline was largely offset by price realization and higher shipment volumes. Net sales increased in 2019 due primarily to price realization and higher shipment volumes. The physical volume of sales, excluding the effect of acquisitions, increased 4 percent, compared with 2018.

Equipment Operations outside U.S. and Canada

The equipment operations outside the U.S. and Canada results in millions of dollars follow:

	2019	2018	% Change
Net sales	$ 14,622	$ 14,504	+1
Operating profit	1,386	1,328	+4
Operating margin	9.5%	9.2%	

Operating profit increased primarily due to price realization and higher shipment volumes, partially offset by higher production costs, the unfavorable effects of currency exchange, increased research and development expenses, and higher selling, administrative, and general expenses. Net sales increased 1 percent in 2019, with Wirtgen adding 3 percent, compared to 2018. The increase was primarily the result of the Wirtgen acquisition and price realization, partially offset by the unfavorable effects of currency translation. The physical volume of sales, excluding the effect of acquisitions, was the same as 2018.

MARKET CONDITIONS AND OUTLOOK

Net income attributable to Deere & Company for fiscal 2020 is forecast to be in a range of $2,700 million to $3,100 million.

During the first quarter of 2020, the company announced a broad voluntary employee-separation program. The program's total pretax expenses are estimated to be about $140 million with annual savings of about $115 million (see Note 31).

Agriculture and Turf. The company's worldwide sales of agriculture and turf equipment are forecast to decline about 5 to 10 percent for fiscal year 2020, including price realization of 2 percent and a negative currency translation effect of 1 percent. Industry sales of agricultural equipment in the U.S. and Canada are forecast to decrease about 5 percent, driven by lower demand for large equipment. Full year industry sales in the EU28 member nations are forecast to be about the same as 2019 as are South American industry sales of tractors and combines. Asian sales are forecast to be about the same as 2019. Industry sales of turf and utility equipment in the U.S. and Canada are expected to be about the same for 2020.

Construction and Forestry. The company's worldwide sales of construction and forestry equipment are anticipated to decrease about 10 to 15 percent for 2020, with price realization having a favorable effect of 1 percent and foreign currency translation having an unfavorable effect of 1 percent. The outlook reflects slowing construction activity as well as the company's efforts to assist dealers to manage their inventory levels. In forestry, global industry sales are expected to be about the same as 2019.

Financial Services. Fiscal year 2020 net income attributable to Deere & Company for the financial services operations is expected to be approximately $600 million. Net income is expected to benefit from lower losses on lease residual values as well as income earned on a higher average portfolio. These items are forecast to be partially offset by a higher provision for credit losses, less favorable financing spreads, and higher selling and administrative expenses.

SAFE HARBOR STATEMENT

Safe Harbor Statement under the Private Securities Litigation Reform Act of 1995: Statements under "Overview," "Market Conditions and Outlook," and other forward-looking statements herein that relate to future events, expectations, and trends involve factors that are subject to change, and risks and uncertainties that could cause actual results to differ materially. Some of these risks and uncertainties could affect particular lines of business, while others could affect all of the company's businesses.

The company's agricultural equipment business is subject to a number of uncertainties including the factors that affect farmers' confidence and financial condition. These factors include demand for agricultural products, world grain stocks, weather conditions, soil conditions, harvest yields, prices for commodities and livestock, crop and livestock production expenses, availability of transport for crops, trade restrictions and tariffs (e.g., China), global trade agreements (e.g., the United States-Mexico-Canada Agreement), the level of farm product exports (including concerns

about genetically modified organisms), the growth and sustainability of non-food uses for some crops (including ethanol and biodiesel production), real estate values, available acreage for farming, the land ownership policies of governments, changes in government farm programs and policies, international reaction to such programs, changes in and effects of crop insurance programs, changes in environmental regulations and their impact on farming practices, animal diseases (e.g., African swine fever) and their effects on poultry, beef and pork consumption and prices and on livestock feed demand, and crop pests and diseases.

Factors affecting the outlook for the company's turf and utility equipment include consumer confidence, weather conditions, customer profitability, labor supply, consumer borrowing patterns, consumer purchasing preferences, housing starts and supply, infrastructure investment, spending by municipalities and golf courses, and consumable input costs.

Consumer spending patterns, real estate and housing prices, the number of housing starts, interest rates and the levels of public and non-residential construction are important to sales and results of the company's construction and forestry equipment. Prices for pulp, paper, lumber and structural panels are important to sales of forestry equipment.

All of the company's businesses and its results are affected by general economic conditions in the global markets and industries in which the company operates; customer confidence in general economic conditions; government spending and taxing; foreign currency exchange rates and their volatility, especially fluctuations in the value of the U.S. dollar; interest rates (including the availability of IBOR reference rates); inflation and deflation rates; changes in weather patterns; the political and social stability of the global markets in which the company operates; the effects of, or response to, terrorism and security threats; wars and other conflicts; natural disasters; and the spread of major epidemics.

Significant changes in market liquidity conditions, changes in the company's credit ratings and any failure to comply with financial covenants in credit agreements could impact access to funding and funding costs, which could reduce the company's earnings and cash flows. Financial market conditions could also negatively impact customer access to capital for purchases of the company's products and customer confidence and purchase decisions, borrowing and repayment practices, and the number and size of customer loan delinquencies and defaults. A debt crisis, in Europe or elsewhere, could negatively impact currencies, global financial markets, social and political stability, funding sources and costs, asset and obligation values, customers, suppliers, demand for equipment, and company operations and results. The company's investment management activities could be impaired by changes in the equity, bond and other financial markets, which would negatively affect earnings.

The anticipated withdrawal of the United Kingdom from the European Union and the perceptions as to the impact of the withdrawal may adversely affect business activity, political stability and economic conditions in the United Kingdom, the European Union and elsewhere. The economic conditions and outlook could be further adversely affected by (i) the uncertainty concerning the timing and terms of the exit, (ii) new or modified trading arrangements between the United Kingdom and other countries, (iii) the risk that one or more other European Union countries could come under increasing pressure to leave the European Union, or (iv) the risk that the euro as the single currency of the Eurozone could cease to exist. Any of these developments, or the perception that any of these developments are likely to occur, could affect economic growth or business activity in the United Kingdom or the European Union, and could result in the relocation of businesses, cause business interruptions, lead to economic recession or depression, and impact the stability of the financial markets, availability of credit, currency exchange rates, interest rates, financial institutions, and political, financial and monetary systems. Any of these developments could affect our businesses, liquidity, results of operations and financial position.

Additional factors that could materially affect the company's operations, access to capital, expenses and results include changes in, uncertainty surrounding and the impact of governmental trade, banking, monetary and fiscal policies, including financial regulatory reform and its effects on the consumer finance industry, derivatives, funding costs and other areas, and governmental programs, policies, tariffs and sanctions in particular jurisdictions or for the benefit of certain industries or sectors; retaliatory actions to such changes in trade, banking, monetary and fiscal policies; actions by central banks; actions by financial and securities regulators; actions by environmental, health and safety regulatory agencies, including those related to engine emissions, carbon and other greenhouse gas emissions, noise and the effects of climate change; changes to GPS radio frequency bands or their permitted uses; changes in labor and immigration regulations; changes to accounting standards; changes in tax rates, estimates, laws and regulations and company actions related thereto; changes to and compliance with privacy regulations; compliance with U.S. and foreign laws when expanding to new markets and otherwise; and actions by other regulatory bodies.

Other factors that could materially affect results include production, design and technological innovations and difficulties, including capacity and supply constraints and prices; the loss of or challenges to intellectual property rights whether through theft, infringement, counterfeiting or otherwise; the availability and prices of strategically sourced materials, components and whole goods; delays or disruptions in the company's supply chain or the loss of liquidity by suppliers; disruptions of infrastructures that support communications, operations or distribution; the failure of suppliers or the company to comply with laws, regulations and company policy pertaining to employment, human rights, health, safety, the environment, anti-corruption, privacy and data protection and other ethical business practices; events that damage the company's reputation or brand; significant investigations, claims, lawsuits or other legal proceedings; start-up of new plants and products; the success of new product initiatives; changes in customer product preferences and sales mix; gaps or limitations in rural broadband coverage, capacity and speed

needed to support technology solutions; oil and energy prices, supplies and volatility; the availability and cost of freight; actions of competitors in the various industries in which the company competes, particularly price discounting; dealer practices especially as to levels of new and used field inventories; changes in demand and pricing for used equipment and resulting impacts on lease residual values; labor relations and contracts; changes in the ability to attract, train and retain qualified personnel; acquisitions and divestitures of businesses; greater than anticipated transaction costs; the integration of new businesses; the failure or delay in closing or realizing anticipated benefits of acquisitions, joint ventures or divestitures; the implementation of organizational changes; the failure to realize anticipated savings or benefits of cost reduction, productivity, or efficiency efforts; difficulties related to the conversion and implementation of enterprise resource planning systems; security breaches, cybersecurity attacks, technology failures and other disruptions to the company's and suppliers' information technology infrastructure; changes in company declared dividends and common stock issuances and repurchases; changes in the level and funding of employee retirement benefits; changes in market values of investment assets, compensation, retirement, discount and mortality rates which impact retirement benefit costs; and significant changes in health care costs.

The liquidity and ongoing profitability of John Deere Capital Corporation and other credit subsidiaries depend largely on timely access to capital in order to meet future cash flow requirements, and to fund operations, costs, and purchases of the company's products. If general economic conditions deteriorate or capital markets become more volatile, funding could be unavailable or insufficient. Additionally, customer confidence levels may result in declines in credit applications and increases in delinquencies and default rates, which could materially impact write-offs and provisions for credit losses.

The company's outlook is based upon assumptions relating to the factors described above, which are sometimes based upon estimates and data prepared by government agencies. Such estimates and data are often revised. The company, except as required by law, undertakes no obligation to update or revise its outlook, whether as a result of new developments or otherwise. Further information concerning the company and its businesses, including factors that could materially affect the company's financial results, is included in the company's other filings with the SEC.

2018 COMPARED WITH 2017

The comparison of the 2018 results with 2017 is in the company's 2018 Form 10-K.

CAPITAL RESOURCES AND LIQUIDITY

The discussion of capital resources and liquidity has been organized to review separately, where appropriate, the company's consolidated totals, equipment operations, and financial services operations.

CONSOLIDATED

Positive cash flows from consolidated operating activities in 2019 were $3,412 million. This resulted primarily from net income adjusted for non-cash provisions and a change in accrued income taxes payable/receivable, which were partially offset by an increase in receivables related to sales, an increase in inventories after adjusting for equipment transferred to operating leases (see Note 7) and the disposition of the construction and forestry retail locations in Canada (see Note 4), and a change in net retirement benefits (see Note 8). Cash outflows from investing activities were $3,924 million in 2019, due primarily to the cost of receivables (excluding receivables related to sales) and cost of equipment on operating leases acquired exceeding the collections of receivables and the proceeds from sales of equipment on operating leases by $2,848 million, purchases of property and equipment of $1,120 million, and purchases of marketable securities exceeding proceeds from maturities and sales by $51 million, partially offset by proceeds from sales of businesses and unconsolidated affiliates, net of cash sold, of $93 million (see Note 4). Cash inflows from financing activities were $509 million in 2019, due primarily to an increase in borrowings of $2,643 million and proceeds from issuance of common stock (resulting from the exercise of stock options) of $178 million, partially offset by repurchases of common stock of $1,253 million and dividends paid of $943 million. Cash, cash equivalents, and restricted cash decreased $59 million during 2019.

Over the last three years, operating activities have provided an aggregate of $7,430 million in cash. In addition, increases in borrowings were $9,774 million, proceeds from issuance of common stock (resulting from the exercise of stock options) were $924 million, proceeds from sales of businesses and unconsolidated affiliates were $363 million, and proceeds from maturities and sales exceeded purchases of marketable securities by $178 million. The aggregate amount of these cash flows was used mainly to acquire receivables (excluding receivables related to sales) and equipment on operating leases that exceeded collections of receivables and the proceeds from sales of equipment on operating leases by $5,950 million, acquire businesses of $5,529 million, purchase property and equipment of $2,611 million, pay dividends of $2,513 million, and repurchase common stock of $2,217 million. Cash, cash equivalents, and restricted cash decreased $534 million over the three-year period.

The company has access to most global capital markets at reasonable costs and expects to have sufficient sources of global funding and liquidity to meet its funding needs. Sources of liquidity for the company include cash and cash equivalents, marketable securities, funds from operations, the issuance of commercial paper and term debt, the securitization of retail notes (both public and private markets), and committed and uncommitted bank lines of credit. The company's commercial paper outstanding at November 3, 2019 and October 28, 2018 was $2,698 million and $3,857 million, respectively, while the total cash and cash equivalents and marketable securities position was $4,438 million and $4,394 million, respectively. The amount of the total cash and cash equivalents and marketable securities held by

foreign subsidiaries was $2,731 million and $2,433 million at November 3, 2019 and October 28, 2018, respectively.

Lines of Credit. The company also has access to bank lines of credit with various banks throughout the world. Worldwide lines of credit totaled $8,499 million at November 3, 2019, $5,143 million of which were unused. For the purpose of computing the unused credit lines, commercial paper, and short-term bank borrowings, excluding secured borrowings and the current portion of long-term borrowings, were primarily considered to constitute utilization. Included in the total credit lines at November 3, 2019 was a 364-day credit facility agreement of $2,800 million, expiring in fiscal April 2020. In addition, total credit lines included long-term credit facility agreements of $2,500 million, expiring in April 2023, and $2,500 million, expiring in April 2024. The agreements are mutually extendable and the annual facility fees are not significant. These credit agreements require John Deere Capital Corporation (Capital Corporation) to maintain its consolidated ratio of earnings to fixed charges at not less than 1.05 to 1 for each fiscal quarter and the ratio of senior debt, excluding securitization indebtedness, to capital base (total subordinated debt and stockholder's equity excluding accumulated other comprehensive income (loss)) at not more than 11 to 1 at the end of any fiscal quarter. The credit agreements also require the equipment operations to maintain a ratio of total debt to total capital (total debt and stockholders' equity excluding accumulated other comprehensive income (loss)) of 65 percent or less at the end of each fiscal quarter. Under this provision, the company's excess equity capacity and retained earnings balance free of restriction at November 3, 2019 was $13,554 million. Alternatively under this provision, the equipment operations had the capacity to incur additional debt of $25,171 million at November 3, 2019. All of these credit agreement requirements have been met during the periods included in the consolidated financial statements.

Debt Ratings. To access public debt capital markets, the company relies on credit rating agencies to assign short-term and long-term credit ratings to the company's securities as an indicator of credit quality for fixed income investors. A security rating is not a recommendation by the rating agency to buy, sell, or hold company securities. A credit rating agency may change or withdraw company ratings based on its assessment of the company's current and future ability to meet interest and principal repayment obligations. Each agency's rating should be evaluated independently of any other rating. Lower credit ratings generally result in higher borrowing costs, including costs of derivative transactions, and reduced access to debt capital markets.

The senior long-term and short-term debt ratings and outlook currently assigned to unsecured company securities by the rating agencies engaged by the company are as follows:

	Senior Long-Term	Short-Term	Outlook
Fitch Ratings	A	F1	Stable
Moody's Investors Service, Inc.	A2	Prime-1	Stable
Standard & Poor's	A	A-1	Stable

Trade accounts and notes receivable primarily arise from sales of goods to independent dealers. Trade receivables increased by $226 million in 2019 due primarily to higher shipment volumes, partially offset by foreign currency translation. The ratio of trade accounts and notes receivable at November 3, 2019 and October 28, 2018 to fiscal year net sales was 15 percent in both 2019 and 2018. Total worldwide agriculture and turf receivables increased $14 million and construction and forestry receivables increased $212 million. The collection period for trade receivables averages less than 12 months. The percentage of trade receivables outstanding for a period exceeding 12 months was 3 percent at November 3, 2019 and 2 percent at October 28, 2018.

Deere & Company's stockholders' equity was $11,413 million at November 3, 2019, compared with $11,288 million at October 28, 2018. The increase of $125 million resulted from net income attributable to Deere & Company of $3,253 million and an increase in common stock of $168 million, which were partially offset by an increase in treasury stock of $1,162 million, dividends declared of $963 million, a change in the retirement benefits adjustment of $678 million, a change in the cumulative translation adjustment of $448 million, and an unrealized loss on derivatives of $75 million.

EQUIPMENT OPERATIONS

The company's equipment businesses are capital intensive and are subject to seasonal variations in financing requirements for inventories and certain receivables from dealers. The equipment operations sell a significant portion of their trade receivables to financial services. To the extent necessary, funds provided from operations are supplemented by external financing sources.

Cash provided by operating activities of the equipment operations during 2019, including intercompany cash flows, was $3,200 million due primarily to net income adjusted for non-cash provisions, partially offset by a change in accrued income taxes payable/receivable, a change in net retirement benefits (see Note 8), an increase in trade receivables and Equipment Operations' financing receivables, and an increase in inventories after adjusting for the Canada retail locations disposition (see Note 4) and foreign currency translation.

Over the last three years, these operating activities, including intercompany cash flows, have provided an aggregate of $8,915 million in cash.

Trade receivables held by the equipment operations increased by $108 million during 2019. The equipment operations sell a significant portion of their trade receivables to financial services (see previous consolidated discussion).

Inventories decreased by $174 million in 2019 due primarily to the Canada retail locations disposition (see Note 4) and the effect of foreign currency translation. Most of these inventories are valued on the last-in, first-out (LIFO) method. The ratios of inventories on a first-in, first-out (FIFO) basis (see Note 16), which approximates current cost, to fiscal year cost of sales were 29 percent and 30 percent at November 3, 2019 and October 28, 2018, respectively.

Total interest-bearing debt of the equipment operations was $6,446 million at the end of 2019, compared with $6,223 million at

the end of 2018 and $5,866 million at the end of 2017. The ratio of total debt to total capital (total interest-bearing debt and stockholders' equity) at the end of 2019, 2018, and 2017 was 36 percent, 36 percent, and 38 percent, respectively.

The company may from time to time seek to retire portions of its outstanding debt securities through cash repurchases or exchanges for other securities, in open-market purchases, privately negotiated transactions, or otherwise. Such repurchases or exchanges, if any, will be subject to and depend on prevailing market conditions, the company's liquidity requirements, contractual restrictions, and other factors. The amounts involved in any such transactions, individually or in the aggregate, may be material.

Property and equipment cash expenditures for the equipment operations in 2019 were $1,118 million, compared with $893 million in 2018. Capital expenditures in 2020 are estimated to be approximately $1,100 million.

In October 2019, the company entered into a definitive agreement to acquire Unimil, a privately held Brazilian company in the aftermarket service parts business for sugarcane harvesters. The expected cash purchase price is R$375 million (or approximately US$95 million based on the exchange rate at the end of the fiscal year). The company expects to fund the acquisition and the transaction expenses with current cash. The transaction requires customary regulatory approval and is expected to close in six to ten months.

FINANCIAL SERVICES

The financial services operations rely on their ability to raise substantial amounts of funds to finance their receivable and lease portfolios. Their primary sources of funds for this purpose are a combination of commercial paper, term debt, securitization of retail notes, equity capital, and borrowings from Deere & Company.

The cash provided by operating and financing activities was used for investing activities. Cash flows from the financial services' operating activities, including intercompany cash flows, were $2,418 million in 2019. Cash used by investing activities totaled $4,721 million in 2019 due primarily to the cost of receivables (excluding trade and wholesale) and cost of equipment on operating leases acquired exceeding collections of these receivables and the proceeds from sales of equipment on operating leases by $3,729 million, an increase in trade receivables and wholesale notes of $935 million, and purchases of marketable securities exceeding proceeds from maturities and sales by $60 million. Cash provided by financing activities totaled $2,264 million in 2019, representing primarily an increase in external borrowings of $2,416 million and an increase in borrowings from Deere & Company of $305 million, partially offset by dividends paid to Deere & Company of $427 million. Cash, cash equivalents, and restricted cash decreased $53 million.

Over the last three years, the operating activities, including intercompany cash flows, have provided $5,937 million in cash. In addition, an increase in total borrowings of $7,351 million provided cash inflows. These amounts have been used mainly to fund receivables (excluding trade and wholesale) and equipment on operating lease acquisitions, which exceeded collections and the proceeds from sales of equipment on operating leases, by $9,677 million, fund an increase in trade and wholesale receivables of $2,537 million, pay dividends to Deere & Company of $1,256 million, and purchase $140 million of marketable securities in excess of maturities and sales. Cash, cash equivalents, and restricted cash decreased $579 million over the three-year period.

Receivables and equipment on operating leases increased by $3,211 million in 2019, compared with 2018. Total acquisition volumes of receivables (excluding trade and wholesale) and cost of equipment on operating leases increased 7 percent in 2019, compared with 2018. The volumes of retail notes, revolving charge accounts, financing leases, and operating leases increased approximately 10 percent, 6 percent, 5 percent, and 1 percent, respectively. During 2019, the amount of wholesale notes and trade receivables increased 17 percent and 3 percent, respectively. At November 3, 2019 and October 28, 2018, net receivables and leases administered, which include receivables administered but not owned, were $46,194 million and $42,985 million, respectively.

Total external interest-bearing debt of the financial services operations was $38,888 million at the end of 2019, compared with $36,033 million at the end of 2018 and $34,179 million at the end of 2017. Total external borrowings have changed generally corresponding with the level of the receivable and lease portfolio, the level of cash and cash equivalents, the change in payables owed to Deere & Company, and the change in investment from Deere & Company. The financial services operations' ratio of total interest-bearing debt to total stockholder's equity was 8.0 to 1 at the end of 2019, 7.5 to 1 at the end of 2018, and 7.6 to 1 at the end of 2017.

The Capital Corporation has a revolving credit agreement to utilize bank conduit facilities to securitize retail notes (see Note 14). At November 3, 2019, the facility had a total capacity, or "financing limit," of up to $3,500 million of secured financings at any time. The facility was renewed in November 2019 with a capacity of $3,500 million. After a two-year revolving period, unless the banks and Capital Corporation agree to renew, Capital Corporation would liquidate the secured borrowings over time as payments on the retail notes are collected. At November 3, 2019, $1,434 million of short-term securitization borrowings was outstanding under the agreement.

During 2019, the financial services operations issued $3,310 million and retired $2,914 million of retail note securitization borrowings. During 2019, the financial services operations also issued $8,638 million and retired $5,454 million of long-term borrowings, which were primarily medium-term notes.

OFF-BALANCE-SHEET ARRANGEMENTS

At November 3, 2019, the company had approximately $343 million of guarantees issued primarily to banks outside the U.S. and Canada related to third-party receivables for the retail financing of John Deere and Wirtgen equipment. The company may recover a portion of any required payments incurred under these

agreements from repossession of the equipment collateralizing the receivables. The maximum remaining term of the receivables guaranteed at November 3, 2019 was approximately seven years.

AGGREGATE CONTRACTUAL OBLIGATIONS

The payment schedule for the company's contractual obligations at November 3, 2019 in millions of dollars is as follows:

	Total	Less than 1 year	2&3 years	4&5 years	More than 5 years
On-balance-sheet					
Debt*					
Equipment operations**	$ 6,483	$ 1,013	$ 1,179	$ 563	$ 3,728
Financial services**	38,706	11,961	15,130	7,014	4,601
Total	45,189	12,974	16,309	7,577	8,329
Interest relating to debt***	5,424	1,114	1,422	728	2,160
Accounts payable	2,851	2,751	73	25	2
Capital leases	32	12	16	3	1
Off-balance-sheet					
Purchase obligations	2,623	2,582	26	12	3
Operating leases	337	111	133	67	26
Total	$56,456	$ 19,544	$ 17,979	$ 8,412	$10,521

* Principal payments.

** Payments related to securitization borrowings of $4,327 million classified as short-term on the balance sheet related to the securitization of retail notes are included in this table based on the expected payment schedule (see Note 19).

*** Includes projected payments related to interest rate swaps.

The previous table does not include unrecognized tax benefit liabilities of approximately $553 million at November 3, 2019, since the timing of future payments is not reasonably estimable at this time (see Note 9). For additional information regarding pension and OPEB obligations, short-term borrowings, long-term borrowings, and lease obligations, see Notes 8, 19, 21, and 22, respectively.

CRITICAL ACCOUNTING POLICIES

The preparation of the company's consolidated financial statements in conformity with accounting principles generally accepted in the U.S. requires management to make estimates and assumptions that affect reported amounts of assets, liabilities, revenues, and expenses. Changes in these estimates and assumptions could have a significant effect on the financial statements. The accounting policies below are those management believes are the most critical to the preparation of the company's financial statements and require the most difficult, subjective, or complex judgments. The company's other accounting policies are described in the Notes to the Consolidated Financial Statements.

Sales Incentives

At the time a sale to a dealer is recognized, the company records an estimate of the future sales incentive costs as a reduction to the sales price. These incentives may be based on a dealer's purchase volume, or on retail sales incentive programs for allowances and financing programs that will be due when the dealer sells the equipment to a retail customer. The estimated cost of these programs is based on historical data, announced and expected incentive programs, field inventory levels, and forecasted sales volumes. The final cost of these programs is determined at the end of the measurement period for volume-based incentives or when the dealer sells the equipment to the retail customer. This is due to numerous programs available at any particular time and new programs that may be announced after the company records the equipment sale. Changes in the mix and types of programs affect these estimates, which are reviewed quarterly.

The sales incentive accruals at November 3, 2019, October 28, 2018, and October 29, 2017 were $2,033 million, $1,850 million, and $1,581 million, respectively. The total accrual is recorded $1,443 million, $1,297 million, and $1,089 million in trade accounts and notes receivable – net, and $590 million, $553 million, and $492 million in accounts payable and accrued expenses at November 3, 2019, October 28, 2018, and October 29, 2017, respectively. The increases in 2019 and 2018 were related primarily to higher sales volume.

The estimation of the retail sales incentive accrual is impacted by many assumptions. One of the key assumptions is the predictive value of the historical percent of retail sales incentive costs to retail sales from dealers. Over the last five fiscal years, this percent has varied by an average of approximately plus or minus 1.1 percent, compared to the average retail sales incentive costs to retail sales percent during that period. Holding other assumptions constant, if this estimated retail incentive cost experience percent were to increase or decrease 1.1 percent, the sales incentive accrual at November 3, 2019 would increase or decrease by approximately $94 million.

Product Warranties

At the time a sale is recognized, the company records the estimated future warranty costs. The company generally determines its total warranty liability by applying historical claims rate experience to the estimated amount of equipment that has been sold and is still under warranty based on dealer inventories and retail sales. The historical claims rate is primarily determined by a review of five-year claims costs and consideration of current quality developments. Variances in claims experience and the type of warranty programs affect these estimates, which are reviewed quarterly.

The product warranty accruals, excluding extended warranty unamortized premiums, at November 3, 2019, October 28, 2018, and October 29, 2017 were $1,218 million, $1,146 million, and $1,007 million, respectively. The increases in 2019 and 2018 were related primarily to higher sales volume.

Estimates used to determine the product warranty accruals are significantly affected by the historical percent of warranty claims costs to sales. Over the last five fiscal years, this percent has varied by an average of approximately plus or minus .09 percent, compared to the average warranty costs to sales percent during that period. Holding other assumptions constant, if this estimated cost experience percent were to increase or decrease .09 percent, the warranty accrual at November 3, 2019 would increase or decrease by approximately $40 million.

Postretirement Benefit Obligations

Pension and other postretirement benefit, primarily health care and life insurance plans, obligations are based on various assumptions used by the company's actuaries in calculating these amounts. These assumptions include discount rates, health care cost trend rates, expected return on plan assets, compensation increases, retirement rates, mortality rates, and other factors. Actual results that differ from the assumptions and changes in assumptions affect future expenses and obligations.

The pension liabilities, net of pension assets, recognized on the balance sheet at November 3, 2019 were $226 million. The pension assets, net of pension liabilities, recognized on the balance sheet at October 28, 2018 were $494 million. The pension liabilities, net of pension assets, recognized on the balance sheet at October 29, 2017 were $1,073 million. The increase in pension net liabilities in 2019 was due primarily to decreases in discount rates and interest on the liabilities, largely offset by the return on plan assets. The increase in pension net assets in 2018 was due primarily to increases in discount rates and contributions to a U.S. pension plan (see Note 8), partially offset by interest on the liabilities. The OPEB liabilities, net of OPEB assets, at November 3, 2019, October 28, 2018, and October 29, 2017 were $4,686 million, $4,753 million, and $5,623 million, respectively. The decrease in OPEB net liabilities in 2019 was due primarily to contributions to a U.S. OPEB plan, a decrease in health care trend rates, and company contributions for benefit payments, mostly offset by decreases in discount rates. The decrease in OPEB net liabilities in 2018 was due primarily to increases in discount rates and contributions to the U.S. OPEB plans (see Note 8).

The effect of hypothetical changes to selected assumptions on the company's major U.S. retirement benefit plans would be as follows in millions of dollars:

Assumptions	Percentage Change	November 3, 2019 Increase (Decrease) PBO/APBO*	2020 Increase (Decrease) Expense
Pension			
Discount rate**	+/-.5	$ (793)/917	$ (42)/50
Expected return on assets	+/-.5		(57)/57
OPEB			
Discount rate**	+/-.5	(316)/350	1/14
Expected return on assets	+/-.5		(4)/4
Health care cost trend rate**	+/-1.0	638/(514)	80/(40)

* Projected benefit obligation (PBO) for pension plans and accumulated postretirement benefit obligation (APBO) for OPEB plans.

** Pretax impact on service cost, interest cost, and amortization of gains or losses.

Goodwill

Goodwill is not amortized and is tested for impairment annually and when events or circumstances change such that it is more likely than not that the fair value of a reporting unit is reduced below its carrying amount. The end of the fiscal third quarter is the annual measurement date. To test for goodwill impairment, the carrying value of each reporting unit is compared with its fair value. If the carrying value of the goodwill is considered impaired, a loss is measured as the excess of the reporting unit's carrying value over the fair value, with a limit of the goodwill allocated to that reporting unit.

An estimate of the fair value of the reporting unit is determined through a combination of comparable market values for similar businesses and discounted cash flows. These estimates can change significantly based on such factors as the reporting unit's financial performance, economic conditions, interest rates, growth rates, pricing, changes in business strategies, and competition.

Based on this testing, the company has not identified a reporting unit for which the goodwill was impaired in 2019, 2018, or 2017. For all reporting units, a 10 percent decrease in the estimated fair value would have had no effect on the carrying value of goodwill at the annual measurement date in 2019.

Allowance for Credit Losses

The allowance for credit losses represents an estimate of the losses inherent in the company's receivable portfolio. The level of the allowance is based on many quantitative and qualitative factors, including historical net loss experience by finance product category, portfolio duration, delinquency trends, economic conditions in the company's major markets and geographies, commodity price trends, and credit risk quality. The company has an established process to calculate a range of possible outcomes and determine the adequacy of the allowance. The adequacy of the allowance is assessed quarterly by finance product category. Different assumptions or changes in economic conditions would result in changes to the allowance for credit losses and the provision for credit losses.

The total allowance for credit losses at November 3, 2019, October 28, 2018, and October 29, 2017 was $222 million, $248 million, and $243 million, respectively. The allowance decrease in 2019 was mainly due to continued improvement in credit loss experience in certain foreign markets. The allowance increase in 2018 was due primarily to growth in the receivable portfolio.

The assumptions used in evaluating the company's exposure to credit losses involve estimates and significant judgment. The historical loss experience on the receivable portfolio represents one factor used in determining the allowance for credit losses. Compared to the average loss experience over the last five fiscal years, this percent has varied by an average of approximately plus or minus .04 percent, compared to the average loss experience percent during that period. Holding other factors constant, if this estimated loss experience on the receivable portfolio were to increase or decrease .04 percent, the allowance for credit losses at November 3, 2019 would increase or decrease by approximately $14 million.

Operating Lease Residual Values

The carrying value of equipment on operating leases is affected by the estimated fair values of the equipment at the end of the lease (residual values). Upon termination of the lease, the equipment is either purchased by the lessee or sold to a third party, in which case the company may record a gain or a loss for the difference

between the estimated residual value and the sale price. The residual values are dependent on current economic conditions and are reviewed when events or circumstances necessitate an evaluation. Changes in residual value assumptions would affect the amount of depreciation expense and the amount of investment in equipment on operating leases.

The total operating lease residual values at November 3, 2019, October 28, 2018, and October 29, 2017 were $5,259 million, $5,089 million, and $4,679 million, respectively. The changes in 2019 and 2018 were due primarily to the increasing levels of operating leases.

Estimates used in determining end of lease market values for equipment on operating leases significantly impact the amount and timing of depreciation expense. Hypothetically, if future market values for this equipment were to decrease 10 percent from the company's present estimates, the total effect would be to increase the company's annual depreciation for equipment on operating leases by approximately $175 million.

Income Taxes

The company's income tax provision, deferred income tax assets and liabilities, and liabilities for uncertain tax benefits represent the company's best estimate of current and future income taxes to be paid. The annual tax rate is based on income tax laws, statutory tax rates, taxable income levels, and tax planning opportunities available in various jurisdictions where the company operates. These tax laws are complex, and require significant judgment to determine the consolidated provision for income taxes. Changes in tax laws, regulations, statutory tax rates, and estimates of the company's future taxable income levels could result in actual realization of deferred taxes being materially different from amounts provided for in the consolidated financial statements.

Deferred income taxes represent temporary differences between the tax and the financial reporting basis of assets and liabilities, which will result in taxable or deductible amounts in the future. Deferred tax assets also include loss carryforwards and tax credits. These assets are regularly assessed for the likelihood of recoverability from estimated future taxable income, reversal of deferred tax liabilities, and tax planning strategies. To the extent the company determines that it is more likely than not a deferred income tax asset will not be realized, a valuation allowance is established. The recoverability analysis of the deferred income tax assets and the related valuation allowances requires significant judgment and relies on estimates.

Uncertain tax positions are determined based on whether it is more likely than not the tax positions will be sustained based on the technical merits of the position. For those positions that meet the more likely than not criteria, an estimate of the largest amount of tax benefit that is greater than 50 percent likely to be realized upon ultimate settlement with the related tax authority is recognized. The ultimate resolution of the tax position could take many years and result in a payment that is significantly different from the original estimate.

Tax reform included additional requirements effective for the company in 2019. Those provisions include a tax on global intangible low-taxed income (GILTI), a tax determined by base erosion and anti-abuse tax benefits (BEAT) from certain payments between a U.S. corporation and foreign subsidiaries, a limitation of certain executive compensation, a deduction for foreign derived intangible income (FDII), and interest expense limitations. These provisions require interpretation and the use of estimates to determine the liability and benefits. The company's accounting policy election is to treat the taxes due on future U.S. inclusions in taxable income under GILTI as a period cost when incurred.

A provision for foreign withholding taxes has not been recorded on undistributed profits of the company's non-U.S. subsidiaries that are determined to be indefinitely reinvested outside the U.S. If management intentions change in the future, there may be a significant impact on the provision for income taxes in the period the change occurs. For further information on income taxes, see Note 9 to the consolidated financial statements.

FINANCIAL INSTRUMENT MARKET RISK INFORMATION

The company is naturally exposed to various interest rate and foreign currency risks. As a result, the company enters into derivative transactions to manage certain of these exposures that arise in the normal course of business and not for the purpose of creating speculative positions or trading. The company's financial services operations manage the relationship of the types and amounts of their funding sources to their receivable and lease portfolio in an effort to diminish risk due to interest rate and foreign currency fluctuations while responding to favorable financing opportunities. In addition, the company has interest rate exposure at certain equipment operations units for below market retail financing programs that are used as sales incentives and are offered for extended periods. Accordingly, from time to time, these operations enter into interest rate swap agreements to manage their interest rate exposure. The company also has foreign currency exposures at some of its foreign and domestic operations related to buying, selling, and financing in currencies other than the functional currencies. The company has entered into agreements related to the management of these foreign currency transaction risks.

Interest Rate Risk

Quarterly, the company uses a combination of cash flow models to assess the sensitivity of its financial instruments with interest rate exposure to changes in market interest rates. The models calculate the effect of adjusting interest rates as follows: cash flows for financing receivables are discounted at the current prevailing rate for each receivable portfolio, cash flows for marketable securities are primarily discounted at the applicable benchmark yield curve plus market credit spreads, cash flows for unsecured borrowings are discounted at the applicable benchmark yield curve plus market credit spreads for similarly rated borrowers, cash flows for securitized borrowings are discounted at the swap yield curve plus a market credit spread for similarly rated borrowers, and cash flows for interest rate swaps are projected and discounted using forward rates from the swap yield curve at the repricing dates. The net loss

in these financial instruments' fair values which would be caused by increasing the interest rates by 10 percent from the market rates at November 3, 2019 would have been approximately $22 million. The net loss from decreasing the interest rates by 10 percent at October 28, 2018 would have been approximately $21 million.

Foreign Currency Risk

In the equipment operations, the company's practice is to hedge significant currency exposures. Worldwide foreign currency exposures are reviewed quarterly. Based on the equipment operations' anticipated and committed foreign currency cash inflows, outflows, and hedging policy for the next twelve months, the company estimates that a hypothetical 10 percent weakening of the U.S. dollar relative to other currencies through 2020 would decrease the 2020 expected net cash inflows by approximately $11 million. At October 28, 2018, a hypothetical 10 percent strengthening of the U.S. dollar under similar assumptions and calculations indicated a potential $55 million adverse effect on the 2019 net cash inflows.

In the financial services operations, the company's policy is to hedge the foreign currency risk if the currency of the borrowings does not match the currency of the receivable portfolio. As a result, a hypothetical 10 percent adverse change in the value of the U.S. dollar relative to all other foreign currencies would not have a material effect on the financial services cash flows.

DEERE & COMPANY

STATEMENT OF CONSOLIDATED INCOME

For the Years Ended November 3, 2019, October 28, 2018, and October 29, 2017

(In millions of dollars and shares except per share amounts)

	2019	2018	2017
Net Sales and Revenues			
Net sales	$ 34,886	$ 33,351	$ 25,885
Finance and interest income	3,493	3,107	2,732
Other income	879	900	1,121
Total	39,258	37,358	29,738
Costs and Expenses			
Cost of sales	26,792	25,571	19,866
Research and development expenses	1,783	1,658	1,373
Selling, administrative and general expenses	3,551	3,455	3,098
Interest expense	1,466	1,204	899
Other operating expenses	1,578	1,399	1,348
Total	35,170	33,287	26,584
Income of Consolidated Group before Income Taxes	4,088	4,071	3,154
Provision for income taxes	852	1,727	971
Income of Consolidated Group	3,236	2,344	2,183
Equity in income (loss) of unconsolidated affiliates	21	27	(24)
Net Income	3,257	2,371	2,159
Less: Net income attributable to noncontrolling interests	4	3	
Net Income Attributable to Deere & Company	$ 3,253	$ 2,368	$ 2,159
Per Share Data			
Basic	$ 10.28	$ 7.34	$ 6.76
Diluted	$ 10.15	$ 7.24	$ 6.68
Dividends declared	$ 3.04	$ 2.58	$ 2.40
Average Shares Outstanding			
Basic	316.5	322.6	319.5
Diluted	320.6	327.3	323.3

The notes to consolidated financial statements are an integral part of this statement.

DEERE & COMPANY

STATEMENT OF CONSOLIDATED COMPREHENSIVE INCOME

For the Years Ended November 3, 2019, October 28, 2018, and October 29, 2017

(In millions of dollars)

	2019	2018	2017
Net Income	$ 3,257	$ 2,371	$ 2,159
Other Comprehensive Income (Loss), Net of Income Taxes			
Retirement benefits adjustment	(678)	1,052	829
Cumulative translation adjustment	(448)	(195)	230
Unrealized gain (loss) on derivatives	(75)	9	4
Unrealized gain (loss) on debt securities	29	(13)	(1)
Other Comprehensive Income (Loss), Net of Income Taxes	(1,172)	853	1,062
Comprehensive Income of Consolidated Group	2,085	3,224	3,221
Less: Comprehensive income attributable to noncontrolling interests	4	2	
Comprehensive Income Attributable to Deere & Company	$ 2,081	$ 3,222	$ 3,221

The notes to consolidated financial statements are an integral part of this statement.

DEERE & COMPANY
CONSOLIDATED BALANCE SHEET
As of November 3, 2019 and October 28, 2018
(In millions of dollars)

	2019	2018
ASSETS		
Cash and cash equivalents	$ 3,857	$ 3,904
Marketable securities	581	490
Receivables from unconsolidated affiliates	46	22
Trade accounts and notes receivable - net	5,230	5,004
Financing receivables - net	29,195	27,054
Financing receivables securitized - net	4,383	4,022
Other receivables	1,487	1,736
Equipment on operating leases - net	7,567	7,165
Inventories	5,975	6,149
Property and equipment - net	5,973	5,868
Investments in unconsolidated affiliates	215	207
Goodwill	2,917	3,101
Other intangible assets - net	1,380	1,562
Retirement benefits	840	1,298
Deferred income taxes	1,466	808
Other assets	1,899	1,718
Total Assets	$ 73,011	$ 70,108
LIABILITIES AND STOCKHOLDERS' EQUITY		
LIABILITIES		
Short-term borrowings	$ 10,784	$ 11,062
Short-term securitization borrowings	4,321	3,957
Payables to unconsolidated affiliates	142	129
Accounts payable and accrued expenses	9,656	10,111
Deferred income taxes	495	556
Long-term borrowings	30,229	27,237
Retirement benefits and other liabilities	5,953	5,751
Total liabilities	61,580	58,803
Commitments and contingencies (Note 23)		
Redeemable noncontrolling interest	14	14
STOCKHOLDERS' EQUITY		
Common stock, $1 par value (authorized – 1,200,000,000 shares; issued – 536,431,204 shares in 2019 and 2018), at paid-in amount	4,642	4,474
Common stock in treasury, 223,290,789 shares in 2019 and 217,975,806 shares in 2018, at cost	(17,474)	(16,312)
Retained earnings	29,852	27,553
Accumulated other comprehensive income (loss)	(5,607)	(4,427)
Total Deere & Company stockholders' equity	11,413	11,288
Noncontrolling interests	4	3
Total stockholders' equity	11,417	11,291
Total Liabilities and Stockholders' Equity	$ 73,011	$ 70,108

The notes to consolidated financial statements are an integral part of this statement.

DEERE & COMPANY

STATEMENT OF CONSOLIDATED CASH FLOWS

For the Years Ended November 3, 2019, October 28, 2018, and October 29, 2017

(In millions of dollars)

	2019	2018	2017
Cash Flows from Operating Activities			
Net income	$ 3,257	$ 2,371	$ 2,159
Adjustments to reconcile net income to net cash provided by operating activities:			
Provision for credit losses	43	90	98
Provision for depreciation and amortization	2,019	1,927	1,716
Impairment charges	77		40
Share-based compensation expense	82	84	68
(Gain) loss on sales of businesses and unconsolidated affiliates	5	(25)	(375)
Undistributed earnings of unconsolidated affiliates	9	(26)	(14)
Provision (credit) for deferred income taxes	(465)	1,480	100
Changes in assets and liabilities:			
Trade, notes, and financing receivables related to sales	(869)	(1,531)	(839)
Inventories	(780)	(1,772)	(1,305)
Accounts payable and accrued expenses	46	722	968
Accrued income taxes payable/receivable	173	(466)	(84)
Retirement benefits	(233)	(1,026)	(32)
Other	48	(6)	(304)
Net cash provided by operating activities	3,412	1,822	2,196
Cash Flows from Investing Activities			
Collections of receivables (excluding receivables related to sales)	16,706	15,589	14,671
Proceeds from maturities and sales of marketable securities	89	76	404
Proceeds from sales of equipment on operating leases	1,648	1,483	1,441
Proceeds from sales of businesses and unconsolidated affiliates, net of cash sold	93	156	114
Cost of receivables acquired (excluding receivables related to sales)	(18,873)	(17,013)	(15,222)
Acquisitions of businesses, net of cash acquired		(5,245)	(284)
Purchases of marketable securities	(140)	(133)	(118)
Purchases of property and equipment	(1,120)	(896)	(595)
Cost of equipment on operating leases acquired	(2,329)	(2,054)	(1,997)
Other	2	(139)	(76)
Net cash used for investing activities	(3,924)	(8,176)	(1,662)
Cash Flows from Financing Activities			
Increase (decrease) in total short-term borrowings	(917)	473	1,310
Proceeds from long-term borrowings	9,986	8,288	8,702
Payments of long-term borrowings	(6,426)	(6,245)	(5,397)
Proceeds from issuance of common stock	178	217	529
Repurchases of common stock	(1,253)	(958)	(6)
Dividends paid	(943)	(806)	(764)
Other	(116)	(93)	(88)
Net cash provided by financing activities	509	876	4,286
Effect of Exchange Rate Changes on Cash, Cash Equivalents, and Restricted Cash	(56)	26	157
Net Increase (Decrease) in Cash, Cash Equivalents, and Restricted Cash	(59)	(5,452)	4,977
Cash, Cash Equivalents, and Restricted Cash at Beginning of Year	4,015	9,467	4,490
Cash, Cash Equivalents, and Restricted Cash at End of Year	$ 3,956	$ 4,015	$ 9,467

The notes to consolidated financial statements are an integral part of this statement.

DEERE & COMPANY

STATEMENT OF CHANGES IN CONSOLIDATED STOCKHOLDERS' EQUITY

For the Years Ended October 29, 2017, October 28, 2018, and November 3, 2019

(In millions of dollars)

	Total Stockholders' Equity							
		Deere & Company Stockholders						
	Total Stockholders' Equity	Common Stock	Treasury Stock	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Noncontrolling Interests		Redeemable Noncontrolling Interest
Balance October 30, 2016	$ 6,531	$ 3,912	$ (15,677)	$ 23,911	$ (5,626)	$ 11		$ 14
Net income	2,159			2,159				
Other comprehensive income	1,062				1,062			
Repurchases of common stock	(6)		(6)					
Treasury shares reissued	222		222					
Dividends declared	(770)			(769)		(1)		
Stock options and other	362	369				(7)		
Balance October 29, 2017	9,560	4,281	(15,461)	25,301	(4,564)	3		14
Net income	2,370			2,368		2		1
Other comprehensive income (loss)	853				854	(1)		
Repurchases of common stock	(958)		(958)					
Treasury shares reissued	107		107					
Dividends declared	(836)			(834)		(2)		(1)
Acquisition (Note 4)	1					1		
Stock options and other	194	193		1				
ASU No. 2018-02 adoption				717	(717)			
Balance October 28, 2018	11,291	4,474	(16,312)	27,553	(4,427)	3		14
ASU No. 2016-01 adoption*				8	(8)			
Net income	3,257			3,253		4		
Other comprehensive loss	(1,172)				(1,172)			
Repurchases of common stock	(1,253)		(1,253)					
Treasury shares reissued	91		91					
Dividends declared	(965)			(963)		(2)		
Stock options and other	168	168		1		(1)		
Balance November 3, 2019	$ 11,417	$ 4,642	$ (17,474)	$ 29,852	$ (5,607)	$ 4		$ 14

* See Note 3.

The notes to consolidated financial statements are an integral part of this statement.

1. ORGANIZATION AND CONSOLIDATION

Structure of Operations

The information in the notes and related commentary are presented in a format that includes data grouped as follows:

Equipment Operations – Includes the company's agriculture and turf operations and construction and forestry operations with financial services reflected on the equity basis.

Financial Services – Includes primarily the company's financing operations.

Consolidated – Represents the consolidation of the equipment operations and financial services. References to "Deere & Company" or "the company" refer to the entire enterprise.

Principles of Consolidation

The consolidated financial statements represent primarily the consolidation of all companies in which Deere & Company has a controlling interest. Certain variable interest entities (VIEs) are consolidated since the company is the primary beneficiary. The primary beneficiary has both the power to direct the activities that most significantly impact the VIEs' economic performance and the obligation to absorb losses or the right to receive benefits that could potentially be significant to the VIEs. Deere & Company records its investment in each unconsolidated affiliated company (generally 20 to 50 percent ownership) at its related equity in the net assets of such affiliate (see Note 11). Other investments (less than 20 percent ownership) are recorded at cost.

Fiscal Year

The company uses a 52/53 week fiscal year ending on the last Sunday in the reporting period. The fiscal year ends for 2019, 2018, and 2017 were November 3, 2019, October 28, 2018, and October 29, 2017, respectively. Fiscal year 2019 contained 53 weeks compared to 52 weeks in fiscal years 2018 and 2017.

Variable Interest Entities

The company consolidates certain VIEs related to retail note securitizations (see Note 14).

The company also has an interest in a joint venture that manufactures construction equipment in Brazil for local and overseas markets. The joint venture is a VIE; however, the company is not the primary beneficiary. Therefore, the entity's financial results are not fully consolidated in the company's consolidated financial statements, but are included on the equity basis. During 2019, the company made an additional contribution to the joint venture in exchange for non-voting preferred stock and terminated a loan guarantee. The maximum exposure to losses at November 3, 2019 and October 28, 2018 in millions of dollars follows:

	2019	2018
Receivables from unconsolidated affiliates	$ 4	$ 2
Investment in unconsolidated affiliates	18	
Loan guarantee		25
Total	$ 22	$ 27

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The following are significant accounting policies in addition to those included in other notes to the consolidated financial statements.

Use of Estimates in Financial Statements

The preparation of financial statements in conformity with accounting principles generally accepted in the U.S. requires management to make estimates and assumptions that affect the reported amounts and related disclosures. Actual results could differ from those estimates.

Revenue Recognition

Sales of equipment and service parts are recognized when each of the following criteria are met: (1) the company and an independent customer approve a contract with commercial substance, (2) the sales price is determinable and collectability of the payments are probable based on the terms outlined in the contract, and (3) control of the goods has transferred to the customer. Transfer of control generally occurs for equipment and service parts when the good is delivered as specified in the contract and the risks and rewards of ownership are transferred. In the U.S. and most international locations, this transfer occurs primarily when goods are shipped. In Canada and some other international locations, certain goods are shipped to dealers on a consignment basis under which the risks and rewards of ownership are not transferred to the dealer at the time the goods are shipped. Accordingly, in these locations, sales are not recorded until a retail customer has purchased the goods. Generally, no right of return exists on sales of equipment.

In limited instances, equipment is transferred to a customer or a financial institution with an obligation to repurchase the equipment for a specified amount, which is exercisable at the customer's option. When the equipment is expected to be repurchased, those arrangements are accounted for as leases. When the operating lease criteria are met, no sale is recorded at the time of the equipment transfer and the difference between sale price and the specified repurchase amount is recognized as revenue on a straight-line basis until the customer's option expires. When this equipment is not expected to be repurchased, a sale is recorded with a return obligation.

Under the terms of sales agreements with dealers, interest-free periods are determined based on the type of equipment sold and the time of year of the sale. These periods range from one to twelve months for most equipment. Interest-free periods may not be extended. Interest is primarily charged to dealers on outstanding balances, from the earlier of the date when goods are sold to a retail customer by the dealer or the expiration of the interest-free period granted at the time of the sale to the dealer, until payment is received by the company. Interest charged may not be forgiven and the past due interest rates exceed market rates. Dealers cannot cancel purchases after the company recognizes a sale and are responsible for payment even if the equipment is not sold to retail customers. If the interest-free or below market interest rate period exceeds one year, the company adjusts the expected sales revenue for the effects of the time

value of money using a current market interest rate. The revenue related to the financing component is recognized in "Finance and interest income" using the interest method. The company does not adjust the sales price to account for a financing component if the expected interest-free or below market period is one year or less.

Service parts and certain attachments returns are estimable and accrued at the time a sale is recognized. The estimated parts returns are recorded in "Other assets" for the inventory value of estimated part returns, adjusted for restocking fees. The estimated dealer refund liability, adjusted for restocking fees, is recorded in "Accounts payable and accrued expenses". The estimated returns are based on historical return rates, current dealer inventory levels, and current economic conditions.

The company remanufactures used engines and components (cores) that are sold to dealers and end customers for maintenance and repair parts. Revenue for remanufactured components is recognized using the same criteria as other parts sales. When a remanufactured part is sold, the company collects a deposit that is repaid if the customer returns a core that meets certain specifications within a defined time period. The deposit received from the customer is recognized as a liability in accounts payable and accrued expenses and the used component that is expected to be returned is recognized in other assets in the consolidated balance sheet. When a customer returns a core, the deposit is repaid, the liability reversed, and the returned core is recorded in inventory to be remanufactured and sold to another customer. If a core is not returned within the required time as estimated, the deposit is recognized as revenue in net sales, and the estimated core return is recorded as an expense in cost of sales in the statement of consolidated income.

Certain equipment is sold with precision guidance, telematics, and other information gathering and analyzing capabilities. The solutions require hardware, software, and include an obligation to provide telematic services for a specific period of time. These solutions are generally bundled with the sale of the equipment, but can also be purchased or renewed separately. The revenue related to the hardware and embedded software is generally recognized at the time of the equipment sale and recorded in "Net sales" in the consolidated statement of income. The revenue for the future services is generally deferred and recognized over the service period. The deferred revenue is recorded as a contract liability in "Accounts payable and accrued expenses" in the consolidated balance sheet and is recognized in "Other income" with the associated expenses recognized in other operating expenses in the statement of consolidated income.

Financing revenue is recorded over the lives of the related receivables using the interest method. Deferred costs on the origination of financing receivables are recognized as a reduction in "Finance and interest income" over the expected lives of the receivables using the interest method. Income and deferred costs on the origination of operating leases are recognized on a straight-line basis over the scheduled lease terms in "Finance and interest income."

Sales Incentives

In certain markets, the company provides sales incentives to dealers. These incentives may be based on a dealer's purchase volume or on retail sales incentive programs for allowances and financing programs that will be due when the dealer sells the equipment to a retail customer. At the time of the sale to a dealer, the company records an estimated cost of these programs as a reduction to the sales price. The estimated cost is based on historical data, announced and expected incentive programs, field inventory levels, and forecasted sales volumes. The final cost of these programs is determined at the end of the measurement period for volume-based incentives or when the dealer sells the equipment to a retail customer. Actual cost differences from the original cost estimate are recognized in net sales.

Product Warranties

For most equipment and parts sales, the company provides a standard warranty to provide assurance that the equipment will function as intended for a specified period. At the time a sale is recognized, the estimated future warranty costs are recorded. The company generally determines its total warranty liability by applying historical warranty claims rate experience to the estimated amount of equipment that has been sold and is still under warranty based on dealer inventories and retail sales. The historical claims rate is primarily determined by a review of five-year claims costs with consideration of current quality developments. The company also offers extended warranty arrangements for purchase at the customer's option. The premiums for extended warranties are recognized in other income in the statement of consolidated income primarily in proportion to the costs expected to be incurred over the contract period. The unamortized extended warranty premiums (deferred revenue) are recorded in "Accounts payable and accrued expenses" in the consolidated balance sheet (see Note 23).

Sales and Transaction Taxes

The company collects and remits taxes assessed by different governmental authorities that are both imposed on and concurrent with revenue producing transactions between the company and its customers. These taxes include sales, use, value-added, and some excise taxes. The company elected to exclude these taxes from the determination of the sales price (excluded from revenues).

Shipping and Handling Costs

Shipping and handling costs related to the sales of the company's equipment after a customer obtains control of the equipment are accrued at the time of the sale in cost of sales.

Contract Costs

Incremental costs of obtaining a revenue contract are recognized as an expense when incurred since the amortization period would be one year or less.

Advertising Costs

Advertising costs are charged to expense as incurred. This expense was $215 million in 2019, $188 million in 2018, and $169 million in 2017.

Depreciation and Amortization

Property and equipment, capitalized software, and other intangible assets are generally stated at cost less accumulated depreciation or amortization. These assets are depreciated over their estimated useful lives generally using the straight-line method. Equipment on operating leases is depreciated over the terms of the leases using the straight-line method. Property and equipment expenditures for new and revised products, increased capacity, and the replacement or major renewal of significant items are capitalized. Expenditures for maintenance, repairs, and minor renewals are generally charged to expense as incurred.

Securitization of Receivables

Certain financing receivables are periodically transferred to special purpose entities (SPEs) in securitization transactions (see Note 14). These securitizations qualify as collateral for secured borrowings and no gains or losses are recognized at the time of securitization. The receivables remain on the balance sheet and are classified as "Financing receivables securitized - net." The company recognizes finance income over the lives of these receivables using the interest method.

Receivables and Allowances

All financing and trade receivables are reported on the balance sheet at outstanding principal adjusted for any charge-offs, the allowance for credit losses, and any deferred fees or costs on originated financing receivables. The company also records an allowance and provision for credit losses related to the receivables from sales (trade receivables and certain financing receivables). The allowance is a reduction to the receivable balances and the provision is recorded in selling, administrative and general expenses. The allowance represents an estimate of the losses inherent in the receivable portfolio. The level of the allowance is based on many qualitative and quantitative factors, including historical net loss experience by finance product category, portfolio duration, delinquency trends, economic conditions in the company's major markets and geographies, commodity price trends, and credit risk quality. The adequacy of the allowance is assessed quarterly by finance product category. Receivables are written-off to the allowance when the account is considered uncollectible (see Note 13).

Impairment of Long-Lived Assets, Goodwill, and Other Intangible Assets

The company evaluates the carrying value of long-lived assets (including equipment on operating leases, property and equipment, goodwill, and other intangible assets) when events or circumstances warrant such a review. Goodwill and intangible assets with indefinite lives are tested for impairment annually at the end of the third quarter of each fiscal year, and more often if events or circumstances indicate a reduction in the fair value below the carrying value. Goodwill is allocated and reviewed for impairment by reporting units, which consist primarily of the operating segments and certain other reporting units. Goodwill is allocated to the reporting unit in which the business that created the goodwill resides. To test for goodwill impairment, the carrying value of each reporting unit is compared with its fair value. If the carrying value of the goodwill is considered impaired, the impairment is measured as the excess of the reporting unit's carrying value over the fair value, with a limit of the goodwill allocated to that reporting unit. If the carrying value of the long-lived asset is considered impaired, a loss is recognized based on the amount by which the carrying value exceeds the fair value of the asset (see Notes 5 and 27).

Derivative Financial Instruments

It is the company's policy that derivative transactions are executed only to manage exposures arising in the normal course of business and not for the purpose of creating speculative positions or trading. The company's financial services operations manage the relationship of the types and amounts of their funding sources to their receivable and lease portfolio in an effort to diminish risk due to interest rate and foreign currency fluctuations, while responding to favorable financing opportunities. The company also has foreign currency exposures at some of its foreign and domestic operations related to buying, selling, and financing in currencies other than the functional currencies. In addition, the company has interest rate exposure at certain equipment operations units for below market retail financing programs that are used as sales incentives and are offered for extended periods.

All derivatives are recorded at fair value on the balance sheet. Cash collateral received or paid is not offset against the derivative fair values on the balance sheet. Each derivative is designated as a cash flow hedge, fair value hedge, or remains undesignated. Changes in the fair value of derivatives that are designated and effective as cash flow hedges are recorded in other comprehensive income (OCI) and reclassified to the income statement when the effects of the item being hedged are recognized in the income statement. Changes in the fair value of derivatives that are designated and effective as fair value hedges are recognized currently in net income. These changes are offset in net income by fair value changes related to the risk being hedged on the hedged item. Changes in the fair value of undesignated hedges are recognized currently in the income statement.

All designated hedges are formally documented as to the relationship with the hedged item as well as the risk-management strategy. Both at inception and on an ongoing basis the hedging instrument is assessed as to its effectiveness. If and when a derivative is determined not to be highly effective as a hedge, the underlying hedged transaction is no longer likely to occur, the hedge designation is removed, or the derivative is terminated, hedge accounting is discontinued (see Note 28).

Foreign Currency Translation

The functional currencies for most of the company's foreign operations are their respective local currencies. The assets and liabilities of these operations are translated into U.S. dollars at the end of the period exchange rates. The revenues and expenses are translated at weighted-average rates for the period. The gains or losses from these translations are recorded in OCI. Gains or losses from transactions denominated in a currency other than the functional currency of the subsidiary involved and foreign exchange derivative contracts are included in net income. The

pretax net loss for foreign exchange in 2019, 2018, and 2017 was $13 million, $8 million, and $62 million, respectively.

3. NEW ACCOUNTING STANDARDS

New Accounting Standards Adopted

In the first quarter of 2019, the company adopted Financial Accounting Standards Board (FASB) Accounting Standards Update (ASU) No. 2014-09, Revenue from Contracts with Customers (Topic 606), which supersedes the revenue recognition requirements in Accounting Standards Codification (ASC) 605, Revenue Recognition. The ASU was adopted using a modified-retrospective approach to all incomplete contracts as of the adoption date. The ASU is based on the principle that revenue is recognized to depict the transfer of 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. A five-step model is used to determine the amount and timing of revenue recognized. The ASU also requires expanded disclosures to include disaggregated revenue by geographic regions and major product lines.

The ASU required that a gross asset and liability rather than a net liability be recorded for the value of estimated service parts returns and the related refund liability. The gross asset is recorded in other assets for the inventory value of estimated parts returns and the gross liability is recorded in accounts payable and accrued expenses for the estimated dealer refund. The table below reflects the change for the estimated parts returns in the affected lines on the consolidated balance sheet in millions of dollars.

	October 28 2018	Cumulative Effect from Adoption	October 29 2018
Assets			
Other assets	$ 1,718	$ 110	$ 1,828
Liabilities			
Accounts payable and accrued expenses	$ 10,111	$ 110	$ 10,221

There were no significant changes affecting the timing of revenue recognition from the adoption. The company's updated revenue policies are included in Note 2 and additional disclosures in Note 6.

In the first quarter of 2019, the company adopted ASU No. 2016-01, Recognition and Measurement of Financial Assets and Financial Liabilities, which amends ASC 825-10, Financial Instruments – Overall. This ASU changed the treatment for available for sale equity investments by recognizing unrealized fair value changes directly in net income and no longer in OCI. The cumulative effect of adoption resulted in an $8 million after-tax reclassification from OCI to retained earnings.

In the first quarter of 2019, the company adopted ASU No. 2016-18, Restricted Cash, which amends ASC 230, Statement of Cash Flows. The ASU requires that restricted cash be included with cash and cash equivalents in the statement of cash flows. The ASU was adopted using a retrospective transition approach resulting in an update to the 2017 and 2018 consolidated and supplemental consolidating statement of cash flows (see Note 7). The ASU did not have a material effect on the company's consolidated financial statements.

In the first quarter of 2019, the company early adopted ASU No. 2017-12, Targeted Improvements to Accounting for Hedging Activities, which amends ASC 815, Derivatives and Hedging. The purpose of this ASU is to better align a company's risk management activities and financial reporting for hedging relationships, simplify the hedge accounting requirements, and improve the disclosures of hedging arrangements. The adoption did not have a material effect on the company's consolidated financial statements (see Note 28). The company continues to evaluate potential additional hedge accounting relationships provided by the new standard to further improve risk management.

The company also adopted the following standards in the first quarter of 2019, none of which had a material effect on the company's consolidated financial statements:

Accounting Standards Updates
2016-15—Classification of Certain Cash Receipts and Cash Payments, which amends ASC 230, Statement of Cash Flows
2016-16—Intra-Entity Transfers of Assets Other Than Inventory, which amends ASC 740, Income Taxes
2017-01—Clarifying the Definition of a Business, which amends ASC 805, Business Combinations
2017-09—Scope of Modification Accounting, which amends ASC 718, Compensation - Stock Compensation
2018-13—Disclosure Framework - Changes to the Disclosure Requirements for Fair Value Measurement, which amends ASC 820, Fair Value Measurement
2018-14—Disclosure Framework - Changes to the Disclosure Requirements for Defined Benefit Plans, which amends ASC 715-20, Compensation - Retirement Benefits - Defined Benefit Plans - General
2018-16—Inclusion of the Secured Overnight Financing Rate (SOFR) Overnight Index Swap (OIS) Rate as a Benchmark Interest Rate for Hedge Accounting Purposes, which amends ASC 815, Derivatives and Hedging

New Accounting Standards to be Adopted

In February 2016, the FASB issued ASU No. 2016-02, Leases (Topic 842), which supersedes ASC 840, Leases. The ASU's primary change is the requirement for lessee entities to recognize a lease liability for payments and a right of use asset during the term of operating lease arrangements. The ASU does not significantly change the lessee's recognition, measurement, and presentation of expenses and cash flows from the previous accounting standard. Lessors' accounting under the ASU is largely unchanged from the previous accounting standard. The ASU also expands the disclosures for leases. The effective date is the first quarter of fiscal year 2020 and the ASU will be adopted using the modified-retrospective approach that will not require earlier periods to be restated. The company will elect the optional practical expedients to not reassess whether existing contracts contain leases, not reassess lease classification, and not reassess initial direct costs for existing leases. The company will not elect the use of the hindsight practical expedient. In addition, the company will elect to combine lease and non-lease components for most asset classes and to not recognize a right of use asset or lease liability for arrangements that qualify as short-term leases. A software application for lessee

accounting will be implemented for the adoption, along with new processes and controls. The estimated right of use assets and lease liabilities at adoption will be approximately $375 million. The adoption will not have a material effect on the company's operating results or cash flows.

In June 2016, the FASB issued ASU No. 2016-13, Measurement of Credit Losses on Financial Instruments, which establishes ASC 326, Financial Instruments – Credit Losses. The ASU revises the measurement of credit losses for financial assets measured at amortized cost from an incurred loss methodology to an expected loss methodology. The ASU affects trade receivables, debt securities, net investment in leases, and most other financial assets that represent a right to receive cash. Additional disclosures about significant estimates and credit quality are also required. In November 2018, the FASB issued ASU No. 2018-19, Codification Improvements to Topic 326, Financial Instruments – Credit Losses. This ASU clarifies that receivables from operating leases are accounted for using the lease guidance and not as financial instruments. In May 2019, the FASB issued ASU No. 2019-05, Targeted Transition Relief, which amends ASC 326. This ASU provides an option to irrevocably elect to measure certain individual financial assets at fair value instead of amortized cost. In November 2019, the FASB issued ASU No. 2019-11, Codification Improvements to Topic 326, Financial Instruments – Credit Losses. The ASU clarifies the treatment of expected recoveries for amounts previously written off on purchased receivables, provides transition relief for troubled debt restructurings, and allows for certain disclosure simplifications of accrued interest. The effective date will be the first quarter of fiscal year 2021. The ASUs will be adopted using a modified-retrospective approach. The company is evaluating the potential effects on the consolidated financial statements.

In March 2017, the FASB issued ASU No. 2017-08, Premium Amortization on Purchased Callable Debt Securities, which amends ASC 310-20, Receivables – Nonrefundable Fees and Other Costs. This ASU reduces the amortization period for certain callable debt securities held at a premium to the earliest call date. The treatment of securities held at a discount is unchanged. The effective date is the first quarter of fiscal year 2020. The ASU will be adopted using a modified-retrospective approach. The adoption will not have a material effect on the company's consolidated financial statements.

In June 2018, the FASB issued ASU No. 2018-07, Improvements to Nonemployee Share-Based Payment Accounting, which amends ASC 718, Compensation – Stock Compensation. The ASU requires that most of the guidance related to stock compensation granted to employees be followed for non-employees, including the measurement date, valuation approach, and performance conditions. The expense is recognized in the same period as though cash were paid for the good or service. The effective date is the first quarter of fiscal year 2020. The ASU will be adopted using a modified-retrospective approach. The adoption will not have a material effect on the consolidated financial statements.

In August 2018, the FASB issued ASU No. 2018-15, Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract, which amends ASC 350-40, Intangibles – Goodwill and Other – Internal-Use Software. This ASU requires customers in a hosting arrangement that is a service contract to evaluate the implementation costs of the hosting arrangement using the guidance to develop internal-use software. The project development stage determines the implementation costs that are capitalized or expensed. Capitalized implementation costs are amortized over the term of the service arrangement and are presented in the same income statement line item as the service contract costs. The effective date will be the first quarter of fiscal year 2021, with early adoption permitted. The company will adopt the ASU on a prospective basis. The company is evaluating the potential effects on the company's consolidated financial statements.

In April 2019, the FASB issued ASU No. 2019-04, Codification Improvements to Topic 326, Financial Instruments – Credit Losses, Topic 815, Derivatives and Hedging, and Topic 825, Financial Instruments. The effective dates for the separate portions of the ASU and the expected effect on the consolidated financial statements are as follows: (1) clarifications to ASU No. 2016-13, Measurement of Credit Losses on Financial Instruments, is the first quarter of fiscal year 2021, which is under evaluation, (2) clarifications to ASU No. 2017-12, Targeted Improvements to Accounting for Hedging Activities is the first quarter of fiscal year 2020, with early adoption permitted, which will not have a material effect, and (3) clarifications to ASU No. 2016-01, Recognition and Measurement of Financial Assets and Financial Liabilities is the first quarter of fiscal year 2021, with early adoption permitted, which will not have a material effect on the company's consolidated financial statements.

4. ACQUISITIONS AND DISPOSITIONS

Acquisitions

PLA

On September 26, 2018, the company acquired PLA, a privately-held manufacturer of sprayers, planters, and specialty products for agriculture. PLA is based in Argentina, with manufacturing facilities in Las Rosas, Argentina and Canoas, Brazil. The total cash purchase price before the final adjustment, net of cash acquired of $1 million, was $69 million with $4 million retained by the company as escrow to secure indemnity obligations. In addition to the cash purchase price, the company assumed $30 million of liabilities. The asset and liability fair values at the acquisition date in millions of dollars follow:

	September 2018
Trade accounts and notes receivable	$ 3
Other receivables	14
Inventories	15
Property and equipment	6
Goodwill	38
Other intangible assets	22
Other assets	1
Total assets	$ 99
Short-term borrowings	$ 8
Accounts payable and accrued expenses	17
Deferred income taxes	5
Total liabilities	$ 30

The identified intangible assets were primarily related to technology, trademarks, and customer relationships, which have a weighted-average amortization period of five years. The goodwill is not expected to be deductible for tax purposes.

King Agro

In March 2018, the company acquired King Agro, a privately held manufacturer of carbon fiber technology products with headquarters in Valencia, Spain and a production facility in Campana, Argentina. The total cash purchase price, net of cash acquired of $3 million, was $40 million, excluding a loan to King Agro of $4 million that was forgiven on the acquisition date. In addition to the cash purchase price, the company assumed $11 million of liabilities. The asset and liability fair values at the acquisition date in millions of dollars follow:

	March 2018
Trade accounts and notes receivable	$ 2
Other receivables	2
Inventories	5
Property and equipment	5
Goodwill	28
Other intangible assets	13
Total assets	$ 55
Short-term borrowings	$ 2
Accounts payable and accrued expenses	4
Deferred income taxes	4
Long-term borrowings	1
Total liabilities	$ 11

The identifiable intangibles were primarily related to trade name and technology, which have a weighted-average amortization period of ten years. The goodwill is not expected to be deductible for tax purposes.

Wirtgen

In December 2017, the company acquired Wirtgen, which was a privately-held international company and is the leading manufacturer worldwide of road construction equipment. Headquartered in Germany, Wirtgen has six brands across the road building sector spanning processing, mixing, paving, compaction, and rehabilitation. Wirtgen sells products in more than 100 countries and had approximately 8,200 employees at the acquisition date.

The total cash purchase price, net of cash acquired of $191 million, was $5,136 million, a portion of which is held in escrow to secure certain indemnity obligations of Wirtgen. In addition to the cash purchase price, the company assumed $1,641 million in liabilities, which represented substantially all of Wirtgen's liabilities. The company financed the acquisition and associated transaction expenses from a combination of cash and new debt financing, which consisted of medium-term notes, including €850 million issued in September 2017. The asset and liability fair values at the acquisition date in millions of dollars follow:

	December 2017
Receivables from unconsolidated affiliates	$ 5
Trade accounts and notes receivable	449
Financing receivables	43
Financing receivables securitized	125
Other receivables	98
Inventories	1,536
Property and equipment	752
Investments in unconsolidated affiliates	19
Goodwill	2,068
Other intangible assets	1,442
Deferred income taxes	26
Other assets	215
Total assets	$ 6,778
Short-term borrowings	$ 285
Short-term securitization borrowings	127
Accounts payable and accrued expenses	719
Deferred income taxes	430
Long-term borrowings	50
Retirement benefits and other liabilities	30
Total liabilities	$ 1,641
Noncontrolling interests	$ 1

The identifiable intangible assets' fair values in millions of dollars and weighted-average useful lives in years follows:

	Weighted-Average Useful Lives	Fair Values
Customer lists and relationships	16	$ 519
Technology, patents, trademarks, and other	19	$ 923

The goodwill is not deductible for tax purposes.

Wirtgen's results are incorporated in the company's consolidated financial statements using a one-month lag period and are included in the construction and forestry segment. The net sales and revenues and operating profit included in the company's statement of consolidated income in 2018 was $3,181 million and $116 million, respectively. During 2018, the company recognized $56 million of acquisition related costs, which were recorded $30 million in selling, administrative and general expenses and $26 million in other operating expenses.

The unaudited pro forma consolidated net sales and revenues and net income were prepared as if the acquisition closed at the beginning of fiscal year 2017 and follow in millions of dollars:

	2018	2017
Net sales and revenues	$ 37,822	$ 32,946
Net income attributable to Deere & Company	$ 2,637	$ 2,272

The pro forma amounts were calculated using policies consistent with the company's accounting policies and included the additional expense from the amortization from the allocated purchase price adjustments. The pro forma results excluded acquisition related costs incurred in both years and assumed the medium-term notes used to fund the acquisition were issued in fiscal year 2016 at the interest rate of the actual notes. In addition, the pro forma results for the year ended October 29, 2017 included nonrecurring pretax expenses of $291 million for the higher cost basis from the inventory fair value adjustment and $84 million for the amortization of identifiable intangible assets. Anticipated synergies or other expected benefits of the acquisition were not included in the pro forma results. As a result, the unaudited pro forma financial information may not have been indicative of the results for future operations or the results if the acquisition closed at the beginning of fiscal year 2017.

Blue River

In September 2017, the company acquired Blue River Technology (Blue River), which is based in Sunnyvale, California for an acquisition cost of approximately $284 million, net of cash acquired of $4 million and $21 million funded to escrow for post-acquisition expenses. Blue River has designed and integrated computer vision and machine learning technology to optimize the use of farm inputs. Machine learning technologies could eventually be applied to a wide range of the company's products. The asset and liability fair values at the acquisition date in millions of dollars follow:

	September 2017
Trade accounts and notes receivable	$ 1
Property and equipment	2
Goodwill	193
Other intangible assets	125
Total assets	$ 321
Accounts payable and accrued expenses	$ 1
Deferred income taxes	36
Total liabilities	$ 37

The identifiable intangibles were primarily related to in-process research and development, which will not be amortized until the research and development efforts are complete or end.

The goodwill is not deductible for tax purposes. Blue River is included in the company's agriculture and turf operating segment.

For the acquisitions, the goodwill was the result of future cash flows and related fair value exceeding the fair value of the identified assets and liabilities. For the acquisitions other than Wirtgen, the results of these operations have been included in the company's consolidated financial statements in the agriculture and turf operating segment and the pro forma results of operations as if these acquisitions had occurred at the beginning of the current or comparative fiscal year would not differ significantly from the reported results.

Dispositions

In October 2019, the company sold its construction and forestry retail locations in Canada. At the time of the sale, total assets were $187 million consisting of inventory of $138 million, property and equipment – net of $24 million, other assets of $3 million, and goodwill of $22 million. The liabilities consisted of $10 million of accounts payable and accrued expenses. In addition, the company accrued $15 million for transaction expenses and related costs. The total proceeds from the sale will be approximately $187 million, with $93 million received in the fourth quarter of 2019. The remaining sales price is due based on standard payment terms of new equipment sales to independent dealers and separately negotiated terms ranging from 12 months to five years. A pretax loss of approximately $5 million was recorded in other operating expenses in the construction and forestry segment.

In May 2018, the company sold construction and forestry retail locations in Michigan, Minnesota, and Wisconsin. At the time of the sale, total assets were $74 million and liabilities were approximately $2 million. The assets consisted of trade accounts and notes receivable – net of $3 million, inventory of $52 million, property and equipment – net of $11 million, and goodwill of $8 million. The liabilities consisted of $2 million of accounts payable and accrued expenses. The total proceeds from the sale were approximately $84 million, with $67 million received in 2018. The remaining sales price was due based on standard payment terms of new equipment sales to independent dealers or refinanced wholesale terms. A pretax gain of $12 million was recorded in other income in the construction and forestry segment.

In November 2017, the company sold its construction and forestry retail locations in Florida. At the time of the sale, total assets were $93 million and liabilities were $1 million. The assets consisted of inventory of $61 million, property and equipment – net of $21 million, goodwill of $10 million, and $1 million of other assets. The liabilities consisted of $1 million of accounts payable and accrued expenses. The total proceeds from the sale were approximately $105 million, with $89 million received in 2018. The remaining sales price was due based on standard payment terms of new equipment sales to independent dealers or refinanced wholesale terms. A pretax gain of $13 million was recorded in other income in the construction and forestry segment.

For the retail location dispositions, the company sells equipment, service parts, and provides other services to the purchasers as independent dealers.

5. SPECIAL ITEMS

Impairments

In the fourth quarter of 2019, the company recorded non-cash charges in other operating expenses of approximately $59 million pretax for the impairment of equipment on operating leases and approximately $18 million pretax on matured operating lease inventory recorded in other assets. The impairment was the result of lower estimated values of used agriculture and construction equipment than originally estimated with the probable effect that the future cash flows would not cover the carrying amount of the net assets. The assets are part of the financial services operations (see Note 27).

In the fourth quarter of 2017, the company recorded a non-cash charge of $40 million pretax in equity in loss of unconsolidated affiliates for an other than temporary decline in value of an investment in an international construction equipment manufacturer with a $14 million income tax benefit recorded in the provision for income taxes (see Note 27).

Employee-Separation Programs

During 2019, the company completed certain employee-separation programs designed for specific functions and geographic areas as part of its on-going efforts to create a more efficient organizational structure. The programs provided for cash payments based on years of service. The expenses were recorded in the period the employees irrevocably accepted the separation offer. The programs' total pretax expenses were $30 million, which were primarily recorded in the fourth quarter of 2019. The total 2019 expenses were allocated approximately 18 percent cost of sales, 2 percent research and development, and 80 percent selling, administrative and general. In addition, the expenses were allocated 62 percent to the agriculture and turf operations, 8 percent to the construction and forestry operations, and 30 percent to the financial services operations. Savings from these programs are estimated to be approximately $30 million in 2020.

During the fourth quarter of 2016, the company announced voluntary employee-separation programs as part of its effort to reduce operating costs. The programs provided for cash payments based on previous years of service. The expense was recorded in the period the employees accepted the separation offer. The programs' total pretax expenses were $113 million, of which $11 million was recorded in the fourth quarter of 2016 and $102 million in 2017. The total 2017 expenses were allocated approximately 30 percent cost of sales, 16 percent research and development, and 54 percent selling, administrative and general. In addition, the expenses were allocated 75 percent to agriculture and turf operations, 17 percent to the construction and forestry operations, and 8 percent to the financial services operations. Savings from these programs were estimated to be approximately $70 million in 2017.

Sale of Investment in Unconsolidated Affiliate

In December 2016, the company sold approximately 38 percent of its interest in SiteOne Landscape Supply, Inc. (SiteOne) resulting in gross proceeds of $114 million and a gain of $105 million pretax or $66 million after-tax. In April 2017, the company sold an additional 68 percent of its then remaining interest in SiteOne resulting in gross proceeds of $184 million and a gain of $176 million pretax or $111 million after-tax. In July 2017, the company sold its remaining interest in SiteOne resulting in gross proceeds of $98 million and a gain of $94 million pretax or $59 million after-tax. The gains were recorded in other income in the agriculture and turf operating segment.

After the December 2016 sale, the company retained approximately a 15 percent ownership interest in SiteOne and approximately a 5 percent ownership interest after the April sale. Prior to April 2017, the company's representation on the SiteOne board of directors allowed the company to exercise significant influence, and therefore, the investment in SiteOne was accounted for using the equity method. In March 2017, the company reduced its representation on the SiteOne board of directors. As a result, beginning April 2017 the investment in SiteOne was recorded as an available-for-sale security and presented in marketable securities.

6. REVENUE RECOGNITION

The company's net sales and revenues by primary geographical market, major product line, and timing of revenue recognition in millions of dollars follow:

	Agriculture and Turf	Construction and Forestry	Financial Services	Total
2019				
Primary geographical markets:				
United States	$ 12,362	$ 6,082	$ 2,482	$ 20,926
Canada	1,096	1,107	617	2,820
Western Europe	3,866	1,586	87	5,539
Central Europe and CIS	1,423	749	37	2,209
Latin America	2,894	719	272	3,885
Asia, Africa, Australia, New Zealand, and Middle East	2,488	1,265	126	3,879
Total	$ 24,129	$ 11,508	$ 3,621	$ 39,258
Major product lines:				
Large Agriculture	$ 11,727			$ 11,727
Small Agriculture	8,696			8,696
Turf	2,650			2,650
Construction		$ 5,188		5,188
Compact Construction		1,279		1,279
Road Building		3,193		3,193
Forestry		1,403		1,403
Financial Products	100	30	$ 3,621	3,751
Other	956	415		1,371
Total	$ 24,129	$ 11,508	$ 3,621	$ 39,258
Timing of revenue recognition:				
Revenue recognized at a point in time	$ 23,915	$ 11,391	$ 111	$ 35,417
Revenue recognized over time	214	117	3,510	3,841
Total	$ 24,129	$ 11,508	$ 3,621	$ 39,258

Following is a description of the company's major product lines:

Large Agriculture – Includes net sales of tractors with more than approximately 200 horsepower and associated attachments, combines, cotton pickers, cotton strippers, self-propelled forage harvesters and related attachments, and sugarcane harvesters, harvesting front-end equipment, sugarcane loaders and pull behind scrapers, tillage, seeding, and application equipment, including sprayers, nutrient management and soil preparation machinery, and related attachments and service parts.

Small Agriculture – Includes net sales of medium and utility tractors with less than approximately 200 horsepower, hay and forage equipment, balers, mowers, and related attachments and service parts.

Turf – Includes net sales of turf and utility equipment, including riding lawn equipment and walk-behind mowers, golf course equipment, utility vehicles, and commercial mowing equipment, along with a broad line of associated implements, other outdoor power products, and related service parts.

Construction – Includes net sales of a broad range of machines used in construction, earthmoving, and material handling, including backhoe loaders, crawler dozers and loaders, four-wheel-drive loaders, excavators, motor graders, articulated dump trucks, and related attachments and service parts.

Compact Construction – Includes net sales of smaller construction equipment, including compact excavators, compact track loaders, compact wheel loaders, skid steer loaders, landscape loaders, and related attachments and service parts.

Road Building – Includes net sales of equipment used in road building and renovation, including milling machines, recyclers, slipform pavers, surface miners, asphalt pavers, compactors, tandem and static rollers; mobile crushers and screens, mobile and stationary asphalt plants, and related attachments and service parts.

Forestry – Includes net sales of equipment used in timber harvesting, including log skidders, feller bunchers, log loaders, log forwarders, log harvesters, and related attachments and service parts.

Financial Products – Includes finance and interest income primarily from retail notes related to sales of John Deere equipment to end customers, wholesale financing to dealers of John Deere equipment, and revolving charge accounts; lease income from retail leases of John Deere equipment; and revenue from extended warranties.

Other – Includes sales of certain components to other equipment manufacturers, revenue earned over time from precision guidance, telematics, and other information enabled solutions, revenue from service performed at company owned dealerships and service centers, gains on disposition of property and businesses, trademark licensing revenue, and other miscellaneous revenue items.

The company invoices in advance of recognizing the sale of certain products and the revenue for certain services. These items are primarily for premiums for extended warranties, advance payments for future equipment sales, and subscription and service revenue related to precision guidance and telematic services. These advanced customer payments are presented as deferred revenue, a contract liability, in accounts payable and accrued expenses in the consolidated balance sheet. The deferred revenue received, but not recognized in revenue, including extended warranty premiums also shown in Note 23, was $1,010 million and $915 million at November 3, 2019 and October 28, 2018, respectively. The contract liability is reduced as the revenue is recognized. Revenue recognized from deferred revenue that was recorded as a contract liability at the beginning of the fiscal year was $444 million in 2019.

The company entered into contracts with customers to deliver equipment and services that have not been recognized at November 3, 2019 because the equipment or services have not been provided. These contracts primarily relate to extended warranty and certain precision guidance and telematic services. The amount of unsatisfied performance obligations for contracts with an original duration greater than one year is $892 million at November 3, 2019. The estimated revenue to be recognized by fiscal year follows in millions of dollars: 2020 - $413, 2021 - $241, 2022 - $142, 2023 - $68, 2024 - $25, and later years - $3. As permitted, the company elected only to disclose remaining performance obligations with an original contract duration greater than one year. The contracts with an expected duration of one year or less are generally for sales to dealers and end customers for equipment, service parts, repair services, and certain telematics services.

7. CASH FLOW INFORMATION

For purposes of the statement of consolidated cash flows, the company considers investments with purchased maturities of three months or less to be cash equivalents. Substantially all of the company's short-term borrowings, excluding the current maturities of long-term borrowings, mature or may require payment within three months or less.

The equipment operations sell a significant portion of their trade receivables to financial services. These intercompany cash flows are eliminated in the consolidated cash flows.

All cash flows from the changes in trade accounts and notes receivable (see Note 13) are classified as operating activities in the statement of consolidated cash flows as these receivables arise from sales to the company's customers. Cash flows from financing receivables that are related to sales to the company's customers (see Note 13) are also included in operating activities. The remaining financing receivables are related to the financing of equipment sold by independent dealers and are included in investing activities.

The company had the following non-cash operating and investing activities that were not included in the statement of consolidated cash flows. The company transferred inventory to equipment on

operating leases of $679 million, $855 million, and $801 million in 2019, 2018, and 2017, respectively. The company also had accounts payable related to purchases of property and equipment of $152 million, $183 million, and $108 million at November 3, 2019, October 28, 2018, and October 29, 2017, respectively.

The company's restricted cash held at November 3, 2019, October 28, 2018, October 29, 2017, and October 30, 2016 was as follows in millions of dollars:

	2019	2018	2017	2016
Equipment operations	$ 21	$ 7	$ 6	$ 10
Financial services	78	104	126	144
Total	$ 99	$ 111	$ 132	$ 154

The equipment operations' restricted cash relates to miscellaneous operational activities. The financial services restricted cash primarily relates to securitization of financing receivables (see Note 14). The restricted cash is recorded in other assets in the consolidated balance sheet.

Cash payments for interest and income taxes consisted of the following in millions of dollars:

	2019	2018	2017
Interest:			
Equipment operations	$ 666	$ 581	$ 506
Financial services	1,154	925	665
Intercompany eliminations	(360)	(330)	(268)
Consolidated	$ 1,460	$ 1,176	$ 903
Income taxes:			
Equipment operations	$ 1,018	$ 625	$ 898
Financial services	(57)	387	92
Intercompany eliminations	150	(300)	(9)
Consolidated	$ 1,111	$ 712	$ 981

8. PENSION AND OTHER POSTRETIREMENT BENEFITS

The company has several funded and unfunded defined benefit pension plans and other postretirement benefit (OPEB) plans, primarily health care and life insurance plans, covering its U.S. employees and employees in certain foreign countries. The company uses an October 31 measurement date for these plans.

The components of net periodic pension cost and the assumptions related to the cost consisted of the following in millions of dollars and in percents:

	2019	2018	2017
Pensions			
Service cost	$ 261	$ 293	$ 274
Interest cost	447	390	361
Expected return on plan assets	(802)	(775)	(790)
Amortization of actuarial loss	148	226	247
Amortization of prior service cost	11	12	12
Settlements	5	8	2
Net cost	$ 70	$ 154	$ 106
Weighted-average assumptions			
Discount rates - service cost	4.0%	3.5%	3.5%
Discount rates - interest cost	4.0%	3.2%	3.0%
Rate of compensation increase	3.8%	3.8%	3.8%
Expected long-term rates of return	6.5%	6.9%	7.3%
Interest crediting rate - U.S. cash balance plan	3.3%	2.6%	2.8%

The components of net periodic OPEB cost and the assumptions related to the cost consisted of the following in millions of dollars and in percents:

	2019	2018	2017
OPEB			
Service cost	$ 41	$ 45	$ 42
Interest cost	216	191	194
Expected return on plan assets	(36)	(22)	(17)
Amortization of actuarial loss	16	62	99
Amortization of prior service credit	(72)	(77)	(77)
Net cost	$ 165	$ 199	$ 241
Weighted-average assumptions			
Discount rates - service cost	4.8%	4.3%	4.7%
Discount rates - interest cost	4.2%	3.3%	3.2%
Expected long-term rates of return	5.7%	5.7%	6.3%

The spot yield curve approach is used to estimate the service and interest cost components of the net periodic pension and OPEB costs by applying the specific spot rates along the yield curve used to determine the benefit plan obligations to relevant projected cash outflows. The components of net periodic pension and OPEB cost excluding the service component are included in the line item "Other operating expenses" in the Statement of Consolidated Income.

The previous pension cost in net income and other changes in plan assets and benefit obligations in other comprehensive income in millions of dollars were as follows:

	2019	2018	2017
Pensions			
Net cost	$ 70	$ 154	$ 106
Retirement benefit adjustments included in other comprehensive (income) loss:			
Net actuarial (gain) loss	887	(553)	(702)
Amortization of actuarial loss	(143)	(226)	(247)
Amortization of prior service cost	(11)	(12)	(12)
Settlements	(3)	(8)	(2)
Total (gain) loss recognized in other comprehensive (income) loss	730	(799)	(963)
Total recognized in comprehensive (income) loss	$ 800	$ (645)	$ (857)

The previous OPEB cost in net income and other changes in plan assets and benefit obligations in other comprehensive income in millions of dollars were as follows:

	2019	2018	2017
OPEB			
Net cost	$ 165	$ 199	$ 241
Retirement benefit adjustments included in other comprehensive (income) loss:			
Net actuarial (gain) loss	141	(608)	(309)
Prior service cost		5	
Amortization of actuarial loss	(16)	(62)	(99)
Amortization of prior service credit	72	77	77
Total (gain) loss recognized in other comprehensive (income) loss	197	(588)	(331)
Total recognized in comprehensive (income) loss	$ 362	$ (389)	$ (90)

The benefit plan obligations, funded status, and the assumptions related to the obligations at November 3, 2019 and October 28, 2018, respectively, in millions of dollars follow:

	Pensions		OPEB	
	2019	2018	2019	2018
Change in benefit obligations				
Beginning of year balance	$ (12,108)	$ (13,166)	$ (5,472)	$ (6,162)
Service cost	(261)	(293)	(41)	(45)
Interest cost	(447)	(390)	(216)	(191)
Actuarial gain (loss)	(2,174)	1,012	(187)	624
Amendments				(5)
Benefits paid	705	711	316	317
Health care subsidies			(22)	(12)
Acquisition*		(29)		
Foreign exchange and other	35	47		2
End of year balance	(14,250)	(12,108)	(5,622)	(5,472)
Change in plan assets (fair value)				
Beginning of year balance	12,602	12,093	719	539
Actual return on plan assets	2,081	316	82	6
Employer contribution	70	938	448	488
Benefits paid	(705)	(711)	(316)	(317)
Foreign exchange and other	(24)	(34)	3	3
End of year balance	14,024	12,602	936	719
Funded status	$ (226)	$ 494	$ (4,686)	$ (4,753)
Weighted-average assumptions				
Discount rates	3.0%	4.1%	3.2%	4.5%
Rate of compensation increase	3.8%	3.8%		
Interest crediting rate - U.S. cash balance plan	2.1%	3.3%		

* See Note 4.

In 2019, the company made a voluntary contribution of $300 million to a U.S. OPEB plan. In 2018, the company made voluntary contributions of $870 million to a U.S. pension plan and $430 million to its U.S. OPEB plans.

The actuarial loss for pension for 2019 was primarily due to a decrease in discount rates. The actuarial loss for OPEB for 2019 was primarily due to a decrease in discount rates partially offset by a decrease in health care trend rates. The actuarial gain for pension and OPEB for 2018 was primarily due to an increase in discount rates.

The mortality assumptions for the 2019 and 2018 benefit plan obligations reflect the most recent tables and scales issued by the Society of Actuaries at that time.

The amounts recognized at November 3, 2019 and October 28, 2018, respectively, in millions of dollars consist of the following:

	Pensions		OPEB	
	2019	2018	2019	2018
Amounts recognized in balance sheet				
Noncurrent asset	$ 840	$ 1,298		
Current liability	(56)	(36)	$ (35)	$ (34)
Noncurrent liability	(1,010)	(768)	(4,651)	(4,719)
Total	$ (226)	$ 494	$(4,686)	$ (4,753)
Amounts recognized in accumulated other comprehensive income – pretax				
Net actuarial loss	$ 4,312	$ 3,571	$ 912	$ 787
Prior service cost (credit)	32	43	(28)	(100)
Total	$ 4,344	$ 3,614	$ 884	$ 687

The total accumulated benefit obligations for all pension plans at November 3, 2019 and October 28, 2018, were $13,430 million and $11,485 million, respectively.

The accumulated benefit obligations and fair value of plan assets for pension plans with accumulated benefit obligations in excess of plan assets were $1,836 million and $924 million, respectively, at November 3, 2019 and $1,710 million and $1,015 million, respectively, at October 28, 2018. The projected benefit obligations and fair value of plan assets for pension plans with projected benefit obligations in excess of plan assets were $10,097 million and $9,031 million, respectively, at November 3, 2019 and $1,833 million and $1,029 million, respectively, at October 28, 2018.

Actuarial gains and losses are recorded in accumulated other comprehensive income (loss). To the extent unamortized gains and losses exceed 10% of the higher of the market-related value of assets or the benefit obligation, the excess is amortized as a component of net periodic cost over the remaining service period of the active participants. For plans in which all or almost all of the plan's participants are inactive, the amortization period is the remaining life expectancy of the inactive participants.

The company expects to contribute approximately $80 million to its pension plans and approximately $445 million to its OPEB plans in 2020. The anticipated OPEB contributions include a voluntary $300 million to a U.S. plan, which will increase plan assets. The pension and remaining OPEB contributions primarily include direct benefit payments from company funds.

The benefits expected to be paid from the benefit plans, which reflect expected future years of service, are as follows in millions of dollars:

	Pensions	OPEB*
2020	$ 731	$ 308
2021	719	307
2022	703	309
2023	698	310
2024	699	313
2025 to 2029	3,469	1,566

* Net of prescription drug group benefit subsidy under Medicare Part D.

The annual rates of increase in the per capita cost of covered health care benefits (the health care cost trend rates) used to determine accumulated postretirement benefit obligations were based on the trends for medical and prescription drug claims for pre- and post-65 age groups due to the effects of Medicare. For the 2019 actuarial valuation, the weighted-average composite trend rates for these obligations were assumed to be an 8.6 percent increase from 2019 to 2020, gradually decreasing to 4.7 percent from 2027 to 2028 and all future years. The 2018 obligations and the cost in 2019 assumed an 8.9 percent increase from 2018 to 2019, gradually decreasing to 4.8 percent from 2024 to 2025 and all future years.

The discount rate assumptions used to determine the pension and OPEB obligations for all periods presented were based on hypothetical AA yield curves represented by a series of annualized individual discount rates. These discount rates represent the rates at which the company's benefit obligations could effectively be settled at the October 31 measurement dates.

Fair value measurement levels in the following tables are defined in Note 27.

The fair values of the pension plan assets at November 3, 2019 follow in millions of dollars:

	Total	Level 1	Level 2
Cash and short-term investments	$ 587	$ 353	$ 234
Equity:			
U.S. equity securities	1,192	1,156	36
International equity securities	981	974	7
Fixed Income:			
Government and agency securities	1,257	970	287
Corporate debt securities	2,416	1	2,415
Mortgage-backed securities	90		90
Real estate	69	63	6
Derivative contracts - assets*	208	17	191
Derivative contracts - liabilities**	(47)	(13)	(34)
Receivables, payables, and other	(106)	(107)	1
Securities lending collateral	476		476
Securities lending liability	(476)		(476)
Securities sold short	(279)	(275)	(4)
Total of Level 1 and Level 2 assets	6,368	$ 3,139	$ 3,229
Investments at net asset value:			
Short-term investments	398		
U.S. equity funds	1,250		
International equity funds	764		
Fixed income funds	1,529		
Real estate	648		
Hedge funds	679		
Private equity/venture capital	1,913		
Other investments	475		
Total net assets	$ 14,024		

* Includes contracts for interest rates of $171 million, foreign currency of $20 million, equity of $10 million, and other of $7 million.

** Includes contracts for foreign currency of $26 million, interest rates of $20 million, and other of $1 million.

The fair values of the health care assets at November 3, 2019 follow in millions of dollars:

	Total	Level 1	Level 2
Cash and short-term investments	$ 81	$ 77	$ 4
Equity:			
U.S. equity securities and funds	41	41	
International equity securities	9	9	
Fixed Income:			
Government and agency securities	112	101	11
Corporate debt securities	43		43
Mortgage-backed securities	15		15
Other		(2)	2
Securities lending collateral	20		20
Securities lending liability	(20)		(20)
Securities sold short	(4)	(4)	
Total of Level 1 and Level 2 assets	297	$ 222	$ 75
Investments at net asset value:			
Short-term investments	4		
U.S. equity funds	311		
International equity funds	197		
Fixed income funds	84		
Hedge funds	9		
Private equity/venture capital	22		
Other investments	12		
Total net assets	$ 936		

The fair values of the pension plan assets at October 28, 2018 follow in millions of dollars:

	Total	Level 1	Level 2
Cash and short-term investments	$ 868	$ 377	$ 491
Equity:			
U.S. equity securities	1,495	1,466	29
International equity securities	1,143	1,136	7
Fixed Income:			
Government and agency securities	764	500	264
Corporate debt securities	1,626		1,626
Mortgage-backed securities	53		53
Real estate	76	72	4
Derivative contracts - assets*	102	3	99
Derivative contracts - liabilities**	(115)	(40)	(75)
Receivables, payables, and other	(9)	(10)	1
Securities lending collateral	561		561
Securities lending liability	(561)		(561)
Securities sold short	(333)	(330)	(3)
Total of Level 1 and Level 2 assets	5,670	$ 3,174	$ 2,496
Investments at net asset value:			
Short-term investments	219		
U.S. equity funds	1,526		
International equity funds	802		
Fixed income funds	1,290		
Real estate	654		
Hedge funds	724		
Private equity/venture capital	1,680		
Other investments	37		
Total net assets	$ 12,602		

* Includes contracts for interest rates of $48 million, foreign currency of $47 million, and other of $7 million.

** Includes contracts for interest rates of $49 million, foreign currency of $28 million, equity of $29 million, and other of $9 million.

The fair values of the health care assets at October 28, 2018 follow in millions of dollars:

	Total	Level 1	Level 2
Cash and short-term investments	$ 78	$ 73	$ 5
Equity:			
U.S. equity securities and funds	54	54	
International equity securities	10	10	
Fixed Income:			
Government and agency securities	57	53	4
Corporate debt securities	29		29
Mortgage-backed securities	11		11
Other	1		1
Securities lending collateral	24		24
Securities lending liability	(24)		(24)
Securities sold short	(3)	(3)	
Total of Level 1 and Level 2 assets	237	$ 187	$ 50
Investments at net asset value:			
Short-term investments	2		
U.S. equity funds	220		
International equity funds	146		
Fixed income funds	83		
Hedge funds	7		
Private equity/venture capital	17		
Other Investments	7		
Total net assets	$ 719		

Investments at net asset value in the preceding tables are measured at fair value using the net asset value per share practical expedient, and therefore, are not classified in the fair value hierarchy.

Fair values are determined as follows:

Cash and Short-Term Investments – Include accounts that are valued based on the account value, which approximates fair value, and investment funds that are valued based on a constant fund net asset value (NAV) using the NAV per share practical expedient or on the fund's NAV based on the fair value of the underlying securities. Also included are securities that are valued using a market approach (matrix pricing model) in which all significant inputs are observable or can be derived from or corroborated by observable market data.

Equity Securities and Funds – The values are determined primarily by closing prices in the active market in which the equity investment trades, or the fund's NAV, based on the fair value of the underlying securities.

Fixed Income Securities and Funds – The securities are valued using either a market approach (matrix pricing model) in which all significant inputs are observable or can be derived from or corroborated by observable market data such as interest rates, yield curves, volatilities, credit risk, and prepayment speeds, or they are valued using the closing prices in the active market in which the fixed income investment trades. Fixed income funds are valued using the fund's NAV, based on the fair value of the underlying securities.

Real Estate, Venture Capital, Private Equity, Hedge Funds, and Other – The investments that are structured as limited

partnerships are valued at estimated fair value based on their proportionate share of the limited partnership's fair value that is determined by the respective general partner. These investments are valued using a combination of NAV, an income approach (primarily estimated cash flows discounted over the expected holding period), or market approach (primarily the valuation of similar securities and properties). Real estate investment trusts are primarily valued at the closing prices in the active markets in which the investment trades.

Interest Rate, Foreign Currency, Equity, and Other Derivative Instruments – The derivatives are valued using either an income approach (discounted cash flow) using market observable inputs, including swap curves and both forward and spot exchange rates, or a market approach (closing prices in the active market in which the derivative instrument trades).

The primary investment objective for the pension and health care plans assets is to maximize the growth of these assets to support the projected obligations to the beneficiaries over a long period of time, and to do so in a manner that is consistent with the company's risk tolerance. The asset allocation policy is the most important decision in managing the assets and it is reviewed regularly. The asset allocation policy considers the company's long-term asset class risk/return expectations for each plan since the obligations are long-term in nature. The current target allocations for pension assets are approximately 32 percent for equities, 45 percent for debt, 5 percent for real estate, and 18 percent for other investments. The target allocations for health care assets are approximately 58 percent for equities, 34 percent for debt, and 8 percent for other investments. The allocation percentages above include the effects of combining derivatives with other investments to manage asset allocations and exposures to interest rates and foreign currency exchange. The assets are well diversified and are managed by professional investment firms as well as by investment professionals who are company employees. As a result of the company's diversified investment policy, there were no significant concentrations of risk.

The expected long-term rate of return on plan assets reflects management's expectations of long-term average rates of return on funds invested to provide for benefits included in the projected benefit obligations. A market related value of plan assets is used to calculate the expected return on assets. The market related value recognizes changes in the fair value of pension plan assets systematically over a five-year period. The market related value of the health care plan assets equals fair value. The expected return is based on the outlook for inflation and for returns in multiple asset classes, while also considering historical returns, asset allocation, and investment strategy. The company's approach has emphasized the long-term nature of the return estimate such that the return assumption is not changed significantly unless there are fundamental changes in capital markets that affect the company's expectations for returns over an extended period of time (i.e., 10 to 20 years). The average annual return of the company's U.S. pension fund was approximately 9.6 percent during the past ten years and approximately 7.9 percent during the past 20 years. Since return premiums over inflation and total returns for major asset classes vary widely even over ten-year periods, recent history is not necessarily indicative of long-term future expected returns. The company's systematic methodology for determining the long-term rate of return for the company's investment strategies supports its long-term expected return assumptions.

The company has created certain Voluntary Employees' Beneficiary Association trusts (VEBAs) for the funding of postretirement health care benefits. The future expected asset returns for these VEBAs are lower than the expected return on the other pension and health care plan assets due to investment in a higher proportion of liquid securities. These assets are in addition to the other postretirement health care plan assets that have been funded under Section 401(h) of the U.S. Internal Revenue Code and maintained in a separate account in the company's pension plan trust.

The company has defined contribution plans related to employee investment and savings plans primarily in the U.S. The company's contributions and costs under these plans were $192 million in 2019, $206 million in 2018, and $188 million in 2017. The contribution rate varies primarily based on the company's performance in the prior year and employee participation in the plans.

9. INCOME TAXES

On December 22, 2017, the U.S. government enacted tax reform. The primary provisions of tax reform affecting the company in 2018 were a reduction to the corporate income tax rate from 35 percent to 21 percent and a transition from a worldwide corporate tax system to a primarily territorial tax system. The reduction in the corporate income tax rate required the company to remeasure its U.S. net deferred tax assets to the new corporate tax rate and the transition to a territorial tax system required payment of a one-time tax on the deemed repatriation of undistributed and previously untaxed non-U.S. earnings (repatriation tax). The repatriation tax was paid in 2019.

In 2019, the company was subject to additional provisions of the U.S. tax reform legislation. The company's U.S. statutory corporate income tax rate was 21 percent and approximately 23.3 percent for 2019 and 2018, respectively. The main provisions of tax reform affecting the company in 2019 include a tax on global intangible low-taxed income (GILTI), a tax determined by base erosion and anti-abuse tax benefits (BEAT) for certain payments between a U.S. corporation and foreign subsidiaries, a limitation on the deductibility of certain executive compensation, a deduction for foreign derived intangible income (FDII), and interest expense limitations. The combined effects of these provisions did not have a significant effect on the 2019 provision for income taxes.

In 2019 and 2018, the company recorded discrete tax adjustments related to the remeasurement of the company's net deferred tax assets to the new corporate income tax rate and for the repatriation tax.

The income tax expense (benefit) for the net deferred tax asset remeasurement and the repatriation tax adjustments in millions of dollars follow:

	Equipment Operations	Financial Services	Total
2019			
Net deferred tax asset remeasurement	$ 1	$ 5	$ 6
Deemed earnings repatriation tax	(66)	(8)	(74)
Total discrete tax expense (benefit)	$ (65)	$ (3)	$ (68)
2018			
Net deferred tax asset remeasurement	$ 768	$ (354)	$ 414
Deemed earnings repatriation tax	277	13	290
Total discrete tax expense (benefit)	$ 1,045	$ (341)	$ 704

Included in the equipment operations' repatriation tax amount was an accrual of approximately $63 million for 2018, which was reduced to $31 million for 2019 for foreign withholding taxes on earnings of subsidiaries outside the U.S.

The repatriation tax expense is based on interpretations of existing laws, regulations, and certain assumptions. The company continues to analyze the repatriation tax provisions, and monitor legislative and regulatory developments.

The provision for income taxes by taxing jurisdiction and by significant component consisted of the following in millions of dollars:

	2019	2018	2017
Current:			
U.S.:			
Federal	$ 545	$ (268)	$ 360
State	72	123	48
Foreign	700	392	463
Total current	1,317	247	871
Deferred:			
U.S.:			
Federal	(345)	1,233	59
State	(26)	(40)	7
Foreign	(94)	287	34
Total deferred	(465)	1,480	100
Provision for income taxes	$ 852	$ 1,727	$ 971

Based upon the location of the company's operations, the consolidated income before income taxes in the U.S. in 2019, 2018, and 2017 was $2,166 million, $2,275 million, and $1,607 million, respectively, and in foreign countries was $1,922 million, $1,796 million, and $1,547 million, respectively. Certain foreign operations are branches or partnerships of Deere & Company and are subject to U.S. as well as foreign income tax regulations. The pretax income by location and the preceding analysis of the income tax provision by taxing jurisdiction are not directly related.

A comparison of the statutory and effective income tax provision and reasons for related differences in millions of dollars follow:

	2019	2018	2017
U.S. federal income tax provision at the U.S. statutory rate (2019 - 21 percent, 2018 - 23.3 percent, 2017 - 35 percent)	$ 859	$ 950	$ 1,104
Increase (decrease) resulting from:			
Net deferred tax asset remeasurement	6	414	
Deemed earnings repatriation tax	(74)	290	
Other effects of tax reform	(33)	42	
Differences in taxability of foreign earnings	(94)	(92)	(83)
Valuation allowance on deferred taxes	28	50	89
Research and business tax credits	(85)	(43)	(63)
State and local income taxes, net of federal income tax benefit	47	59	37
Excess tax benefits on equity compensation	(40)	(49)	(30)
Tax rates on foreign earnings	183	44	(84)
Unrecognized tax benefits	(28)	30	9
Other—net	83	32	(8)
Provision for income taxes	$ 852	$ 1,727	$ 971

At November 3, 2019, accumulated earnings in certain subsidiaries outside the U.S. totaled $2,608 million, of which a portion were subject to the repatriation tax in 2018, and are not subject to additional U.S. income tax. No provision for foreign withholding taxes has been made since these earnings are expected to remain indefinitely reinvested outside the U.S. Determination of the amount of a foreign withholding tax liability on these unremitted earnings is not practicable.

Deferred income taxes arise because there are certain items that are treated differently for financial accounting than for income tax reporting purposes. An analysis of the deferred income tax assets and liabilities at November 3, 2019 and October 28, 2018 in millions of dollars follows:

	2019		2018	
	Deferred Tax Assets	Deferred Tax Liabilities	Deferred Tax Assets	Deferred Tax Liabilities
OPEB liabilities	$ 1,015		$ 984	
Lease transactions		$ 599		$ 850
Tax loss and tax credit carryforwards	781		713	
Accrual for sales allowances	518		464	
Tax over book depreciation		339		357
Goodwill and other intangible assets		378		458
Pension liability - net	186		45	
Allowance for credit losses	70		115	
Accrual for employee benefits	207		72	
Share-based compensation	68		58	
Deferred compensation	39		35	
Undistributed foreign earnings				6
Foreign unrealized losses	8		10	
Other items	367	311	346	261
Less valuation allowances	(661)		(658)	
Deferred income tax assets and liabilities	$ 2,598	$ 1,627	$ 2,184	$ 1,932

Deere & Company files a consolidated federal income tax return in the U.S., which includes the wholly-owned financial services subsidiaries. These subsidiaries account for income taxes generally as if they filed separate income tax returns, with a modification for realizability of certain tax benefits.

At November 3, 2019, tax loss and tax credit carryforwards of $781 million were available with $319 million expiring from 2020 through 2039 and $462 million with an indefinite carryforward period.

A reconciliation of the total amounts of unrecognized tax benefits at November 3, 2019, October 28, 2018, and October 29, 2017 in millions of dollars follows:

	2019	2018	2017
Beginning of year balance	$ 279	$ 221	$ 198
Increases to tax positions taken during the current year	30	36	35
Increases to tax positions taken during prior years	357	62	13
Decreases to tax positions taken during prior years	(30)	(39)	(17)
Decreases due to lapse of statute of limitations	(6)	(15)	(11)
Acquisitions*		31	
Settlements	(75)	(5)	(1)
Foreign exchange	(2)	(12)	4
End of year balance	$ 553	$ 279	$ 221

* See Note 4.

The amount of unrecognized tax benefits at November 3, 2019 and October 28, 2018 that would affect the effective tax rate if the tax benefits were recognized was $153 million and $128 million, respectively. The increase from 2018 primarily relates to the interpretation of a recently issued repatriation tax regulation for companies that do not have a calendar fiscal year end. The increase was partially offset by the settlement of U.S. income tax positions related to the 2008 through 2014 tax years. The remaining liability was related to tax positions for which there are offsetting tax receivables, or the uncertainty was only related to timing. The company expects that any reasonably possible change in the amounts of unrecognized tax benefits in the next twelve months would not be significant.

The company files its tax returns according to the tax laws of the jurisdictions in which it operates, which includes the U.S. federal jurisdiction and various state and foreign jurisdictions. The U.S. Internal Revenue Service (IRS) has completed the examination of the company's federal income tax returns for periods prior to 2015. The years 2015, 2016, and 2017 federal income tax return are currently under examination. Various state and foreign income tax returns, including major tax jurisdictions in Argentina, Australia, Brazil, Canada, China, Finland, France, Germany, India, Mexico, Russia, Singapore, and Spain also remain subject to examination by taxing authorities.

The company's policy is to recognize interest related to income taxes in interest expense and interest income and recognize penalties in selling, administrative and general expenses. During 2019, 2018, and 2017, the total amount of expense from interest and penalties was $13 million, $23 million, and $6 million and the interest income was $25 million, $12 million, and $6 million, respectively. At November 3, 2019 and October 28, 2018, the liability for accrued interest and penalties totaled $76 million and $90 million, respectively, and the receivable for interest was $4 million and none, respectively.

10. OTHER INCOME AND OTHER OPERATING EXPENSES

The major components of other income and other operating expenses consisted of the following in millions of dollars:

	2019	2018	2017
Other income			
Revenues from services	$ 348	$ 347	$ 288
Insurance premiums and fees earned**	214	217	211
SiteOne investment gains*			375
Investment income	25	14	17
Other	292	322	230
Total	$ 879	$ 900	$ 1,121
Other operating expenses			
Depreciation of equipment on operating leases	$ 981	$ 928	$ 853
Insurance claims and expenses**	210	175	187
Cost of services	228	211	168
Operating lease residual losses and impairments	159	26	50
Pension and OPEB (benefit) cost, excluding service cost component	(67)	15	31
Other	67	44	59
Total	$ 1,578	$ 1,399	$ 1,348

* See Note 5.
** Primarily related to extended warranties (see Note 23).

11. UNCONSOLIDATED AFFILIATED COMPANIES

Unconsolidated affiliated companies are companies in which Deere & Company generally owns 20 percent to 50 percent of the outstanding voting shares. Deere & Company does not control these companies and accounts for its investments in them on the equity basis. The investments in these companies primarily consist of Bell Equipment Limited (31 percent ownership), Deere-Hitachi Construction Machinery Corporation (50 percent ownership), and Deere-Hitachi Maquinas de Construcao do Brasil S.A. (50 percent ownership). In 2017, the company sold its interest in SiteOne (see Note 5). The unconsolidated affiliated companies primarily manufacture or market equipment. Deere & Company's share of the income or loss of these companies is reported in the consolidated income statement under "Equity in income (loss) of unconsolidated affiliates." The investment in these companies is reported in the consolidated balance sheet under "Investments in unconsolidated affiliates."

Combined financial information of the unconsolidated affiliated companies in millions of dollars follows:

Operations	2019	2018	2017
Sales	$ 2,483	$ 2,313	$ 2,638
Net income	50	91	7
Deere & Company's equity in net income (loss)	21	27	(24)

Financial Position	2019	2018
Total assets	$ 1,694	$ 1,648
Total external borrowings	488	453
Total net assets	563	620
Deere & Company's share of the net assets	215	207

Consolidated retained earnings at November 3, 2019 include undistributed earnings of the unconsolidated affiliates of $135 million. Dividends from unconsolidated affiliates were $30 million in 2019, $12 million in 2018, and $4 million in 2017.

In the ordinary course of business, the company purchases and sells components and finished goods to the unconsolidated affiliated companies. Transactions with unconsolidated affiliated companies reported in the statement of consolidated income in millions of dollars follow:

	2019	2018	2017
Net sales	$ 143	$ 161	$ 84
Purchases	1,937	1,682	1,331

12. MARKETABLE SECURITIES

All marketable securities are classified as available-for-sale. Prior to 2019, all unrealized gains and losses on marketable securities were shown as a component of stockholders' equity. Beginning in 2019 with the adoption of ASU No. 2016-01, unrealized gains and losses on equity securities are shown as a component of net income (see Note 3). Realized gains or losses from the sales of marketable securities are based on the specific identification method.

The amortized cost and fair value of marketable securities at November 3, 2019 and October 28, 2018 in millions of dollars follow:

	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
2019				
Equity fund				$ 59
Total equity securities				59
U.S. government debt securities	$ 128	$ 4	$ 1	131
Municipal debt securities	57	3		60
Corporate debt securities	157	8		165
International debt securities	9		3	6
Mortgage-backed securities*	155	5		160
Total debt securities	506	20	4	522
Marketable securities	$ 506	$ 20	$ 4	$ 581
2018				
Equity fund	$ 36	$ 10		$ 46
U.S. government debt securities	113	1	$ 3	111
Municipal debt securities	49		3	46
Corporate debt securities	143	1	4	140
International debt securities	11		1	10
Mortgage-backed securities*	144		7	137
Marketable securities	$ 496	$ 12	$ 18	$490

* Primarily issued by U.S. government sponsored enterprises.

Equity Securities

Unrealized gains on equity securities held at November 3, 2019 were $17 million in total, with $7 million recognized in 2019. Proceeds and realized gains on equity securities sold during 2019 and 2018 were not material. Proceeds and realized gains on equity securities sold in 2017 were $294 million and $273 million, respectively (see Note 5).

Debt Securities

The contractual maturities of debt securities at November 3, 2019 in millions of dollars follow:

	Amortized Cost	Fair Value
Due in one year or less	$ 29	$ 26
Due after one through five years	95	98
Due after five through 10 years	95	100
Due after 10 years	132	138
Mortgage-backed securities	155	160
Debt securities	$ 506	$ 522

Actual maturities may differ from contractual maturities because some securities may be called or prepaid. Because of the potential for prepayment on mortgage-backed securities, they are not categorized by contractual maturity. Proceeds from the sales of debt securities were $31 million in 2019, $40 million in 2018, and $109 million in 2017. Realized gains, realized losses, the increase (decrease) in net unrealized gains or losses, and unrealized losses that have been continuous for over twelve months were not significant in 2019, 2018, and 2017. Unrealized losses at November 3, 2019 and October 28, 2018 were primarily the result of an increase in interest rates and were not recognized in income due to the ability and intent to hold to maturity. There were no significant impairment write-downs in the periods reported.

13. RECEIVABLES

Trade Accounts and Notes Receivable

Trade accounts and notes receivable at November 3, 2019 and October 28, 2018 in millions of dollars follows:

	2019	2018
Trade accounts and notes:		
Agriculture and turf	$ 3,224	$ 3,210
Construction and forestry	2,006	1,794
Trade accounts and notes receivable – net	$ 5,230	$ 5,004

The allowance for credit losses on trade accounts and notes receivable at November 3, 2019, October 28, 2018, and October 29, 2017, as well as the related activity, in millions of dollars follow:

	2019	2018	2017
Beginning of year balance	$ 70	$ 56	$ 50
Provision	8	36	11
Write-offs	(14)	(16)	(3)
Recoveries	4		
Translation adjustments	4	(6)	(2)
End of year balance	$ 72	$ 70	$ 56

The equipment operations sell a significant portion of their trade receivables to financial services and provide compensation to these operations at approximate market rates of interest.

Trade accounts and notes receivable primarily arise from sales of goods to independent dealers. Under the terms of the sales to dealers, interest is primarily charged to dealers on outstanding balances, from the earlier of the date when goods are sold to retail customers by the dealer or the expiration of certain interest-free periods granted at the time of the sale to the dealer, until payment

is received by the company. Dealers cannot cancel purchases after the company recognizes a sale and are responsible for payment even if the equipment is not sold to retail customers. The interest-free periods are determined based on the type of equipment sold and the time of year of the sale. These periods range from one to twelve months for most equipment. Interest-free periods may not be extended. Interest charged may not be forgiven and the past due interest rates exceed market rates. The company evaluates and assesses dealers on an ongoing basis as to their creditworthiness and generally secures the receivables by retaining a security interest in the goods associated with the trade receivables or with other financial instruments. In certain jurisdictions, the company is obligated to repurchase goods sold to a dealer upon cancellation or termination of the dealer's contract for such causes as change in ownership and closeout of the business.

Trade accounts and notes receivable include receivables from sales to certain retail customers with payment terms less than twelve months. The customer cannot cancel purchases or return the equipment after delivery. The company evaluates and assesses retail customers at the time of purchase as to their creditworthiness and generally retains a security interest in the goods associated with the receivables.

Trade accounts and notes receivable have significant concentrations of credit risk in the agriculture and turf sector and construction and forestry sector as shown in the previous table. On a geographic basis, there is not a disproportionate concentration of credit risk in any area.

Financing Receivables

Financing receivables at November 3, 2019 and October 28, 2018 in millions of dollars follow:

	2019		2018	
	Unrestricted	Securitized	Unrestricted	Securitized
Retail notes:				
Agriculture and turf	$ 16,712	$ 3,799	$ 15,885	$ 3,441
Construction and forestry	3,134	697	2,776	675
Total	19,846	4,496	18,661	4,116
Wholesale notes	4,645		4,009	
Revolving charge accounts	4,004		3,907	
Financing leases (direct and sales-type)	2,263		1,948	
Total financing receivables	30,758	4,496	28,525	4,116
Less:				
Unearned finance income:				
Retail notes	1,141	101	1,069	84
Wholesale notes	11		10	
Revolving charge accounts	61		45	
Financing leases	212		179	
Total	1,425	101	1,303	84
Allowance for credit losses	138	12	168	10
Financing receivables – net	$ 29,195	$ 4,383	$ 27,054	$ 4,022

The residual values for investments in financing leases at November 3, 2019 and October 28, 2018 totaled $333 million and $294 million, respectively.

Financing receivables have significant concentrations of credit risk in the agriculture and turf sector and construction and forestry sector as shown in the previous table. On a geographic basis, there is not a disproportionate concentration of credit risk in any area. The company generally retains as collateral a security interest in the equipment associated with retail notes, wholesale notes, and financing leases.

Financing receivables at November 3, 2019 and October 28, 2018 related to the company's sales of equipment that were included in the table above consisted of the following in millions of dollars:

	2019		2018	
	Unrestricted	Securitized	Unrestricted	Securitized
Retail notes*:				
Agriculture and turf	$ 2,164		$ 2,312	
Construction and forestry	374	$ 45	441	$ 77
Total	2,538	45	2,753	77
Wholesale notes	4,645		4,009	
Sales-type leases	1,064		878	
Total	8,247	45	7,640	77
Less:				
Unearned finance income:				
Retail notes	242		261	1
Wholesale notes	11		10	
Sales-type leases	83		68	
Total	336		339	1
Financing receivables related to the company's sales of equipment	$ 7,911	$ 45	$ 7,301	$ 76

* These retail notes generally arise from sales of equipment by company-owned dealers or through direct sales.

Financing receivable installments, including unearned finance income, at November 3, 2019 and October 28, 2018 are scheduled as follows in millions of dollars:

	2019		2018	
	Unrestricted	Securitized	Unrestricted	Securitized
Due in months:				
0 – 12	$ 16,174	$ 2,067	$ 14,658	$ 1,922
13 – 24	5,639	1,214	5,355	1,160
25 – 36	4,133	777	3,911	652
37 – 48	2,759	369	2,663	315
49 – 60	1,555	67	1,480	65
Thereafter	498	2	458	2
Total	$ 30,758	$ 4,496	$ 28,525	$ 4,116

The maximum terms for retail notes are generally seven years for agriculture and turf equipment and five years for construction and forestry equipment. The maximum term for financing leases is generally six years, while the average term for wholesale notes is less than twelve months.

At November 3, 2019 and October 28, 2018, worldwide net financing receivables administered, which include financing receivables administered but not owned, totaled $33,583 million and $31,082 million, respectively.

Past due balances of financing receivables still accruing finance income represent the total balance held (principal plus accrued interest) with any payment amounts 30 days or more past the contractual payment due date. Non-performing financing receivables represent loans for which the company has ceased accruing finance income. Beginning in 2019, the company ceased accruing finance income when these receivables are generally 90 days delinquent. Previously, finance income ceased accruing when the receivables were generally 120 days delinquent. This change in estimate was made on a prospective basis and did not have a significant effect on the company's consolidated financial statements. Management's methodology to determine the collectability of delinquent accounts was not affected by the change. Generally, when receivables are 120 days delinquent the estimated uncollectible amount, after charging the dealer's withholding account, if any, is written off to the allowance for credit losses. Finance income for non-performing receivables is recognized on a cash basis. Accrual of finance income is generally resumed when the receivable becomes contractually current and collections are reasonably assured.

An age analysis of past due financing receivables that are still accruing interest and non-performing financing receivables at November 3, 2019 and October 28, 2018 follows in millions of dollars:

	30-59 Days Past Due	60-89 Days Past Due	90 Days or Greater Past Due	Total Past Due
2019				
Retail Notes:				
Agriculture and turf	$ 138	$ 73	$ 1	$ 212
Construction and forestry	79	29	4	112
Other:				
Agriculture and turf	39	19	1	59
Construction and forestry	26	7		33
Total	$ 282	$ 128	$ 6	$ 416

	Total Past Due	Total Non-Performing	Current	Total Financing Receivables
Retail Notes:				
Agriculture and turf	$ 212	$ 268	$ 18,931	$ 19,411
Construction and forestry	112	127	3,450	3,689
Other:				
Agriculture and turf	59	28	8,986	9,073
Construction and forestry	33	26	1,496	1,555
Total	$ 416	$ 449	$ 32,863	33,728
Less allowance for credit losses				150
Total financing receivables - net				$ 33,578

(continued)

	30-59 Days Past Due	60-89 Days Past Due	90 Days or Greater Past Due	Total Past Due
2018				
Retail Notes:				
Agriculture and turf	$ 133	$ 74	$ 63	$ 270
Construction and forestry	79	45	52	176
Other:				
Agriculture and turf	36	16	8	60
Construction and forestry	18	5	3	26
Total	$ 266	$ 140	$ 126	$ 532

	Total Past Due	Total Non-Performing	Current	Total Financing Receivables
Retail Notes:				
Agriculture and turf	$ 270	$ 201	$ 17,836	$ 18,307
Construction and forestry	176	40	3,101	3,317
Other:				
Agriculture and turf	60	15	8,274	8,349
Construction and forestry	26	3	1,252	1,281
Total	$ 532	$ 259	$ 30,463	31,254
Less allowance for credit losses				178
Total financing receivables - net				$ 31,076

An analysis of the allowance for credit losses and investment in financing receivables follows in millions of dollars:

	Retail Notes	Revolving Charge Accounts	Other	Total
2019				
Allowance:				
Beginning of year balance	$ 113	$ 43	$ 22	$ 178
Provision (credit)	(2)	29	8	35
Write-offs	(40)	(58)	(7)	(105)
Recoveries	22	26	1	49
Translation adjustments	(4)		(3)	(7)
End of year balance*	$ 89	$ 40	$ 21	$ 150
Financing receivables:				
End of year balance	$ 23,100	$ 3,943	$ 6,685	$ 33,728
Balance individually evaluated	$ 156		$ 13	$ 169
2018				
Allowance:				
Beginning of year balance	$ 121	$ 40	$ 26	$ 187
Provision	14	38	2	54
Write-offs	(33)	(55)	(6)	(94)
Recoveries	17	20	1	38
Translation adjustments	(6)		(1)	(7)
End of year balance*	$ 113	$ 43	$ 22	$ 178
Financing receivables:				
End of year balance	$ 21,624	$ 3,862	$ 5,768	$ 31,254
Balance individually evaluated	$ 122	$ 2	$ 12	$ 136

(continued)

	Retail Notes	Revolving Charge Accounts	Other	Total
2017				
Allowance:				
Beginning of year balance	$ 113	$ 40	$ 23	$ 176
Provision	46	33	9	88
Write-offs	(56)	(53)	(7)	(116)
Recoveries	20	20	1	41
Translation adjustments	(2)			(2)
End of year balance*	$ 121	$ 40	$ 26	$ 187
Financing receivables:				
End of year balance	$ 20,697	$ 3,629	$ 5,124	$ 29,450
Balance individually evaluated	$ 86	$ 3	$ 20	$ 109

* Individual allowances were not significant.

Past-due amounts over 30 days represented 1.23 percent and 1.70 percent of the receivables financed at November 3, 2019 and October 28, 2018, respectively. The allowance for credit losses represented .44 percent and .57 percent of financing receivables outstanding at November 3, 2019 and October 28, 2018, respectively. In addition, at November 3, 2019 and October 28, 2018, the company's financial services operations had $152 million and $156 million, respectively, of deposits primarily withheld from dealers and merchants available for potential credit losses.

Financing receivables are considered impaired when it is probable the company will be unable to collect all amounts due according to the contractual terms. Receivables reviewed for impairment generally include those that are past due, have provided bankruptcy notification, or require significant collection efforts. Receivables that are impaired are generally classified as non-performing.

An analysis of the impaired financing receivables at November 3, 2019 and October 28, 2018 follows in millions of dollars:

	Recorded Investment	Unpaid Principal Balance	Specific Allowance	Average Recorded Investment
2019*				
Receivables with specific allowance**	$ 40	$ 39	$ 13	$ 40
Receivables without a specific allowance**	32	31		37
Total	$ 72	$ 70	$ 13	$ 77
Agriculture and turf	$ 49	$ 48	$ 8	$ 52
Construction and forestry	$ 23	$ 22	$ 5	$ 25
2018*				
Receivables with specific allowance**	$ 28	$ 27	$ 10	$ 30
Receivables without a specific allowance**	37	35		41
Total	$ 65	$ 62	$ 10	$ 71
Agriculture and turf	$ 50	$ 48	$ 9	$ 54
Construction and forestry	$ 15	$ 14	$ 1	$ 17

* Finance income recognized was not material.
** Primarily retail notes.

A troubled debt restructuring is generally the modification of debt in which a creditor grants a concession it would not otherwise consider to a debtor that is experiencing financial difficulties. These modifications may include a reduction of the stated interest rate, an extension of the maturity dates, a reduction of the face amount or maturity amount of the debt, or a reduction of accrued interest. During 2019, 2018, and 2017, the company identified 522, 587, and 474 receivable contracts, primarily trade receivables and retail notes, as troubled debt restructurings with aggregate balances of $36 million, $34 million, and $16 million pre-modification and $35 million, $34 million, and $15 million post-modification, respectively. In 2017, there were $3 million of troubled debt restructurings that subsequently defaulted and were written off. In 2019 and 2018, there were no significant troubled debt restructurings that subsequently defaulted and were written off. At November 3, 2019, the company had commitments to lend approximately $18 million to borrowers whose accounts were modified in troubled debt restructurings.

Other Receivables

Other receivables at November 3, 2019 and October 28, 2018 consisted of the following in millions of dollars:

	2019	2018
Taxes receivable	$ 1,231	$ 1,370
Other	256	366
Other receivables	$ 1,487	$ 1,736

14. SECURITIZATION OF FINANCING RECEIVABLES

The company, as a part of its overall funding strategy, periodically transfers certain financing receivables (retail notes) into VIEs that are SPEs, or non-VIE banking operations, as part of its asset-backed securities programs (securitizations). The structure of these transactions is such that the transfer of the retail notes did not meet the accounting criteria for sales of receivables, and is, therefore, accounted for as a secured borrowing. SPEs utilized in securitizations of retail notes differ from other entities included in the company's consolidated statements because the assets they hold are legally isolated. Use of the assets held by the SPEs or the non-VIEs is restricted by terms of the documents governing the securitization transactions.

In these securitizations, the retail notes are transferred to certain SPEs or to non-VIE banking operations, which in turn issue debt to investors. The debt securities issued to the third party investors result in secured borrowings, which are recorded as "Short-term securitization borrowings" on the consolidated balance sheet. The securitized retail notes are recorded as "Financing receivables securitized - net" on the balance sheet. The total restricted assets on the balance sheet related to these securitizations include the financing receivables securitized less an allowance for credit losses, and other assets primarily representing restricted cash. Restricted cash results from contractual requirements in securitized borrowing arrangements and serves as a credit enhancement. The restricted cash is used to satisfy payment deficiencies, if any, in the required payments on secured borrowings. The balance of restricted cash is contractually stipulated and is either a fixed amount as determined by the initial balance of the financing receivables securitized or a fixed percentage of the outstanding balance of the securitized financing receivables. The restriction is removed either after all secured borrowing payments are made or proportionally as these receivables are collected and borrowing obligations reduced. For those securitizations in which retail notes are transferred into SPEs, the SPEs supporting the secured borrowings are consolidated unless the company does not have both the power to direct the activities that most significantly impact the SPEs' economic performance and the obligation to absorb losses or the right to receive benefits that could potentially be significant to the SPEs. No additional support to these SPEs beyond what was previously contractually required has been provided during the reporting periods.

In certain securitizations, the company consolidates the SPEs since it has both the power to direct the activities that most significantly impact the SPEs' economic performance through its role as servicer of all the receivables held by the SPEs, and the obligation through variable interests in the SPEs to absorb losses or receive benefits that could potentially be significant to the SPEs. The restricted assets (retail notes securitized, allowance for credit losses, and other assets) of the consolidated SPEs totaled $2,895 million and $2,593 million at November 3, 2019 and October 28, 2018, respectively. The liabilities (short-term securitization borrowings and accrued interest) of these SPEs totaled $2,847 million and $2,520 million at November 3, 2019 and October 28, 2018, respectively. The credit holders of these SPEs do not have legal recourse to the company's general credit.

In certain securitizations, the company transfers retail notes to non-VIE banking operations, which are not consolidated since the company does not have a controlling interest in the entities. The company's carrying values and interests related to the securitizations with the unconsolidated non-VIEs were restricted assets (retail notes securitized, allowance for credit losses and other assets) of $491 million and $504 million at November 3, 2019 and October 28, 2018, respectively. The liabilities (short-term securitization borrowings and accrued interest) were $465 million and $475 million at November 3, 2019 and October 28, 2018, respectively.

In certain securitizations, the company transfers retail notes into bank-sponsored, multi-seller, commercial paper conduits, which are SPEs that are not consolidated. The company does not service a significant portion of the conduits' receivables, and therefore, does not have the power to direct the activities that most significantly impact the conduits' economic performance. These conduits provide a funding source to the company (as well as other transferors into the conduit) as they fund the retail notes through the issuance of commercial paper. The company's carrying values and variable interest related to these conduits were restricted assets (retail notes securitized, allowance for credit losses, and other assets) of $1,079 million and $1,033 million at November 3, 2019 and October 28, 2018, respectively. The liabilities (short-term securitization borrowings and accrued interest) related to these conduits were $1,015 million and $965 million at November 3, 2019 and October 28, 2018, respectively.

The company's carrying amount of the liabilities to the unconsolidated conduits, compared to the maximum exposure to loss related to these conduits, which would only be incurred in the event of a complete loss on the restricted assets, was as follows at November 3 in millions of dollars:

	2019
Carrying value of liabilities	$ 1,015
Maximum exposure to loss	1,079

The total assets of unconsolidated VIEs related to securitizations were approximately $37 billion at November 3, 2019.

The components of consolidated restricted assets related to secured borrowings in securitization transactions at November 3, 2019 and October 28, 2018 were as follows in millions of dollars:

	2019	2018
Financing receivables securitized (retail notes)	$ 4,395	$ 4,032
Allowance for credit losses	(12)	(10)
Other assets	82	108
Total restricted securitized assets	$ 4,465	$ 4,130

The components of consolidated secured borrowings and other liabilities related to securitizations at November 3, 2019 and October 28, 2018 were as follows in millions of dollars:

	2019	2018
Short-term securitization borrowings	$ 4,321	$ 3,957
Accrued interest on borrowings	6	3
Total liabilities related to restricted securitized assets	$ 4,327	$3,960

The secured borrowings related to these restricted securitized retail notes are obligations that are payable as the retail notes are liquidated. Repayment of the secured borrowings depends primarily on cash flows generated by the restricted assets. Due to the company's short-term credit rating, cash collections from these restricted assets are not required to be placed into a segregated collection account until immediately prior to the time payment is required to the secured creditors. At November 3, 2019, the maximum remaining term of all securitized retail notes was approximately six years.

15. EQUIPMENT ON OPERATING LEASES

Operating leases arise primarily from the leasing of John Deere equipment to retail customers. Initial lease terms generally range from 12 to 60 months. Net equipment on operating leases at November 3, 2019 and October 28, 2018 consisted of the following in millions of dollars:

	2019	2018
Equipment on operating leases:		
Agriculture and turf	$5,888	$ 5,682
Construction and forestry	1,679	1,483
Equipment on operating leases – net	$ 7,567	$ 7,165

The equipment is depreciated on a straight-line basis over the term of the lease. The accumulated depreciation on this equipment was $1,855 million and $1,515 million at November 3, 2019 and October 28, 2018, respectively. The corresponding depreciation expense was $981 million in 2019, $928 million in 2018, and $853 million in 2017.

Future payments to be received on operating leases totaled $2,498 million at November 3, 2019 and are scheduled in millions of dollars as follows: 2020 - $1,086, 2021 - $759, 2022 - $419, 2023 - $193, and 2024 - $41. At November 3, 2019 and October 28, 2018, the company's financial services operations had $12 million and $34 million, respectively, of deposits withheld from dealers available for potential losses on residual values.

Equipment returned to the company upon termination of leases and held for subsequent sale or lease is recorded in "Other assets" at the lower of net book value or estimated fair value of the equipment less costs to sell and is not depreciated. The matured operating lease inventory at November 3, 2019 and October 28, 2018 was $163 million and $247 million, respectively.

16. INVENTORIES

A majority of inventory owned by Deere & Company and its U.S. equipment subsidiaries are valued at cost, on the "last-in, first-out" (LIFO) basis. Remaining inventories are generally valued at the lower of cost, on the "first-in, first-out" (FIFO) basis, or net realizable value. The value of gross inventories on the LIFO basis at November 3, 2019 and October 28, 2018 represented 55 percent and 54 percent, respectively, of worldwide gross inventories at FIFO value. The pretax favorable income effect from the liquidation of LIFO inventory during 2019 was $3 million. If all inventories had been valued on a FIFO basis, estimated inventories by major classification at November 3, 2019 and October 28, 2018 in millions of dollars would have been as follows:

	2019	2018
Raw materials and supplies	$2,285	$ 2,233
Work-in-process	747	776
Finished goods and parts	4,613	4,777
Total FIFO value	7,645	7,786
Less adjustment to LIFO value	1,670	1,637
Inventories	$5,975	$ 6,149

17. PROPERTY AND DEPRECIATION

A summary of property and equipment at November 3, 2019 and October 28, 2018 in millions of dollars follows:

	Useful Lives* (Years)	2019	2018
Equipment Operations			
Land		$ 274	$ 283
Buildings and building equipment	22	3,976	3,848
Machinery and equipment	11	5,710	5,570
Dies, patterns, tools, etc.	8	1,531	1,564
All other	4	1,065	1,032
Construction in progress		733	619
Total at cost		13,289	12,916
Less accumulated depreciation		7,360	7,095
Total		5,929	5,821
Financial Services			
Land		4	4
Buildings and building equipment	26	75	74
All other	6	34	34
Total at cost		113	112
Less accumulated depreciation		69	65
Total		44	47
Property and equipment - net		$ 5,973	$ 5,868

* Weighted-averages

Total property and equipment additions in 2019, 2018, and 2017 were $1,107 million, $985 million, and $602 million and depreciation was $779 million, $754 million, and $726 million, respectively. Capitalized interest was $7 million, $4 million, and $3 million in the same periods, respectively. The cost of leased property and equipment under capital leases of $62 million and $52 million and accumulated depreciation of $27 million and $22 million at November 3, 2019 and October 28, 2018, respectively, is included in property and equipment.

Capitalized software has an estimated useful life of three years. The amounts of total capitalized software costs, including purchased and internally developed software, classified as "Other assets" at November 3, 2019 and October 28, 2018 were $1,305 million and $1,207 million, less accumulated amortization of $1,023 million and $910 million, respectively. Capitalized interest on software was $5 million and $3 million at November 3, 2019 and October 28, 2018, respectively. Amortization of these software costs in 2019, 2018, and 2017 was $150 million, $145 million, and $118 million, respectively.

The cost of compliance with foreseeable environmental requirements has been accrued and did not have a material effect on the company's consolidated financial statements.

18. GOODWILL AND OTHER INTANGIBLE ASSETS – NET

The changes in amounts of goodwill by operating segments were as follows in millions of dollars:

	Agriculture and Turf	Construction and Forestry	Total
Goodwill at October 29, 2017	$ 521	$ 512	$ 1,033
Acquisitions*	71	2,068	2,139
Divestitures*		(18)	(18)
Translation adjustments and other	(9)	(44)	(53)
Goodwill at October 28, 2018	583	2,518	3,101
Divestitures*		(22)	(22)
Translation adjustments and other	(9)	(153)	(162)
Goodwill at November 3, 2019	$ 574	$ 2,343	$ 2,917

* See Note 4.

There were no accumulated impairment losses in the reported periods.

The components of other intangible assets are as follows in millions of dollars:

	Useful Lives* (Years)	2019	2018
Amortized intangible assets:			
Customer lists and relationships	16	$ 511	$ 542
Technology, patents, trademarks, and other	18	1,028	1,080
Total at cost		1,539	1,622
Less accumulated amortization**		282	183
Total		1,257	1,439
Unamortized intangible assets:			
In-process research and development***		123	123
Other intangible assets - net		$1,380	$1,562

* Weighted-averages

** Accumulated amortization at 2019 and 2018 for customer lists and relationships was $77 million and $46 million and technology, patents, trademarks, and other was $205 million and $137 million, respectively.

***See Note 4.

Other intangible assets are stated at cost less accumulated amortization. The amortization of other intangible assets in 2019, 2018, and 2017 was $109 million, $100 million, and $18 million, respectively. The estimated amortization expense for the next five years is as follows in millions of dollars: 2020 - $101, 2021 - $100, 2022 - $100, 2023 - $97, and 2024 - $95.

19. TOTAL SHORT-TERM BORROWINGS

Total short-term borrowings at November 3, 2019 and October 28, 2018 consisted of the following in millions of dollars:

	2019	2018
Equipment Operations		
Notes payable to banks	$ 345	$ 464
Long-term borrowings due within one year	642	970
Total	987	1,434
Financial Services		
Commercial paper	2,698	3,857
Notes payable to banks	313	344
Long-term borrowings due within one year*	6,786	5,427
Total	9,797	9,628
Short-term borrowings	10,784	11,062
Short-term securitization borrowings		
Equipment Operations	44	75
Financial Services	4,277	3,882
Total	4,321	3,957
Total short-term borrowings	$ 15,105	$ 15,019

* Includes unamortized fair value adjustments related to interest rate swaps.

The short-term securitization borrowings are secured by financing receivables (retail notes) on the balance sheet (see Note 14). Although these securitization borrowings are classified as short-term since payment is required if the retail notes are liquidated early, the payment schedule for these borrowings, which are net of debt acquisition costs, at November 3, 2019 based on the expected liquidation of the retail notes in millions of dollars is as follows: 2020 - $2,174, 2021 - $1,278, 2022 - $663, 2023 - $195, 2024 - $15, and 2025 - $1.

The weighted-average interest rates on total short-term borrowings, excluding current maturities of long-term borrowings, at November 3, 2019 and October 28, 2018 were 2.9 percent and 3.0 percent, respectively.

Lines of credit available from U.S. and foreign banks were $8,499 million at November 3, 2019. At November 3, 2019, $5,143 million of these worldwide lines of credit were unused. For the purpose of computing the unused credit lines, commercial paper, and short-term bank borrowings, excluding secured borrowings and the current portion of long-term borrowings, were primarily considered to constitute utilization. Included in the total credit lines at November 3, 2019 was a 364-day credit facility agreement of $2,800 million, expiring in fiscal April 2020. In addition, total credit lines included long-term credit facility agreements of $2,500 million, expiring in April 2023, and $2,500 million, expiring in April 2024. The agreements are mutually extendable and the annual facility fees are not significant. These credit agreements require Capital Corporation to maintain its consolidated ratio of earnings to fixed charges at not less than 1.05 to 1 for each fiscal quarter and the ratio of senior debt, excluding securitization indebtedness, to capital base (total subordinated debt and stockholder's equity excluding accumulated other comprehensive income (loss)) at not more than 11 to 1 at the end of any fiscal quarter. The credit agreements also require the equipment operations to maintain a ratio of total debt to total capital (total

debt and stockholders' equity excluding accumulated other comprehensive income (loss)) of 65 percent or less at the end of each fiscal quarter. Under this provision, the company's excess equity capacity and retained earnings balance free of restriction at November 3, 2019 was $13,554 million. Alternatively under this provision, the equipment operations had the capacity to incur additional debt of $25,171 million at November 3, 2019. All of these credit agreement requirements have been met during the periods included in the consolidated financial statements.

Deere & Company has an agreement with Capital Corporation pursuant to which it has agreed to continue to own, directly or through one or more wholly-owned subsidiaries, at least 51 percent of the voting shares of capital stock of Capital Corporation and to maintain Capital Corporation's consolidated tangible net worth at not less than $50 million. This agreement also obligates Deere & Company to make payments to Capital Corporation such that its consolidated ratio of earnings to fixed charges is not less than 1.05 to 1 for each fiscal quarter. Deere & Company's obligations to make payments to Capital Corporation under the agreement are independent of whether Capital Corporation is in default on its indebtedness, obligations or other liabilities. Further, Deere & Company's obligations under the agreement are not measured by the amount of Capital Corporation's indebtedness, obligations or other liabilities. Deere & Company's obligations to make payments under this agreement are expressly stated not to be a guaranty of any specific indebtedness, obligation or liability of Capital Corporation and are enforceable only by or in the name of Capital Corporation. No payments were required under this agreement during the periods included in the consolidated financial statements.

20. ACCOUNTS PAYABLE AND ACCRUED EXPENSES

Accounts payable and accrued expenses at November 3, 2019 and October 28, 2018 consisted of the following in millions of dollars:

	2019	2018
Equipment Operations		
Accounts payable:		
Trade payables	$ 1,996	$ 2,466
Dividends payable	244	223
Other	284	243
Accrued expenses:		
Dealer sales discounts	1,990	1,801
Product warranties	1,218	1,146
Employee benefits	1,001	1,038
Accrued taxes	734	836
Unearned revenue	657	665
Other	1,108	965
Total	9,232	9,383
Financial Services		
Accounts payable:		
Deposits withheld from dealers and merchants	164	190
Other	163	239
Accrued expenses:		
Unearned revenue	978	885
Accrued interest	211	163
Employee benefits	61	63
Other	259	516
Total	1,836	2,056
Eliminations*	1,412	1,328
Accounts payable and accrued expenses	$ 9,656	$ 10,111

* Primarily trade receivable valuation accounts related to sales incentive accruals of $1,400 million, which are reclassified as accrued expenses by the equipment operations as a result of their trade receivables being sold to financial services.

21. LONG-TERM BORROWINGS

Long-term borrowings at November 3, 2019 and October 28, 2018 consisted of the following in millions of dollars:

	2019	2018
Equipment Operations		
U.S. dollar notes and debentures:		
8-1/2% debentures due 2022	$ 105	$ 105
2.60% notes due 2022	1,000	1,000
6.55% debentures due 2028	200	200
5.375% notes due 2029	500	500
8.10% debentures due 2030	250	250
7.125% notes due 2031	300	300
3.90% notes due 2042	1,250	1,250
2.875% notes due 2049	500	
Euro notes:		
Medium-term note due 2020: (€350 principal) Average interest rate of .0% - 2018		398
.5% notes due 2023 (€500 principal)	558	569
1.65% notes due 2039 (€650 principal)	725	
Other notes	51	159
Less debt issuance costs	24	17
Total	5,415	4,714
Financial Services		
Notes and debentures:		
Medium-term notes due 2020 - 2029: (principal $23,265 - 2019, $21,721 - 2018) Average interest rates of 2.7% - 2019, 2.8% - 2018	23,528 *	21,354 *
Other notes	1,335	1,215
Less debt issuance costs	49	46
Total	24,814	22,523
Long-term borrowings**	$ 30,229	$ 27,237

* Includes unamortized fair value adjustments related to interest rate swaps.
** All interest rates are as of year end.

The approximate principal amounts of the equipment operations' long-term borrowings maturing in each of the next five years in millions of dollars are as follows: 2020 - $643, 2021 - $39, 2022 - $1,121, 2023 - $562, and 2024 - $1. The approximate principal amounts of the financial services' long-term borrowings maturing in each of the next five years in millions of dollars are as follows: 2020 - $6,795, 2021 - $6,885, 2022 - $6,323, 2023 - $3,791, and 2024 - $3,013.

22. LEASES

At November 3, 2019, future minimum lease payments under capital leases amounted to $32 million as follows: 2020 - $12, 2021 - $10, 2022 - $6, 2023 - $2, 2024 - $1, and later years $1. Total rental expense for operating leases was $194 million in 2019, $167 million in 2018, and $167 million in 2017. At November 3, 2019, future minimum lease payments under operating leases amounted to $337 million as follows: 2020 - $111, 2021 - $77, 2022 - $56, 2023 - $39, 2024 - $28, and later years $26.

23. COMMITMENTS AND CONTINGENCIES

The company generally determines its total warranty liability by applying historical claims rate experience to the estimated amount of equipment that has been sold and is still under warranty based on dealer inventories and retail sales. The historical claims rate is primarily determined by a review of five-year claims costs and current quality developments.

The premiums for extended warranties are primarily recognized in income in proportion to the costs expected to be incurred over the contract period. The unamortized extended warranty premiums (deferred revenue) included in the following table totaled $582 million and $506 million at November 3, 2019 and October 28, 2018, respectively.

A reconciliation of the changes in the warranty liability and unearned premiums in millions of dollars follows:

	Warranty Liability/ Unearned Premiums	
	2019	2018
Beginning of year balance	$ 1,652	$ 1,468
Payments	(985)	(907)
Amortization of premiums received	(214)	(217)
Accruals for warranties	1,066	978
Premiums received	292	270
Acquisition*		80
Foreign exchange	(11)	(20)
End of year balance	$ 1,800	$ 1,652

* See Note 4.

At November 3, 2019, the company had approximately $343 million of guarantees issued primarily to banks outside the U.S. and Canada related to third-party receivables for the retail financing of John Deere and Wirtgen equipment. The company may recover a portion of any required payments incurred under these agreements from repossession of the equipment collateralizing the receivables. At November 3, 2019, the company had accrued losses of approximately $14 million under these agreements. The maximum remaining term of the receivables guaranteed at November 3, 2019 was approximately seven years.

At November 3, 2019, the company had commitments of approximately $281 million for the construction and acquisition of property and equipment. Also at November 3, 2019, the company had restricted assets of $88 million, classified as "Other assets". See Note 14 for additional restricted assets associated with borrowings related to securitizations.

The company also had other miscellaneous contingent liabilities totaling approximately $65 million at November 3, 2019. The accrued liability for these contingencies was not material at November 3, 2019.

The company is subject to various unresolved legal actions which arise in the normal course of its business, the most prevalent of which relate to product liability (including asbestos related liability), retail credit, employment, patent, and trademark matters. The company believes the reasonably possible range of losses for these unresolved legal actions would not have a material effect on its financial statements.

24. CAPITAL STOCK

Changes in the common stock account in millions were as follows:

	Number of Shares Issued	Amount
Balance at October 30, 2016	536.4	$ 3,912
Stock options and other		369
Balance at October 29, 2017	536.4	4,281
Stock options and other		193
Balance at October 28, 2018	536.4	4,474
Stock options and other		168
Balance at November 3, 2019	536.4	$ 4,642

The number of common shares the company is authorized to issue is 1,200 million. The number of authorized preferred shares, none of which has been issued, is nine million.

The Board of Directors at its meeting in December 2013 authorized the repurchase of up to $8,000 million of common stock (45.4 million shares based on the fiscal year end closing common stock price of $176.11 per share). At the end of the fiscal year, this repurchase program had $1,075 million (6.1 million shares at the same price) remaining to be repurchased. Repurchases of the company's common stock under this plan will be made from time to time, at the company's discretion, in the open market.

A reconciliation of basic and diluted net income per share attributable to Deere & Company follows in millions, except per share amounts:

	2019	2018	2017
Net income attributable to Deere & Company	$ 3,253	$ 2,368	$ 2,159
Average shares outstanding	316.5	322.6	319.5
Basic per share	$ 10.28	$ 7.34	$ 6.76
Average shares outstanding	316.5	322.6	319.5
Effect of dilutive stock options	4.1	4.7	3.8
Total potential shares outstanding	320.6	327.3	323.3
Diluted per share	$ 10.15	$ 7.24	$ 6.68

All stock options outstanding were included in the computation except .7 million in 2019, .4 million in 2018, and .2 million in 2017 that had an antidilutive effect under the treasury stock method.

25. STOCK OPTION AND RESTRICTED STOCK AWARDS

The company issues stock options and restricted stock awards to key employees under plans approved by stockholders. Restricted stock is also issued to nonemployee directors for their services as directors under a plan approved by stockholders. Options are awarded with the exercise price equal to the market price and become exercisable in one to three years after grant. Options expire ten years after the date of grant. Restricted stock awards generally vest after three years. The compensation cost for stock options, service based restricted stock units, and market/service based restricted stock units, which is based on the fair value at the grant date, is recognized on a straight-line basis over the requisite period the employee is required to render service. The compensation cost for performance/service based units, which is based on the fair value at the grant date, is recognized over the employees' requisite service period and periodically adjusted for the probable number of shares to be awarded. According to these plans at November 3, 2019, the company is authorized to grant an additional 8.3 million shares related to stock options or restricted stock.

The fair value of each option award was estimated on the date of grant using a binomial lattice option valuation model. Expected volatilities are based on implied volatilities from traded call options on the company's stock. The expected volatilities are constructed from the following three components: the starting implied volatility of short-term call options traded within a few days of the valuation date; the predicted implied volatility of long-term call options; and the trend in implied volatilities over the span of the call options' time to maturity. The company uses historical data to estimate option exercise behavior and employee termination within the valuation model. The expected term of options granted is derived from the output of the option valuation model and represents the period of time that options granted are expected to be outstanding. The risk-free rates utilized for periods throughout the contractual life of the options are based on U.S. Treasury security yields at the time of grant.

The assumptions used for the binomial lattice model to determine the fair value of options follow:

	2019	2018	2017
Risk-free interest rate	2.68% - 3.1%	1.69% - 2.7%	.88% - 2.5%
Expected dividends	2.0%	1.6%	2.4%
Expected volatility	28.8% - 31.8%	22.3% - 23.0%	24.0% - 24.8%
Weighted-average volatility	30.0%	22.8%	24.5%
Expected term (in years)	8.0 - 8.5	7.9 - 8.6	7.8 - 8.6

Stock option activity at November 3, 2019 and changes during 2019 in millions of dollars and shares follow:

	Shares	Exercise Price*	Remaining Contractual Term (Years)	Aggregate Intrinsic Value
Outstanding at beginning of year	8.8	$ 87.08		
Granted	.4	148.14		
Exercised	(2.2)	79.64		
Outstanding at end of year	7.0	92.85	6.28	$ 579.1
Exercisable at end of year	6.1	86.65	5.93	548.3

* Weighted-averages

The weighted-average grant-date fair values of options granted during 2019, 2018, and 2017 were $46.96, $39.11, and $24.46, respectively. The total intrinsic values of options exercised during 2019, 2018, and 2017 were $186 million, $229 million, and $225 million, respectively. During 2019, 2018, and 2017, cash received from stock option exercises was $178 million, $217 million, and $529 million with tax benefits of $44 million, $54 million, and $83 million, respectively.

The company granted 447 thousand, 415 thousand, and 579 thousand restricted stock units to employees and nonemployee directors in 2019, 2018, and 2017, of which 355 thousand, 330 thousand, and 465 thousand are subject to service based only conditions, 92 thousand, 85 thousand, and 57 thousand are subject to performance/service based conditions, and none, none,

and 57 thousand are subject to market/service based conditions, respectively. The service based only units award one share of common stock for each unit at the end of the vesting period and include dividend equivalent payments.

The performance/service based units are subject to a performance metric based on the company's compound annual revenue growth rate, compared to a benchmark group of companies over the vesting period. The market/service based units are subject to a market related metric based on total shareholder return, compared to the same benchmark group of companies over the vesting period. The performance/service based units and the market/service based units both award common stock in a range of zero to 200 percent for each unit granted based on the level of the metric achieved and do not include dividend equivalent payments over the vesting period. The weighted-average fair values of the service based only units at the grant dates during 2019, 2018, and 2017 were $149.54, $151.67, and $101.03 per unit, respectively, based on the market price of a share of underlying common stock. The fair value of the performance/service based units at the grant date during 2019, 2018, and 2017 were $140.49, $145.33, and $93.86 per unit, respectively, based on the market price of a share of underlying common stock excluding dividends. The fair value of the market/service based units at the grant date during 2017 was $129.70 per unit based on a lattice valuation model excluding dividends.

The company's restricted shares at November 3, 2019 and changes during 2019 in millions of shares follow:

	Shares	Grant-Date Fair Value*
Service based only		
Nonvested at beginning of year	.9	$ 117.47
Granted	.4	149.54
Vested	(.2)	88.76
Nonvested at end of year	1.1	130.72
Performance/service and market/service based		
Nonvested at beginning of year	.3	$ 110.56
Granted	.1	140.49
Vested	(.3)	88.30
Performance change	.2	88.30
Nonvested at end of year	.3	130.78

* Weighted-averages

During 2019, 2018, and 2017, the total share-based compensation expense was $82 million, $84 million, and $68 million, respectively, with recognized income tax benefits of $20 million, $20 million, and $25 million, respectively. At November 3, 2019, there was $51 million of total unrecognized compensation cost from share-based compensation arrangements granted under the plans, which is related to restricted shares and options. This compensation is expected to be recognized over a weighted-average period of approximately two years. The total grant-date fair values of stock options and restricted shares vested during 2019, 2018, and 2017 were $66 million, $63 million, and $72 million, respectively.

The company currently uses shares that have been repurchased through its stock repurchase programs to satisfy share option exercises. At fiscal year end, the company had 223 million shares in treasury stock and 6 million shares remaining to be repurchased under its publicly announced repurchase program (see Notes 24 and 31).

26. OTHER COMPREHENSIVE INCOME ITEMS

The after-tax changes in accumulated other comprehensive income at October 30, 2016, October 29, 2017, October 28, 2018, and November 3, 2019 in millions of dollars follow:

	Retirement Benefits Adjustment	Cumulative Translation Adjustment	Unrealized Gain (Loss) on Derivatives	Unrealized Gain (Loss) on Debt Securities	Total Accumulated Other Comprehensive Income (Loss)
2016	$ (4,409)	$ (1,229)	$ 1	$ 11	$ (5,626)
Period Change	829	230	4	(1)	1,062
2017	(3,580)	(999)	5	10	(4,564)
Period Change	1,052	(194)	9	(13)	854
ASU No. 2018-02	(709)	(10)	1	1	(717)
2018	(3,237)	(1,203)	15	(2)	(4,427)
ASU No. 2016-01*				(8)	(8)
Period Change	(678)	(448)	(75)	29	(1,172)
2019	$ (3,915)	$ (1,651)	$ (60)	$ 19	$ (5,607)

* See Note 3.

Following are amounts recorded in and reclassifications out of other comprehensive income (loss), and the income tax effects, in millions of dollars:

	Before Tax Amount	Tax (Expense) Credit	After Tax Amount
2019			
Cumulative translation adjustment	$ (447)	$ (1)	$ (448)
Unrealized gain (loss) on derivatives:			
Unrealized hedging gain (loss)	(92)	21	(71)
Reclassification of realized (gain) loss to:			
Interest rate contracts – Interest expense	(5)	1	(4)
Net unrealized gain (loss) on derivatives	(97)	22	(75)
Unrealized gain (loss) on debt securities:			
Unrealized holding gain (loss)	36	(7)	29
Net unrealized gain (loss) on debt securities	36	(7)	29
Retirement benefits adjustment:			
Pensions			
Net actuarial gain (loss)	(887)	236	(651)
Reclassification to other operating expenses through amortization of: *			
Actuarial (gain) loss	143	(35)	108
Prior service (credit) cost	11	(2)	9
Settlements	3	(1)	2
OPEB			
Net actuarial gain (loss)	(141)	38	(103)
Reclassification to other operating expenses through amortization of: *			
Actuarial (gain) loss	16	(4)	12
Prior service (credit) cost	(72)	17	(55)
Net unrealized gain (loss) on retirement benefits adjustment	(927)	249	(678)
Total other comprehensive income (loss)	$ (1,435)	$ 263	$ (1,172)

* These accumulated other comprehensive income amounts are included in net periodic pension and OPEB costs. See Note 8 for additional detail.

	Before Tax Amount	Tax (Expense) Credit	After Tax Amount
2018			
Cumulative translation adjustment	$ (188)	$ (6)	$ (194)
Unrealized gain (loss) on derivatives:			
Unrealized hedging gain (loss)	18	(4)	14
Reclassification of realized (gain) loss to:			
Interest rate contracts – Interest expense	(5)	1	(4)
Foreign exchange contracts – Other operating expenses	(1)		(1)
Net unrealized gain (loss) on derivatives	12	(3)	9
Unrealized gain (loss) on investments:			
Unrealized holding gain (loss)	(17)	5	(12)
Reclassification of realized (gain) loss – Other income	(1)		(1)
Net unrealized gain (loss) on investments	(18)	5	(13)
Retirement benefits adjustment:			
Pensions			
Net actuarial gain (loss)	553	(128)	425
Reclassification to other operating expenses through amortization of: *			
Actuarial (gain) loss	226	(63)	163
Prior service (credit) cost	12	(4)	8
Settlements	8	(2)	6
OPEB			
Net actuarial gain (loss) and prior service credit (cost)	603	(142)	461
Reclassification to other operating expenses through amortization of: *			
Actuarial (gain) loss	62	(17)	45
Prior service (credit) cost	(77)	21	(56)
Net unrealized gain (loss) on retirement benefits adjustment	1,387	(335)	1,052
Total other comprehensive income (loss)	$ 1,193	$ (339)	$ 854

* These accumulated other comprehensive income amounts are included in net periodic pension and OPEB costs. See Note 8 for additional detail.

	Before Tax Amount	Tax (Expense) Credit	After Tax Amount
2017			
Cumulative translation adjustment	$ 232	$ (2)	$ 230
Unrealized gain (loss) on derivatives:			
Unrealized hedging gain (loss)	3	(1)	2
Reclassification of realized (gain) loss to:			
Interest rate contracts – Interest expense	2	(1)	1
Foreign exchange contracts – Other operating expenses	1		1
Net unrealized gain (loss) on derivatives	6	(2)	4
Unrealized gain (loss) on investments:			
Unrealized holding gain (loss)	274	(101)	173
Reclassification of realized (gain) loss – Other income	(275)	101	(174)
Net unrealized gain (loss) on investments	(1)		(1)
Retirement benefits adjustment:			
Pensions			
Net actuarial gain (loss)	702	(248)	454
Reclassification to other operating expenses through amortization of: *			
Actuarial (gain) loss	247	(89)	158
Prior service (credit) cost	12	(4)	8
Settlements	2	(1)	1
OPEB			
Net actuarial gain (loss)	309	(115)	194
Reclassification to other operating expenses through amortization of: *			
Actuarial (gain) loss	99	(36)	63
Prior service (credit) cost	(77)	28	(49)
Net unrealized gain (loss) on retirement benefits adjustment	1,294	(465)	829
Total other comprehensive income (loss)	$ 1,531	$ (469)	$ 1,062

* These accumulated other comprehensive income amounts are included in net periodic pension and OPEB costs. See Note 8 for additional detail.

The noncontrolling interests' comprehensive income was $4 million in 2019, $2 million in 2018, and none in 2017, which consisted of net income of $4 million in 2019, $3 million in 2018, and none in 2017 and cumulative translation adjustments of none in 2019, $(1) million in 2018, and none in 2017.

27. FAIR VALUE MEASUREMENTS

Fair value is defined as 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. To determine fair value, the company uses various methods including market and income approaches. The company utilizes valuation models and techniques that maximize the use of observable inputs. The models are industry-standard models that consider various assumptions including time values and yield curves as well as other economic measures. These valuation techniques are consistently applied.

Level 1 measurements consist of quoted prices in active markets for identical assets or liabilities. Level 2 measurements include significant other observable inputs such as quoted prices for similar assets or liabilities in active markets; identical assets or liabilities in inactive markets; observable inputs such as interest rates and yield curves; and other market-corroborated inputs. Level 3 measurements include significant unobservable inputs.

The fair values of financial instruments that do not approximate the carrying values at November 3, 2019 and October 28, 2018 in millions of dollars follow:

	2019		2018	
	Carrying Value	Fair Value*	Carrying Value	Fair Value*
Financing receivables – net:				
Equipment operations	$ 65	$ 61	$ 93	$ 91
Financial services	29,130	29,106	26,961	26,722
Total	$ 29,195	$ 29,167	$ 27,054	$ 26,813
Financing receivables securitized – net:				
Equipment operations	$ 44	$ 43	$ 76	$ 73
Financial services	4,339	4,362	3,946	3,895
Total	$ 4,383	$ 4,405	$ 4,022	$ 3,968
Short-term securitization borrowings:				
Equipment operations	$ 44	$ 45	$ 75	$ 75
Financial services	4,277	4,302	3,882	3,870
Total	$ 4,321	$ 4,347	$ 3,957	$ 3,945
Long-term borrowings due within one year:				
Equipment operations	$ 642	$ 645	$ 970	$ 979
Financial services	6,786	6,788	5,427	5,411
Total	$ 7,428	$ 7,433	$ 6,397	$ 6,390
Long-term borrowings:				
Equipment operations	$ 5,415	$ 6,138	$ 4,714	$ 4,948
Financial services	24,814	25,122	22,523	22,590
Total	$ 30,229	$ 31,260	$ 27,237	$ 27,538

* Fair value measurements above were Level 3 for all financing receivables, Level 3 for equipment operations short-term securitization borrowings, and Level 2 for all other borrowings.

Fair values of the financing receivables that were issued long-term were based on the discounted values of their related cash flows at interest rates currently being offered by the company for similar financing receivables. The fair values of the remaining financing receivables approximated the carrying amounts.

Fair values of long-term borrowings and short-term securitization borrowings were based on current market quotes for identical or similar borrowings and credit risk, or on the discounted values of their related cash flows at current market interest rates. Certain long-term borrowings have been swapped to current variable interest rates. The carrying values of these long-term borrowings included adjustments related to fair value hedges.

Assets and liabilities measured at November 3, 2019 and October 28, 2018 at fair value on a recurring basis in millions of dollars follow*:

	2019	2018
Level 1:		
Marketable securities		
Equity fund	$ 59	$ 46
U.S. government debt securities	50	44
Total Level 1 marketable securities	109	90
Level 2:		
Marketable securities		
U.S. government debt securities	81	67
Municipal debt securities	60	46
Corporate debt securities	165	140
International debt securities	5	2
Mortgage-backed securities**	160	137
Total Level 2 marketable securities	471	392
Other assets		
Derivatives:		
Interest rate contracts	363	80
Foreign exchange contracts	20	83
Cross-currency interest rate contracts	1	5
Total Level 2 other assets	384	168
Accounts payable and accrued expenses		
Derivatives:		
Interest rate contracts	65	350
Foreign exchange contracts	71	49
Cross-currency interest rate contracts	3	
Total Level 2 accounts payable and accrued expenses	139	399
Level 3:		
Marketable securities		
International debt securities	1	8

* Excluded from this table were the company's cash equivalents, which were carried at cost that approximates fair value. The cash equivalents consist primarily of money market funds and time deposits.

** Primarily issued by U.S. government sponsored enterprises.

Fair value, recurring Level 3 measurements from available-for-sale marketable securities at November 3, 2019, October 28, 2018, and October 29, 2017 in millions of dollars follow:

	2019	2018	2017
Beginning of year balance	$ 8	$ 17	$ 28
Principal payments	(8)	(9)	(13)
Change in unrealized gain		1	2
Other	1	(1)	
End of year balance	$ 1	$ 8	$ 17

Fair value, nonrecurring measurements from impairments at November 3, 2019 and October 28, 2018 in millions of dollars follow:

	Fair Value*		Losses*		
	2019	2018	2019	2018	2017
Equipment on operating leases – net	$ 855		$ 59		
Investments in unconsolidated affiliates					$ 40
Other assets	$ 142		$ 18		

* Fair value losses at October 29, 2017 were a Level 1 measurement. See financing receivables with specific allowances in Note 13 that were not significant. See Note 5 for impairments.

The following is a description of the valuation methodologies the company uses to measure certain financial instruments on the balance sheet at fair value:

Marketable Securities – The portfolio of investments, except for the Level 3 measurement international debt securities, is primarily valued on a market approach (matrix pricing model) in which all significant inputs are observable or can be derived from or corroborated by observable market data such as interest rates, yield curves, volatilities, credit risk, and prepayment speeds. Funds are primarily valued using the fund's net asset value, based on the fair value of the underlying securities. The Level 3 measurement international debt securities are primarily valued using an income approach based on discounted cash flows using yield curves derived from limited, observable market data.

Derivatives – The company's derivative financial instruments consist of interest rate swaps and caps, foreign currency futures, forwards and swaps, and cross-currency interest rate swaps. The portfolio is valued based on an income approach (discounted cash flow) using market observable inputs, including swap curves and both forward and spot exchange rates for currencies.

Financing Receivables – Specific reserve impairments are based on the fair value of the collateral, which is measured using a market approach (appraisal values or realizable values). Inputs include a selection of realizable values (see Note 13).

Equipment on Operating Leases – Net – The impairments are based on an income approach (discounted cash flow), using the contractual payments, plus an estimate of equipment sale price at lease maturity. Inputs include realized sales values.

Investment in Unconsolidated Affiliates – Other than temporary impairments for investments are measured as the difference between the implied fair value and the carrying value of the investments. The fair value for publicly traded entities is the share price multiplied by the shares owned (see Note 5).

Other Assets – The impairments are measured at the fair value of the matured operating lease inventory. The valuations were based on a market approach. The inputs include sales of comparable assets (see Note 5).

28. DERIVATIVE INSTRUMENTS

Cash Flow Hedges

Certain interest rate and cross-currency interest rate contracts (swaps) were designated as hedges of future cash flows from borrowings. The total notional amounts of the receive-variable/pay-fixed interest rate contracts at November 3, 2019 and October 28, 2018 were $3,150 million and $3,050 million, respectively. During 2019, the company hedged a portion of its exposure to interest rate changes on a forecasted debt issuance using an interest rate contract with a term of 30 years. The hedge was terminated upon issuance of the debt, resulting in a fair value loss of $70 million. Fair value gains or losses on cash flow hedges were recorded in OCI and are subsequently reclassified into interest expense or other operating expenses (foreign exchange) in the same periods during which the hedged transactions impact earnings. These amounts offset the effects of interest rate or foreign currency exchange rate changes on the related borrowings. The cash flows from these contracts were recorded in operating activities in the statement of consolidated cash flows.

The amount of loss recorded in OCI at November 3, 2019 that is expected to be reclassified to interest expense or other operating expenses in the next twelve months if interest rates or exchange rates remain unchanged is approximately $8 million after-tax. There were no gains or losses reclassified from OCI to earnings based on the probability that the original forecasted transaction would not occur.

Fair Value Hedges

Certain interest rate contracts (swaps) were designated as fair value hedges of borrowings. The total notional amounts of the receive-fixed/pay-variable interest rate contracts at November 3, 2019 and October 28, 2018 were $8,717 million and $8,479 million, respectively. The fair value gains or losses on these contracts were generally offset by fair value gains or losses on the hedged items (fixed-rate borrowings) with both items recorded in interest expense.

The amounts recorded, at November 3, 2019, in the consolidated balance sheet related to borrowings designated in fair value hedging relationships in millions of dollars follow:

	Carrying Amount of Hedged Item	Cumulative Increase (Decrease) of Fair Value Hedging Adjustments Included in the Carrying Amount: Active Hedging Relationships	Discontinued Relationships	Total
Long-term borrowings due within one year*	$ 412	$ (1)	$ (4)	$ (5)
Long-term borrowings	8,532	295	(32)	263

* Presented in short-term borrowings.

Derivatives Not Designated as Hedging Instruments

The company has certain interest rate contracts (swaps and caps), foreign exchange contracts (futures, forwards and swaps), and cross-currency interest rate contracts (swaps), which were not formally designated as hedges. These derivatives were held as economic hedges for underlying interest rate or foreign currency exposures primarily for certain borrowings, purchases or sales of inventory, and below market retail financing programs. The total notional amounts of the interest rate swaps at November 3, 2019 and October 28, 2018 were $9,166 million and $8,075 million, the foreign exchange contracts were $4,962 million and $6,842 million, and the cross-currency interest rate contracts were $92 million and $81 million, respectively. To facilitate borrowings through securitization of retail notes, interest rate caps were sold with notional amounts of $6 million and $66 million at November 3, 2019 and October 28, 2018, respectively. Interest rate caps were also purchased with notional amounts of $6 million and $66 million, at the same dates. The fair value gains or losses from the interest rate contracts were recognized currently in interest expense and the gains or losses from foreign exchange contracts in cost of sales or other operating expenses, generally offsetting over time the expenses on the exposures being hedged. The cash flows from these non-designated contracts were recorded in operating activities in the statement of consolidated cash flows.

Fair values of derivative instruments in the consolidated balance sheet at November 3, 2019 and October 28, 2018 in millions of dollars follow:

	2019	2018
Other Assets		
Designated as hedging instruments:		
Interest rate contracts	$ 332	$ 29
Total designated	332	29
Not designated as hedging instruments:		
Interest rate contracts	31	51
Foreign exchange contracts	20	83
Cross-currency interest rate contracts	1	5
Total not designated	52	139
Total derivative assets	$ 384	$ 168
Accounts Payable and Accrued Expenses		
Designated as hedging instruments:		
Interest rate contracts	$ 28	$ 321
Total designated	28	321
Not designated as hedging instruments:		
Interest rate contracts	37	29
Foreign exchange contracts	71	49
Cross-currency interest rate contracts	3	
Total not designated	111	78
Total derivative liabilities	$ 139	$ 399

The classification and gains (losses) including accrued interest expense related to derivative instruments on the statement of consolidated income consisted of the following in millions of dollars:

	2019	2018	2017
Fair Value Hedges			
Interest rate contracts – Interest expense	$ 589	$ (283)	$ (205)
Cash Flow Hedges			
Recognized in OCI			
Interest rate contracts – OCI (pretax)*	(92)	17	4
Foreign exchange contracts – OCI (pretax)*		2	(1)
Reclassified from OCI			
Interest rate contracts – Interest expense*	5	5	(2)
Foreign exchange contracts – Other expense*		1	(1)
Not Designated as Hedges			
Interest rate contracts – Net sales	$ (23)	$ 3	
Interest rate contracts – Interest expense*	(32)	(4)	$ 11
Foreign exchange contracts – Cost of sales	(18)	(24)	(12)
Foreign exchange contracts – Other expense*	97	195	(106)
Total not designated	$ 24	$ 170	$ (107)

* Includes interest and foreign exchange gains (losses) from cross-currency interest rate contracts.

Counterparty Risk and Collateral

Derivative instruments are subject to significant concentrations of credit risk to the banking sector. The company manages individual counterparty exposure by setting limits that consider the credit rating of the counterparty, the credit default swap spread of the counterparty, and other financial commitments and exposures between the company and the counterparty banks. All interest rate derivatives are transacted under International Swaps and Derivatives Association (ISDA) documentation. Some of these agreements include credit support provisions. Each master agreement permits the net settlement of amounts owed in the event of default or termination.

Certain of the company's derivative agreements contain credit support provisions that may require the company to post collateral based on the size of the net liability positions and credit ratings. The aggregate fair value of all derivatives with credit-risk-related contingent features that were in a net liability position at November 3, 2019 and October 28, 2018, was $68 million and $350 million, respectively. In accordance with the limits established in these agreements, the company posted none and $59 million in cash collateral at November 3, 2019 and October 28, 2018, respectively.

Derivatives are recorded without offsetting for netting arrangements or collateral. The impact on the derivative assets and liabilities related to netting arrangements and any collateral paid at November 3, 2019 and October 28, 2018 in millions of dollars follows:

	Gross Amounts Recognized	Netting Arrangements	Collateral Paid	Net Amount
2019				
Assets	$ 384	$ (70)		$ 314
Liabilities	139	(70)		69
2018				
Assets	$ 168	$ (65)		$ 103
Liabilities	399	(65)	$ (59)	275

29. SEGMENT AND GEOGRAPHIC AREA DATA

The company's operations are presently organized and reported in three major business segments described as follows:

The agriculture and turf segment primarily manufactures and distributes a full line of agriculture and turf equipment and related service parts, including large, medium, and utility tractors; tractor loaders; combines, cotton pickers, cotton strippers, and sugarcane harvesters; harvesting front-end equipment; sugarcane loaders and pull-behind scrapers; tillage, seeding, and application equipment, including sprayers, nutrient management, and soil preparation machinery; hay and forage equipment, including self-propelled forage harvesters and attachments, balers and mowers; turf and utility equipment, including riding lawn equipment and walk-behind mowers, golf course equipment, utility vehicles, and commercial mowing equipment, along with a broad line of associated implements; integrated agricultural management systems technology and solutions; and other outdoor power products.

The construction and forestry segment primarily manufactures and distributes a broad range of machines and service parts used in construction, earthmoving, road building, material handling, and timber harvesting, including backhoe loaders; crawler dozers and loaders; four-wheel-drive loaders; excavators; motor graders; articulated dump trucks; landscape loaders; skid-steer loaders; milling machines; recyclers; slipform pavers; surface miners; asphalt pavers; compactors; tandem and static rollers; mobile crushers and screens; mobile and stationary asphalt plants; log skidders; feller bunchers; log loaders; log forwarders; log harvesters; and related logging attachments.

The products and services produced by the segments above are marketed primarily through independent retail dealer networks and major retail outlets.

The financial services segment primarily finances sales and leases by John Deere dealers of new and used agriculture and turf equipment and construction and forestry equipment. In addition, the financial services segment provides wholesale financing to dealers of the foregoing equipment, finances retail revolving charge accounts, and offers extended equipment warranties.

Because of integrated manufacturing operations and common administrative and marketing support, a substantial number of

allocations must be made to determine operating segment and geographic area data. Intersegment sales and revenues represent sales of components and finance charges, which are generally based on market prices.

Information relating to operations by operating segment in millions of dollars follows for the years ended November 3, 2019, October 28, 2018, and October 29, 2017. In addition to the following unaffiliated sales and revenues by segment, intersegment sales and revenues in 2019, 2018, and 2017 were as follows: agriculture and turf net sales of $34 million, $47 million, and $39 million, construction and forestry net sales of $1 million, none, and $1 million, and financial services revenues of $348 million, $308 million, and $244 million, respectively.

OPERATING SEGMENTS	2019	2018	2017
Net sales and revenues			
Unaffiliated customers:			
Agriculture and turf net sales	$ 23,666	$ 23,191	$ 20,167
Construction and forestry net sales	11,220	10,160	5,718
Total net sales	34,886	33,351	25,885
Financial services revenues	3,621	3,252	2,935
Other revenues*	751	755	918
Total	$ 39,258	$ 37,358	$ 29,738

* Other revenues are primarily the equipment operations' revenues for finance and interest income, and other income as disclosed in Note 32, net of certain intercompany eliminations.

OPERATING SEGMENTS	2019	2018	2017
Operating profit			
Agriculture and turf	$ 2,506	$ 2,816	$ 2,513
Construction and forestry	1,215	868	346
Financial services*	694	792	715
Total operating profit*	4,415	4,476	3,574
Interest income	85	80	55
Interest expense	(256)	(298)	(264)
Foreign exchange gains (losses) from equipment operations' financing activities	(22)	36	(12)
Pension and OPEB benefit (cost), excluding service cost component	67	(15)	(31)
Corporate expenses – net	(180)	(181)	(192)
Income taxes	(852)	(1,727)	(971)
Total	(1,158)	(2,105)	(1,415)
Net income	3,257	2,371	2,159
Less: Net income attributable to noncontrolling interests	4	3	
Net income attributable to Deere & Company	$ 3,253	$ 2,368	$ 2,159

* Operating profit of the financial services business segment includes the effect of its interest expense and foreign exchange gains or losses.

(continued)

OPERATING SEGMENTS	2019	2018	2017
Interest income*			
Agriculture and turf	$ 22	$ 14	$ 16
Construction and forestry	11	33	1
Financial services	2,316	1,997	1,771
Corporate	85	80	55
Intercompany	(360)	(330)	(268)
Total	$ 2,074	$ 1,794	$ 1,575

* Does not include finance rental income for equipment on operating leases.

OPERATING SEGMENTS	2019	2018	2017
Interest expense			
Agriculture and turf	$ 245	$ 229	$ 182
Construction and forestry	91	71	52
Financial services	1,234	936	669
Corporate	256	298	264
Intercompany	(360)	(330)	(268)
Total	$ 1,466	$ 1,204	$ 899
Depreciation* and amortization expense			
Agriculture and turf	$ 723	$ 723	$ 695
Construction and forestry	292	251	145
Financial services	1,004	953	876
Total	$ 2,019	$ 1,927	$ 1,716

* Includes depreciation for equipment on operating leases.

OPERATING SEGMENTS	2019	2018	2017
Equity in income (loss) of unconsolidated affiliates			
Agriculture and turf	$ 6	$ 6	$ 2
Construction and forestry	14	19	(27)
Financial services	1	2	1
Total	$ 21	$ 27	$ (24)
Identifiable operating assets			
Agriculture and turf	$ 10,379	$ 10,161	$ 9,359
Construction and forestry	9,387	9,855	3,212
Financial services	48,483	45,720	42,596
Corporate*	4,762	4,372	10,619
Total	$ 73,011	$ 70,108	$ 65,786

* Corporate assets are primarily the equipment operations' retirement benefits, deferred income tax assets, marketable securities, and cash and cash equivalents as disclosed in Note 32, net of certain intercompany eliminations.

OPERATING SEGMENTS	2019	2018	2017
Capital additions			
Agriculture and turf	$ 859	$ 675	$ 485
Construction and forestry	245	308	114
Financial services	3	2	3
Total	$ 1,107	$ 985	$ 602
Investments in unconsolidated affiliates			
Agriculture and turf	$ 28	$ 26	$ 25
Construction and forestry	171	166	143
Financial services	16	15	14
Total	$ 215	$ 207	$ 182

(continued)

The company views and has historically disclosed its operations as consisting of two geographic areas, the U.S. and Canada, and outside the U.S. and Canada, shown below in millions of dollars. No individual foreign country's net sales and revenues were material for disclosure purposes.

GEOGRAPHIC AREAS	2019	2018	2017
Net sales and revenues			
Unaffiliated customers:			
U.S. and Canada:			
Equipment operations net sales and revenues*	$ 20,647	$ 18,847	$ 15,031
Financial services revenues*	3,099	2,785	2,526
Total	23,746	21,632	17,557
Outside U.S. and Canada:			
Equipment operations net sales and revenues	14,990	14,504	10,854
Financial services revenues	522	467	409
Total	15,512	14,971	11,263
Other revenues		755	918
Total	$ 39,258	$ 37,358	$ 29,738

* The 2018 and 2017 equipment operations' amounts are only for net sales and approximate the proportion of each amount that relates to the U.S. only based on a three-year average. The equipment operations' percentages for 2018 and 2017 were 88%. The financial services' U.S. only percentages were 79% for both fiscal years. See Note 6 for additional 2019 geographic net sales and revenues information.

	2019	2018	2017
Operating profit			
U.S. and Canada:			
Equipment operations	$ 2,335	$ 2,356	$ 1,754
Financial services	506	604	515
Total	2,841	2,960	2,269
Outside U.S. and Canada:			
Equipment operations	1,386	1,328	1,105
Financial services	188	188	200
Total	1,574	1,516	1,305
Total	$ 4,415	$ 4,476	$ 3,574
Property and equipment			
U.S.	$ 3,169	$ 3,031	$ 2,976
Germany	1,137	1,164	598
Other countries	1,667	1,673	1,494
Total	$ 5,973	$ 5,868	$ 5,068

30. SUPPLEMENTAL INFORMATION (UNAUDITED)

The $1 par value common stock of Deere & Company is listed on the New York Stock Exchange under the symbol "DE". At November 3, 2019, there were 19,873 holders of record of the company's $1 par value common stock.

Quarterly information with respect to net sales and revenues and earnings is shown in the following schedule. The company uses a 52/53 week fiscal year ending on the last Sunday in the reporting period (see Note 1). Fiscal year 2019 contained 53 weeks and the fourth quarter contained 14 weeks compared to 52 weeks and 13 weeks in the respective periods in 2018. The interim periods (quarters) end in January, April, and July. Such information is shown in millions of dollars except for per share amounts.

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
2019*				
Net sales and revenues	$ 7,984	$ 11,342	$10,036	$9,896
Net sales	6,941	10,273	8,969	8,703
Gross profit	1,509	2,518	2,099	1,968
Income before income taxes	677	1,473	1,113	825
Net income attributable to Deere & Company	498	1,135	899	721
Per share data:				
Basic	1.56	3.57	2.84	2.30
Diluted	1.54	3.52	2.81	2.27
Dividends declared	.76	.76	.76	.76
Dividends paid	.69	.76	.76	.76
2018				
Net sales and revenues	$ 6,913	$10,720	$10,309	$ 9,416
Net sales	5,974	9,747	9,287	8,343
Gross profit	1,270	2,414	2,134	1,962
Income before income taxes	518	1,384	1,190	979
Net income (loss) attributable to Deere & Company	(535)	1,208	910	785
Per share data:				
Basic	(1.66)	3.73	2.81	2.45
Diluted	(1.66)	3.67	2.78	2.42
Dividends declared	.60	.60	.69	.69
Dividends paid	.60	.60	.60	.69

Net income per share for each quarter must be computed independently. As a result, their sum may not equal the total net income per share for the year.

* See Note 5 for "Special Items."

31. SUBSEQUENT EVENTS

A quarterly dividend of $.76 per share was declared at the Board of Directors meeting on December 4, 2019, payable on February 10, 2020 to stockholders of record on December 31, 2019.

In December 2019, the Board of Directors also authorized the repurchase of up to $8,000 million of additional common stock. This repurchase program will supplement the existing $8,000 million share repurchase program, which had $1,075 million remaining at November 3, 2019. Repurchases of the company's common stock will be made at the company's discretion in the open market.

In November 2019, the company's financial services operations entered into a retail note securitization using its bank conduit facility that resulted in securitization borrowings of approximately $760 million.

During the first quarter of 2020, the company announced a broad voluntary employee-separation program that continues the efforts to create a more efficient organization structure and reduce operating costs. The program will provide for cash payments based on years of service. The expenses will generally be recorded in the period the employees irrevocably accept the separation offer, which is expected to be primarily in the first quarter of 2020. The program's total pretax expenses are estimated to be about $120 million with annual savings of about $90 million.

32. SUPPLEMENTAL CONSOLIDATING DATA

INCOME STATEMENT

For the Years Ended November 3, 2019, October 28, 2018, and October 29, 2017

(In millions of dollars)

	EQUIPMENT OPERATIONS*			FINANCIAL SERVICES		
	2019	2018	2017	2019	2018	2017
Net Sales and Revenues						
Net sales	$ 34,886	$ 33,351	$ 25,885			
Finance and interest income	118	126	72	$ 3,735	$ 3,311	$ 2,928
Other income	881	875	1,065	234	249	251
Total	35,885	34,352	27,022	3,969	3,560	3,179
Costs and Expenses						
Cost of sales	26,793	25,573	19,868			
Research and development expenses	1,783	1,658	1,373			
Selling, administrative and general expenses	3,031	2,935	2,555	528	528	549
Interest expense	256	298	264	1,234	936	669
Interest compensation to Financial Services	336	300	234			
Other operating expenses	299	315	295	1,506	1,298	1,240
Total	32,498	31,079	24,589	3,268	2,762	2,458
Income of Consolidated Group before Income Taxes	3,387	3,273	2,433	701	798	721
Provision (credit) for income taxes	689	1,869	726	163	(142)	245
Income of Consolidated Group	2,698	1,404	1,707	538	940	476
Equity in Income (Loss) of Unconsolidated Subsidiaries and Affiliates						
Financial Services	539	942	477	1	2	1
Other	20	25	(25)			
Total	559	967	452	1	2	1
Net Income	3,257	2,371	2,159	539	942	477
Less: Net income attributable to noncontrolling interests	4	3				
Net Income Attributable to Deere & Company	$ 3,253	$ 2,368	$ 2,159	$ 539	$ 942	$ 477

* Deere & Company with Financial Services on the equity basis.

The supplemental consolidating data is presented for informational purposes. The "Equipment Operations" reflect the basis of consolidation described in Note 1 to the consolidated financial statements. The consolidated group data in the "Equipment Operations" income statement reflect the results of the agriculture and turf operations and construction and forestry operations. Transactions between the "Equipment Operations" and "Financial Services" have been eliminated to arrive at the consolidated financial statements.

BALANCE SHEET
As of November 3, 2019 and October 28, 2018
(In millions of dollars)

	EQUIPMENT OPERATIONS*		FINANCIAL SERVICES	
	2019	2018	2019	2018
ASSETS				
Cash and cash equivalents	$ 3,175	$ 3,195	$ 682	$ 709
Marketable securities	1	8	580	482
Receivables from unconsolidated subsidiaries and affiliates	2,017	1,700		
Trade accounts and notes receivable - net	1,482	1,374	5,153	4,906
Financing receivables - net	65	93	29,130	26,961
Financing receivables securitized - net	44	76	4,339	3,946
Other receivables	1,376	1,010	116	776
Equipment on operating leases - net			7,567	7,165
Inventories	5,975	6,149		
Property and equipment - net	5,929	5,821	44	47
Investments in unconsolidated subsidiaries and affiliates	5,326	5,231	16	15
Goodwill	2,917	3,101		
Other intangible assets - net	1,380	1,562		
Retirement benefits	836	1,241	58	57
Deferred income taxes	1,896	1,503	57	69
Other assets	1,158	1,133	741	587
Total Assets	$ 33,577	$ 33,197	$ 48,483	$ 45,720
LIABILITIES AND STOCKHOLDERS' EQUITY				
LIABILITIES				
Short-term borrowings	$ 987	$ 1,434	$ 9,797	$ 9,628
Short-term securitization borrowings	44	75	4,277	3,882
Payables to unconsolidated subsidiaries and affiliates	142	129	1,970	1,678
Accounts payable and accrued expenses	9,232	9,383	1,836	2,056
Deferred income taxes	414	497	568	823
Long-term borrowings	5,415	4,714	24,814	22,523
Retirement benefits and other liabilities	5,912	5,660	94	91
Total liabilities	22,146	21,892	43,356	40,681
Commitments and contingencies (Note 23)				
Redeemable noncontrolling interest	14	14		
STOCKHOLDERS' EQUITY				
Common stock, $1 par value (authorized – 1,200,000,000 shares; issued – 536,431,204 shares in 2019 and 2018), at paid-in amount	4,642	4,474	2,107	2,100
Common stock in treasury, 223,290,789 shares in 2019 and 217,975,806 shares in 2018, at cost	(17,474)	(16,312)		
Retained earnings	29,852	27,553	3,378	3,257
Accumulated other comprehensive income (loss)	(5,607)	(4,427)	(358)	(318)
Total Deere & Company stockholders' equity	11,413	11,288	5,127	5,039
Noncontrolling interests	4	3		
Total stockholders' equity	11,417	11,291	5,127	5,039
Total Liabilities and Stockholders' Equity	$ 33,577	$ 33,197	$ 48,483	$ 45,720

* Deere & Company with Financial Services on the equity basis.

The supplemental consolidating data is presented for informational purposes. The "Equipment Operations" reflect the basis of consolidation described in Note 1 to the consolidated financial statements. Transactions between the "Equipment Operations" and "Financial Services" have been eliminated to arrive at the consolidated financial statements.

STATEMENT OF CASH FLOWS
For the Years Ended November 3, 2019, October 28, 2018, and October 29, 2017
(In millions of dollars)

	EQUIPMENT OPERATIONS*			FINANCIAL SERVICES		
	2019	2018	2017	2019	2018	2017
Cash Flows from Operating Activities						
Net income	$ 3,257	$ 2,371	$ 2,159	$ 539	$ 942	$ 477
Adjustments to reconcile net income to net cash provided by operating activities:						
Provision for credit losses	14	39	10	29	51	88
Provision for depreciation and amortization	1,015	974	839	1,135	1,077	984
Impairment charges			40	77		
(Gain) loss on sale of businesses and unconsolidated affiliates	5	(25)	(375)			
Undistributed earnings of unconsolidated subsidiaries and affiliates	(102)	(503)	(125)	(2)	(2)	(1)
Provision (credit) for deferred income taxes	(222)	1,504	(7)	(243)	(24)	107
Changes in assets and liabilities:						
Trade receivables and Equipment Operations' financing receivables	(142)	(239)	(244)			
Inventories	(102)	(917)	(504)			
Accounts payable and accrued expenses	13	793	946	163	120	94
Accrued income taxes payable/receivable	(355)	103	(123)	528	(569)	39
Retirement benefits	(235)	(985)	(39)	2	(41)	7
Other	54	166	(143)	190	88	82
Net cash provided by operating activities	3,200	3,281	2,434	2,418	1,642	1,877
Cash Flows from Investing Activities						
Collections of receivables (excluding trade and wholesale)				18,190	17,032	15,963
Proceeds from maturities and sales of marketable securities	12	11	298	77	65	106
Proceeds from sales of equipment on operating leases				1,648	1,483	1,441
Proceeds from sales of businesses and unconsolidated affiliates, net of cash sold	93	156	114			
Cost of receivables acquired (excluding trade and wholesale)				(20,321)	(18,778)	(16,800)
Acquisitions of businesses, net of cash acquired		(5,245)	(284)			
Purchases of marketable securities	(3)			(137)	(133)	(118)
Purchases of property and equipment	(1,118)	(893)	(592)	(2)	(3)	(3)
Cost of equipment on operating leases acquired				(3,246)	(3,209)	(3,080)
Increase in investment in Financial Services	(8)		(20)			
Increase in trade and wholesale receivables				(935)	(1,222)	(380)
Other	35	17	(33)	5	(95)	(44)
Net cash used for investing activities	(989)	(5,954)	(517)	(4,721)	(4,860)	(2,915)
Cash Flows from Financing Activities						
Increase (decrease) in total short-term borrowings	(149)	16	64	(768)	457	1,246
Change in intercompany receivables/payables	(305)	(748)	2,142	305	748	(2,142)
Proceeds from long-term borrowings	1,348	149	1,107	8,638	8,139	7,595
Payments of long-term borrowings	(972)	(163)	(66)	(5,454)	(6,082)	(5,331)
Proceeds from issuance of common stock	178	217	529			
Repurchases of common stock	(1,253)	(958)	(6)			
Capital investment from Equipment Operations				8		20
Dividends paid	(943)	(806)	(764)	(427)	(464)	(365)
Other	(79)	(60)	(55)	(38)	(32)	(33)
Net cash provided by (used for) financing activities	(2,175)	(2,353)	2,951	2,264	2,766	990
Effect of Exchange Rate Changes on Cash, Cash Equivalents, and Restricted Cash	(42)	54	155	(14)	(28)	2
Net Increase (Decrease) in Cash, Cash Equivalents, and Restricted Cash	(6)	(4,972)	5,023	(53)	(480)	(46)
Cash, Cash Equivalents, and Restricted Cash at Beginning of Year	3,202	8,174	3,151	813	1,293	1,339
Cash, Cash Equivalents, and Restricted Cash at End of Year	$ 3,196	$ 3,202	$ 8,174	$ 760	$ 813	$ 1,293

* Deere & Company with Financial Services on the equity basis.
The supplemental consolidating data is presented for informational purposes. The "Equipment Operations" reflect the basis of consolidation described in Note 1 to the consolidated financial statements. Transactions between the "Equipment Operations" and "Financial Services" have been eliminated to arrive at the consolidated financial statements.

DEERE & COMPANY

SELECTED FINANCIAL DATA

(Dollars in millions except per share amounts)

	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
Net sales and revenues	$ 39,258	$ 37,358	$ 29,738	$ 26,644	$ 28,863	$ 36,067	$ 37,795	$ 36,157	$ 32,013	$ 26,005
Net sales	34,886	33,351	25,885	23,387	25,775	32,961	34,998	33,501	29,466	23,573
Finance and interest income	3,493	3,107	2,732	2,511	2,381	2,282	2,115	1,981	1,923	1,825
Research and development expenses	1,783	1,658	1,373	1,394	1,410	1,437	1,445	1,409	1,192	1,005
Selling, administrative and general expenses	3,551	3,455	3,098	2,791	2,868	3,266	3,558	3,369	3,143	2,926
Interest expense	1,466	1,204	899	764	680	664	741	783	759	811
Net income*	3,253	2,368	2,159	1,524	1,940	3,162	3,537	3,065	2,800	1,865
Return on net sales	9.3%	7.1%	8.3%	6.5%	7.5%	9.6%	10.1%	9.1%	9.5%	7.9%
Return on beginning Deere & Company stockholders' equity	28.8%	24.8%	33.1%	22.6%	21.4%	30.8%	51.7%	45.1%	44.5%	38.7%
Comprehensive income*	2,081	3,222	3,221	627	994	2,072	5,416	2,171	2,502	2,079
Net income per share – basic*	$ 10.28	$ 7.34	$ 6.76	$ 4.83	$ 5.81	$ 8.71	$ 9.18	$ 7.72	$ 6.71	$ 4.40
– diluted*	10.15	7.24	6.68	4.81	5.77	8.63	9.09	7.63	6.63	4.35
Dividends declared per share	3.04	2.58	2.40	2.40	2.40	2.22	1.99	1.79	1.52	1.16
Dividends paid per share	2.97	2.49	2.40	2.40	2.40	2.13	1.94	1.74	1.41	1.14
Average number of common shares outstanding (in millions) – basic	316.5	322.6	319.5	315.2	333.6	363.0	385.3	397.1	417.4	424.0
– diluted	320.6	327.3	323.3	316.6	336.0	366.1	389.2	401.5	422.4	428.6
Total assets	$ 73,011	$ 70,108	$ 65,786	$ 57,918	$ 57,883	$ 61,267	$ 59,454	$ 56,193	$ 48,146	$ 43,186
Trade accounts and notes receivable – net	5,230	5,004	3,925	3,011	3,051	3,278	3,758	3,799	3,295	3,464
Financing receivables – net	29,195	27,054	25,104	23,702	24,809	27,422	25,633	22,159	19,924	17,682
Financing receivables securitized – net	4,383	4,022	4,159	5,127	4,835	4,602	4,153	3,618	2,905	2,238
Equipment on operating leases – net	7,567	7,165	6,594	5,902	4,970	4,016	3,152	2,528	2,150	1,936
Inventories	5,975	6,149	3,904	3,341	3,817	4,210	4,935	5,170	4,371	3,063
Property and equipment – net	5,973	5,868	5,068	5,171	5,181	5,578	5,467	5,012	4,352	3,791
Short-term borrowings:										
Equipment operations	987	1,434	375	249	464	434	1,080	425	529	85
Financial services	9,797	9,628	9,660	6,662	7,961	7,584	7,707	5,966	6,307	5,239
Total	10,784	11,062	10,035	6,911	8,425	8,018	8,787	6,391	6,836	5,324
Short-term securitization borrowings:										
Equipment operations	44	75								
Financial services	4,277	3,882	4,119	4,998	4,585	4,553	4,103	3,569	2,773	2,204
Total	4,321	3,957	4,119	4,998	4,585	4,553	4,103	3,569	2,773	2,204
Long-term borrowings:										
Equipment operations	5,415	4,714	5,491	4,565	4,439	4,619	4,845	5,418	3,155	3,316
Financial services	24,814	22,523	20,400	19,138	19,336	19,699	16,673	16,970	13,764	13,424
Total	30,229	27,237	25,891	23,703	23,775	24,318	21,518	22,388	16,919	16,740
Total Deere & Company stockholders' equity	11,413	11,288	9,557	6,520	6,743	9,063	10,266	6,842	6,800	6,290
Book value per share*	$ 36.45	$ 35.45	$ 29.70	$ 20.71	$ 21.29	$ 26.23	$ 27.46	$ 17.64	$ 16.75	$ 14.90
Capital expenditures	$ 1,084	$ 969	$ 586	$ 668	$ 655	$ 1,004	$ 1,132	$ 1,360	$ 1,050	$ 795
Number of employees (at year end)	73,489	74,413	60,476	56,767	57,180	59,623	67,044	66,859	61,278	55,650

* Attributable to Deere & Company.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the stockholders and the Board of Directors of Deere & Company:

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Deere & Company and subsidiaries (the "Company") as of November 3, 2019 and October 28, 2018, the related statements of consolidated income, consolidated comprehensive income, changes in consolidated stockholders' equity, and consolidated cash flows for each of the three years in the period ended November 3, 2019, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of November 3, 2019, and October 28, 2018, and the results of its operations and its cash flows for each of the three years in the period ended November 3, 2019, in conformity with accounting principles generally accepted in the United States of America.

We have also 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 November 3, 2019, based on criteria established in Internal Control — Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated December 19, 2019, expressed an unqualified opinion on the Company's internal control over financial reporting.

Basis for Opinion

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

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

Critical Audit Matters

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

Sales Incentives — Refer to Note 2 to the financial statements

Critical Audit Matter Description

The sales incentive accrual at November 3, 2019 was $2,033 million, of which $1,443 million is recorded within trade accounts and notes receivable – net and $590 million is recorded within accounts payable and accrued expenses. At the time a sale to a dealer is recognized, the Company records an estimate of the future sales incentive costs as a reduction to the sales price. These incentives may be based on a dealer’s purchase volume, or on retail sales incentive programs for allowances and financing programs that will be due when the dealer sells the equipment to a retail customer. The estimated cost of these programs is based on historical data, announced and expected incentive programs, field inventory levels and forecasted sales volumes. The final cost of these programs is determined at the end of the measurement period for volume-based incentives or when the dealer sells the equipment to the retail customer. This is due to numerous programs available at any particular time and new programs that may be announced after the company records the equipment sale. Changes in the mix and types of programs affect these estimates, which are reviewed quarterly. The estimation of the sales incentive accrual is impacted by many assumptions. One of the key assumptions is the predictive value of the historical percentage of sales incentive costs to retail sales from dealers.

We identified the sales incentive accrual as a critical audit matter because estimating sales incentive costs requires significant judgment by management and changes in historical percentage of sales incentive costs to retails sales from dealers could have a material impact on the sales incentive accrual. Auditing management’s assumptions about the predictive nature of historical sales incentive costs involves a high degree of auditor judgment and an increased extent of effort to evaluate the reasonableness of management’s estimates.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to testing management's assumption that historical sales incentive costs are predictive of future incentive costs included the following, among others:

- We tested the effectiveness of management's controls over the assumptions used to estimate the sales incentive accrual.
- We evaluated management's ability to accurately forecast future incentive costs performing a retrospective review that involved comparing actual incentive costs to management's historical forecasts.
- We evaluated the reasonableness of management's assumption that historical sales incentive costs are predictive of future incentive costs by:
    - Considering the impact of changes in the current economic conditions and competitive environment.
    - Testing the completeness of the population used in the calculation by inspecting a sample of incentive program communications to dealers to ensure all sales incentive programs offered were included in the calculation and by confirming sales incentive payments with a sample of dealers.
    - Comparing historical and current sales incentive costs in the following manner:
        - Type and number of programs
        - Geography
        - Program size and duration
        - Eligible products

Allowance for Credit Losses – Refer to Notes 2 and 13 to the financial statements

Critical Audit Matter Description

The allowance for credit losses as of November 3, 2019 was $222 million. The allowance for credit losses represents an estimate of the losses inherent in the Company's receivable portfolio. The level of the allowance is based on many quantitative and qualitative factors, including historical net loss experience by product category, portfolio duration, delinquency trends, economic conditions in the Company's major markets and geographies, commodity price trends, and credit risk quality. The Company has an established process to calculate a range of possible outcomes and determine the adequacy of the allowance. Historical receivable write-offs and recoveries are considered as part of the loss experience by product category. The adequacy of the allowance is assessed quarterly.

The allowance for credit losses specific to the revolving charge accounts portfolio of $3,943 million as of November 3, 2019 was $40 million. The assumptions used in evaluating the Company's exposure to revolving credit losses involve estimates and require significant judgments, as no single statistic, measurement or assumption determines the adequacy of the allowance for credit losses for the revolving charge accounts portfolio. Additionally, the revolving charge accounts portfolio is more susceptible to losses as the loans within this portfolio are unsecured. Losses in this portfolio are expected to follow poor economic conditions prior to losses in the other portfolios. Losses in the revolving charge accounts portfolio could grow to material levels before the full extent of losses is observable in the historical loss data. Therefore, historical loss experience is not the sole predicting factor of anticipated losses. Consequently, qualitative factors (which consider overall economic conditions, the agricultural market, commodity price trends, and delinquency trends) are considered when adjusting historical loss experience for the purpose of determining the level of the allowance for credit losses for the revolving charge accounts portfolio.

We identified the allowance for credit losses specific to the revolving charge accounts portfolio as a critical audit matter because of the significant judgment required by management in determining these qualitative adjustments. Given the subjective nature and judgment applied by management to determine the allowance for credit losses related to the revolving charge accounts portfolio, auditing the allowance for credit losses required a high degree of auditor judgment and an increased extent of effort.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to testing the allowance for credit losses for the revolving charge accounts portfolio included the following:

- We tested the effectiveness of controls over the determination of the allowance for credit losses for the revolving charge accounts portfolio, including the qualitative factors considered.
- We evaluated the accuracy and relevance of the underlying historical data used in the Company's model which included:
    - Historical write-off experience
    - Other historical loss metrics
    - Portfolio duration
    - Delinquency trends
    - Trends in non-performing loans
    - Trends in portfolio quality

- We tested the computational accuracy of the Company's model.
- We evaluated the various qualitative adjustment factors considered in the Company's determination of the allowance for credit losses. Our evaluation included:
  - Comparison of the qualitative factors used by the Company to source data provided by the Company and/or to externally available data
  - Consideration and evaluation of contradictory evidence
  - Consideration of specific revolving charge accounts portfolio delinquency trends within particular geographic locations
- We evaluated management's ability to accurately estimate the losses inherent in the revolving charge accounts portfolio by comparing management's historical estimates to actual losses incurred.

/s/ DELOITTE & TOUCHE LLP
Chicago, Illinois
December 19, 2019

We have served as the Company's auditor since 1910.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the stockholders and the Board of Directors of Deere & Company:

Opinion on Internal Control over Financial Reporting

We have audited the internal control over financial reporting of Deere & Company and subsidiaries (the "Company") as of November 3, 2019, based on criteria established in Internal Control — Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of November 3, 2019, based on criteria established in Internal Control — Integrated Framework (2013) issued by COSO.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated financial statements as of and for the year ended November 3, 2019, of the Company and our report dated December 19, 2019, expressed an unqualified opinion on those financial statements.

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/ DELOITTE & TOUCHE LLP
Chicago, Illinois
December 19, 2019

2.1 Share and Asset Sale and Purchase Agreement, dated May 31, 2017, between Deere & Company and Wirtgen Group Holding GmbH (Exhibit 2.1 to Form 8-K of registrant dated June 1, 2017*)

2.2 Accession Agreement to the Share and Asset Sale and Purchase Agreement, dated November 24, 2017, between Wirtgen Group Holding GmbH as Seller, Deere & Company as Purchaser, and Purchaser's Nominees: John Deere GmbH & Co. KG, John Deere Construction & Forestry Company, John Deere Asia (Singapore) Private Limited, John Deere Holding S.à r.L., John Deere India Private Limited, John Deere-Lanz Verwaltungs-GmbH, John Deere Proprietary Limited, WMT GmbH, and John Deere Technologies S.C.S.

2.3 First Amendment to the Share and Asset Sale and Purchase Agreement, dated November 24, 2017, between Deere & Company and Wirtgen Group Holding GmbH**

2.4 Second Amendment to the Share and Asset Sale and Purchase Agreement, dated December 1, 2017, between Wirtgen Group Holding GmbH as Seller, Deere & Company as Purchaser, and Purchaser's Nominees: John Deere GmbH & Co. KG, John Deere Construction & Forestry Company, John Deere Asia (Singapore) Private Limited, John Deere Holding S.à r.L., John Deere India Private Limited, John Deere-Lanz Verwaltungs-GmbH, John Deere Proprietary Limited, WMT GmbH, and John Deere Technologies S.C.S.**

3.1 Certificate of incorporation (Exhibit 3.1 to Form 10-Q of registrant for the quarter ended July 28, 2019, Securities and Exchange Commission File Number 1-4121*)

3.2 Certificate of Designation Preferences and Rights of Series A Participating Preferred Stock (Exhibit 3.2 to Form 10-K of registrant for the year ended October 31, 1998, Securities and Exchange Commission File Number 1-4121*)

3.3 Bylaws, as amended (Exhibit 3.2 to Form 10-Q of registrant for the quarter ended January 27, 2019, Securities and Exchange Commission File Number 1-4121*)

4.1 Form of common stock certificate (Exhibit 4.6 to Form 10-K of registrant for the year ended October 31, 1998, Securities and Exchange Commission File Number 1-4121*)

4.2 Indenture dated as of September 25, 2008 between the registrant and The Bank of New York Mellon, as Trustee (Exhibit 4.1 to the registration statement on Form S-3ASR no. 333-153704, filed September 26, 2008, Securities and Exchange Commission file number 1-4121*)

4.3 Terms and Conditions of the Euro Medium Term Notes, published on February 2, 2017, applicable to the U.S. $3,000,000,000 Euro Medium Term Note Programme of registrant, John Deere Capital Corporation, John Deere Bank S.A., and John Deere Cash Management S.A.

4.4 Description of Deere & Company's Common Stock

4.5 Description of Deere & Company's 8½% Debentures Due 2022

4.6 Description of Deere & Company's 6.55% Debentures Due 2028

Certain instruments relating to long-term debt constituting less than 10% of the registrant's total assets, are not filed as exhibits herewith pursuant to Item 601(b)(4)(iii)(A) of Regulation S-K. The registrant will file copies of such instruments upon request of the Commission.

10.1 Agreement as amended November 1, 1994 between registrant and John Deere Capital Corporation concerning agricultural retail notes (Exhibit 10.1 to Form 10-K of registrant for the year ended October 31, 1998, Securities and Exchange Commission File Number 1-4121*)

10.2 Agreement as amended November 1, 1994 between registrant and John Deere Capital Corporation relating to lawn and grounds care retail notes (Exhibit 10.2 to Form 10-K of registrant for the year ended October 31, 1998, Securities and Exchange Commission File Number 1-4121*)

10.3 Agreement as amended November 1, 1994 between John Deere Construction Equipment Company, a wholly-owned subsidiary of registrant and John Deere Capital Corporation concerning construction retail notes (Exhibit 10.3 to Form 10-K of registrant for the year ended October 31, 1998, Securities and Exchange Commission File Number 1-4121*)

10.4	Agreement dated July 14, 1997 between the John Deere Construction Equipment Company and John Deere Capital Corporation concerning construction retail notes (Exhibit 10.4 to Form 10-K of registrant for the year ended October 31, 2003, Securities and Exchange Commission File Number 1-4121*)
10.5	Agreement dated November 1, 2003 between registrant and John Deere Capital Corporation relating to fixed charges ratio, ownership and minimum net worth of John Deere Capital Corporation (Exhibit 10.5 to Form 10-K of registrant for the year ended October 31, 2003, Securities and Exchange Commission File Number 1-4121*)
10.6	Deere & Company Voluntary Deferred Compensation Plan as amended January 2014 (Exhibit 10.6 to Form 10-K of registrant for the year ended October 31, 2014, Securities and Exchange Commission File Number 1-4121*)
10.7	John Deere Short-Term Incentive Bonus Plan as amended February 25, 2015 (Appendix E to Proxy Statement of registrant filed January 14, 2015, Securities and Exchange Commission File Number 1-4121*)
10.8	John Deere Long-Term Incentive Cash Plan (Appendix C to Proxy Statement of registrant filed January 12, 2018, Securities and Exchange Commission File Number 1-4121*)
10.9	John Deere Omnibus Equity and Incentive Plan as amended February 25, 2015 (Appendix D to Proxy Statement of registrant filed January 14, 2015, Securities and Exchange Commission File Number 1-4121*)
10.10	Form of Terms and Conditions for John Deere Nonqualified Stock Option Grant (Exhibit 10.10 to Form 10-K of registrant for the year ended October 31, 2010, Securities and Exchange Commission File Number 1-4121*)
10.11	Form of John Deere Restricted and Performance Stock Unit Grant for Employees (Exhibit 10.11 to Form 10-K of the registrant for the year ended October 31, 2012, Securities and Exchange Commission File Number 1-4121*)
10.12	Form of John Deere Restricted Stock Unit Grant for Directors (Exhibit 10.13 to Form 10-K of the registrant for the year ended October 31, 2008, Securities and Exchange Commission File Number 1-4121*)
10.13	Form of Nonemployee Director Restricted Stock Grant (Exhibit 10.13 to Form 10-K of registrant for the year ended October 31, 2004, Securities and Exchange Commission File Number 1-4121*)
10.14	John Deere Defined Contribution Restoration Plan, as amended October 2016 (Exhibit 10.14 to Form 10-K of registrant for the year ended October 29, 2017, Securities and Exchange Commission File Number 1-4121*)
10.15	John Deere Supplemental Pension Benefit Plan, as amended October 2014 (Exhibit 10.15 to Form 10-K of registrant for the year ended October 31, 2014, Securities and Exchange Commission File Number 1-4121*)
10.16	John Deere Senior Supplementary Pension Benefit Plan as amended October 2014 (Exhibit 10.16 to Form 10-K of registrant for the year ended October 31, 2014, Securities and Exchange Commission File Number 1-4121*)
10.17	John Deere ERISA Supplementary Pension Benefit Plan as amended December 2011 (Exhibit 10.17 to Form 10-K of registrant for the year ended October 31, 2014, Securities and Exchange Commission File Number 1-4121*)
10.18	Nonemployee Director Stock Ownership Plan (Appendix A to Proxy Statement of registrant filed on January 13, 2012, Securities and Exchange Commission File Number 1-4121*)
10.19	Deere & Company Nonemployee Director Deferred Compensation Plan, as amended October 2016 (Exhibit 10.19 to Form 10-K of registrant for the year ended October 29, 2017, Securities and Exchange Commission File Number 1-4121*)
10.20	Amended and Restated Change in Control Severance Program, effective May 29, 2018
10.21	Executive Incentive Award Recoupment Policy (Exhibit 10.9 to Form 10-Q of registrant for the quarter ended January 31, 2008, Securities and Exchange Commission File Number 1-4121*)
10.22	Asset Purchase Agreement dated October 29, 2001 between registrant and Deere Capital, Inc. concerning the sale of trade receivables (Exhibit 10.19 to Form 10-K of registrant for the year ended October 31, 2001, Securities and Exchange Commission File Number 1-4121*)
10.23	Asset Purchase Agreement dated October 29, 2001 between John Deere Construction & Forestry Company and Deere Capital, Inc. concerning the sale of trade receivables (Exhibit 10.20 to Form 10-K of registrant for the year ended October 31, 2001, Securities and Exchange Commission File Number 1-4121*)

10.24 Factoring Agreement dated September 20, 2002 between John Deere Bank S.A. (as successor in interest to John Deere Finance S.A.) and John Deere Vertrieb, a branch of Deere & Company, concerning the sale of trade receivables (Exhibit 10.21 to Form 10-K of registrant for the year ended October 31, 2002, Securities and Exchange Commission File Number 1-4121*)

10.25 Receivables Purchase Agreement dated August 23, 2002 between John Deere Bank S.A. (as successor in interest to John Deere Finance S.A.) and John Deere Limited (Scotland) concerning the sale of trade receivables (Exhibit 10.22 to Form 10-K of registrant for the year ended October 31, 2002, Securities and Exchange Commission File Number 1-4121*)

10.26 Joint Venture Agreement dated May 16, 1988 between registrant and Hitachi Construction Machinery Co., Ltd ((Exhibit 10.26 to Form 10-K of registrant for the year ended October 31, 2005, Securities and Exchange Commission File Number 1-4121*)

10.27 Marketing Profit Sharing Agreement dated January 1, 2002 between John Deere Construction and Forestry Equipment Company (also known as John Deere Construction & Forestry Company) and Hitachi Construction Machinery Holding U.S.A. Corporation (Exhibit 10.27 to Form 10-K of registrant for the year ended October 31, 2005, Securities and Exchange Commission File Number 1-4121*)

10.28 Integrated Marketing Agreement dated October 16, 2001 between registrant and Hitachi Construction Machinery Co. Ltd. (Exhibit 10.28 to Form 10-K of registrant for the year ended October 31, 2005, Securities and Exchange Commission File Number 1-4121*)

10.29 2023 Credit Agreement among the registrant, John Deere Capital Corporation, John Deere Bank S.A., various financial institutions, JPMorgan Chase Bank, N.A., as administrative agent, Citibank, N.A., as documentation agent, and Bank of America, N.A., as syndication agent, dated April 1, 2019 (Exhibit 10.1 to Form 10-Q of registrant for the quarter ended April 28, 2019, Securities and Exchange Commission File Number 1-4121*)

10.30 2024 Credit Agreement among the registrant, John Deere Capital Corporation, John Deere Bank S.A., various financial institutions, JPMorgan Chase Bank, N.A., as administrative agent, Citibank, N.A., as documentation agent, and Bank of America, N.A., as syndication agent, dated April 1, 2019 (Exhibit 10.2 to Form 10-Q of registrant for the quarter ended April 28, 2019, Securities and Exchange Commission File Number 1-4121*)

21. Subsidiaries

23. Consent of Deloitte & Touche LLP

24. Power of Attorney (included on signature page)

31.1 Rule 13a-14(a)/15d-14(a) Certification

31.2 Rule 13a-14(a)/15d-14(a) Certification

32. Section 1350 Certifications

101.SCH Inline XBRL Taxonomy Extension Schema Document

101.CAL Inline XBRL Taxonomy Extension Calculation Linkbase Document

101.DEF Inline XBRL Taxonomy Extension Definition Linkbase Document

101.LAB Inline XBRL Taxonomy Extension Label Linkbase Document

101.PRE Inline XBRL Taxonomy Extension Presentation Linkbase Document

104. Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)

---

* Incorporated by reference. Copies of these exhibits are available from the Company upon request.

** Schedules have been omitted pursuant to Item 601(b)(2) of Regulation S-K. Deere hereby undertakes to furnish supplemental copies of any of the omitted schedules upon request by the U.S. Securities and Exchange Commission.

SIGNATURES

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

DEERE & COMPANY

By: */s/ John C. May*
John C. May
Chief Executive Officer, President and Director
(Principal Executive Officer)

Date: December 19, 2019

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

Each person signing below also hereby appoints John C. May, Ryan D. Campbell, and Todd E. Davies, and each of them singly, his or her lawful attorney-in-fact with full power to execute and file any and all amendments to this report together with exhibits thereto and generally to do all such things as such attorney-in-fact may deem appropriate to enable Deere & Company to comply with the provisions of the Securities Exchange Act of 1934 and all requirements of the Securities and Exchange Commission.

Signature	Title	Date
/s/ Samuel R. Allen Samuel R. Allen	Chairman and Director	December 19, 2019
/s/ Ryan D. Campbell Ryan D. Campbell	Senior Vice President and Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)	
/s/ Vance D. Coffman Vance D. Coffman	Director	
/s/ Alan C. Heuberger Alan C. Heuberger	Director	
/s/ *Charles O. Holliday, Jr.* Charles O. Holliday, Jr.	Director	
/s/ *Dipak C. Jain* Dipak C. Jain	Director	
/s/ Michael O. Johanns Michael O. Johanns	Director	
/s/ Clayton M. Jones Clayton M. Jones	Director	

/s/ John C. May	Chief Executive Officer, President	)
John C. May	and Director	)
	(Principal Executive Officer)	)
/s/ Gregory R. Page	Director	)
Gregory R. Page		)
/s/ Sherry M. Smith	Director	)
Sherry M. Smith		)
/s/ Dmitri L. Stockton	Director	)
Dmitri L. Stockton		)
/s/ Sheila G. Talton	Director	)
Sheila G. Talton		)

Exhibit 4.4

DESCRIPTION OF DEERE & COMPANY'S COMMON STOCK

The following summary of terms of our common stock, par value $1.00 (the "Common Stock") is based upon our amended and restated certificate of incorporation (the "Charter") and amended and restated bylaws (the "Bylaws") currently in effect under Delaware law. This summary is not complete and is subject to, and qualified in its entirety by reference to, the Charter and the Bylaws. For a complete description of the terms and provisions of the Common Stock, refer to the Charter, Bylaws, and form of common stock certificate, which are filed as exhibits to this Annual Report on Form 10-K. Throughout this exhibit, references to the "Company," "we," "our," and "us" refer to Deere & Company. We encourage you to read these documents and the applicable portion of the Delaware General Corporation Law, as amended (the "DGCL"), carefully.

Deere & Company's authorized capital stock consists of (i) 1,200,000,000 shares of common stock, $1.00 par value per share, and (ii) 9,000,000 shares of preferred stock, $1.00 par value per share.

On November 30, 2019, we had 313,275,755 outstanding shares of common stock.

No preferred stock had been issued as of November 30, 2019.

Dividend, Voting and Liquidation Rights

Subject to the rights of the holders of any outstanding shares of preferred stock, holders of our common stock are entitled to receive dividends when, as and if declared by our Board of Directors out of funds legally available therefor.

Each holder of common stock is entitled to one vote for each share held on all matters voted upon by our stockholders, including the election of directors. The common stock does not have cumulative voting rights. Election of directors is decided by the holders of a majority of the shares entitled to vote and present in person or by proxy at a meeting for the election of directors.

In the event of our voluntary or involuntary liquidation, dissolution or winding up, after the payment or provision for payment of our debts and other liabilities and the preferential amounts to which holders of our preferred stock are entitled (if any shares of preferred stock are then outstanding), the holders of our common stock are entitled to share ratably in our remaining assets.

Fully Paid and Nonassessable

The outstanding shares of our common stock are fully paid and non-assessable.

Preemptive or Other Rights

Our common stock has no preemptive or conversion rights and there are no redemption or sinking fund provisions applicable to it.

Proxy Access

Our Bylaws contains "proxy access" which permits a stockholder, or a group of up to 20 stockholders, owning 3% or more of the Company's outstanding common stock continuously for at least three years to nominate and include in the Company's proxy materials director candidates constituting up to the greater of two individuals or 20% of the Board, provided that the stockholder(s) and the nominee(s) satisfy the requirements specified in the Bylaws.

Listing and Transfer Agent

Our common stock is listed on the New York Stock Exchange (symbol "DE"). The transfer agent and registrar is The Bank of New York Mellon.

Anti-Takeover Provisions

Delaware General Corporation Law Section 203. We are subject to the provisions of Section 203 of the General Corporation Law of the State of Delaware ("Delaware Section 203"), the "business combination" statute. In general, the law prohibits a public Delaware corporation from engaging in a "business combination" with an "interested stockholder" for a period of three years after the date of the transaction in which the person became an interested stockholder, unless:

- prior to that date, the board of directors of the corporation approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;
- upon consummation of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced (excluding certain shares described in Delaware Section 203); or
- on or subsequent to that date, the business combination is approved by the board of directors of the corporation and authorized at an annual or special meeting of stockholders by the affirmative vote of at least two-thirds of the outstanding voting stock that is not owned by the "interested stockholder."

"Business combination" is defined to include mergers, asset sales and certain other transactions resulting in a financial benefit to a stockholder. An "interested stockholder" is defined generally as a person who, together with affiliates and associates, owns (or, within the prior three years, did own) 15% or more of a corporation's voting stock. Our certificate of incorporation does not exclude us from the restrictions imposed under Delaware Section 203 and Delaware Section 203 could prohibit or delay the accomplishment of mergers or other takeover or change in control attempts with respect to us and, accordingly, may discourage attempts to acquire us.

No Stockholder Action by Written Consent. No stockholder action required to be taken or which may be taken at any annual or special meeting of stockholders of the Company may be taken without a meeting, and the power of stockholders to consent in writing without a meeting to the taking of any action is specifically denied.

Advance Notice for Stockholder Proposals. Company stockholders wishing to nominate a director or propose other action at an annual meeting must give advance written notice of such nomination or proposal not less than 90 days nor more than 120 days prior to such annual meeting. Shareholders utilizing "proxy access" must meet separate deadlines.

Special Meetings. Special meetings of the stockholders may be called only by (i) the Chairman, (ii) the Chief Executive Officer or (iii) resolution of the Board.

Liability of Directors and Officers

The Charter provides that no director shall be personally liable to the Company or its stockholders for monetary damages for any breach of fiduciary duty by such director as a director. Notwithstanding the foregoing sentence, a director shall be liable to the extent provided by applicable law (i) for breach of the director's duty of loyalty to the Company or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) pursuant to Section 174 of the

DGCL or (iv) for any transaction from which the director derived an improper personal benefit. No amendment to or repeal of this provision in the Charter will apply to or have any effect on the liability or alleged liability of any director of the Company for or with respect to any acts or omissions of such director occurring prior to such amendment.

The Charter provides that each person who is or was a director or officer of the Company, and each person who serves or served at the request of the Company as a director or officer (or equivalent) of another enterprise, shall be indemnified by the Company to the fullest extent authorized by the DGCL as it may be in effect from time to time, except as to any action, suit or proceeding brought by or on behalf of a director or officer without prior approval of the board of directors.

Exhibit 4.5

DESCRIPTION OF THE
8½% DEBENTURES DUE 2022

The following summary of our 8½% Debentures due 2022 (the "Debentures") is based on and qualified by the Indenture, dated as of February 1, 1991, between Deere & Company (the "Company") and the Bank of New York Mellon (formerly known as The Bank of New York, successor Trustee to The Chase Manhattan Bank, successor Trustee to Continental Bank), as trustee (the "Trustee") (the "Indenture"). This summary is not complete and is subject to, and qualified in its entirety by reference to, the actual Indenture. For a complete description of the terms and provisions of the Company's notes, refer to the Indenture, which is available from the Company upon request. Throughout this exhibit, references to the "Company," "we," "our," and "us" refer to Deere & Company.

We issued $200,000,000 aggregate principal amount of the Debentures on January 9, 1992. The Debentures were issued under the Indenture and pursuant to a Prospectus dated January 3, 1992 (the "Prospectus") and the Prospectus Supplemented dated January 3, 1992 (the "Prospectus Supplement"). The Debentures were limited to $200,000,000 aggregate principal amount.

The Indenture governs our obligations under the Debentures. The terms of the Debentures include those stated in the Indenture and those made part of the Indenture by reference to the Trust Indenture Act of 1939, as amended (the "TIA"). The Debentures are subject to all such terms.

The Debentures are traded on the New York Stock Exchange under the symbol "DE22."

We have issued a significant amount of other debt securities under the Indenture that have neither been registered pursuant to Section 12 of the Securities Exchange Act of 1934 nor listed on the NYSE. You should refer to our description of the amount of debt outstanding as disclosed in our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q and in other filings with the Securities and Exchange Commission.

The Indenture provides that additional unsubordinated, unsecured debt securities of the Company unlimited as to aggregate principal amount may be issued in one or more series thereunder, in each case as authorized from time to time by the Board of Directors of the Company. (Section 301) The Debt Securities referred to on the cover page of the Prospectus and any such additional debt securities so issued under the Indenture are herein collectively referred to, when a single Trustee is acting for all, as the "Indenture Securities."

Defined terms used in this description but not defined in this summary have the meanings assigned to them in the Indenture.

General

The Debentures will mature on January 9, 2022 (the "Maturity Date"). The Debentures are unsecured and unsubordinated obligations of the Company.

The Debentures are not subject to any sinking fund.

The Debentures were issued in denominations of $1,000 and any integral multiple thereof.

Interest and Interest Rates

Interest on the Debentures accrues at a rate of 8½% per year and is payable on January 9 and July 9 of each year (each an "Interest Payment Date"), commencing on July 9, 1992. We pay interest to those persons who were holders of record of the Debentures on the December 24 and June 24 immediately before the Interest Payment Dates. Interest is computed on the basis of a 360-day year of twelve 30-day months.

Principal and interest will be payable, and transfers of the Debentures will be registrable, at the offices or agencies of the Company maintained for that purpose in Chicago, Illinois and New York, New York; provided that, at the option of the Company, payment of interest may be made by check mailed to the address of the person entitled thereto as such address shall appear in the securities register.

Redemption

The Debentures may not be redeemed by the Company prior to maturity.

Events of Default

The Indenture provides, with respect to the Debentures, that the following shall constitute Events of Default: (i) default in the payment of any interest upon or any Additional Amounts payable in respect of the Debentures, or of any coupon appertaining thereto, when the same becomes due and payable, continued for 30 days; (ii) default in the payment of the principal of or any premium on the Debentures at their maturity; (iii) default in the performance, or breach, of any covenant or warranty of the Company in the Indenture with respect to the Debentures, continued for 60 days after written notice to the Company; (iv) certain events in bankruptcy, insolvency or reorganization; and (v) any other Event of Default provided with respect to the Debentures. (Section 501) The Company is required to file with the Trustee, annually, an officer's certificate as to the Company's compliance with all conditions and covenants under the Indenture. (Section 1006) The Indenture provides that the Trustee may withhold notice to the holders of Debentures of any default (except payment defaults on the Debentures) if it considers it in the interest of the holders of the Debentures to do so. (Section 601)

If an Event of Default with respect to the Debentures shall occur and be continuing, the Trustee or the holders of not less than 25% in principal amount of outstanding Debentures may declare the outstanding Debentures due and payable immediately. (Section 502)

Subject to the provisions relating to the duties of the Trustee, in case an Event of Default with respect to the Debentures shall occur and be continuing, the Trustee shall be under no obligation to exercise any of its rights or powers under the Indenture at the request, order or direction of any of the holders of the Debentures, unless such holders shall have offered to the Trustee reasonable indemnity and security against the expenses and liabilities which might be incurred by it in compliance with such request. (Section 507 and TIA Section 315) Subject to such provisions for the indemnification of the Trustee, the holders of a majority in principal amount of the outstanding Debentures shall have the right to direct the time, method and place of conducting any proceeding for any remedy available to the Trustee under the Indenture, or exercising any trust or power conferred on the Trustee with respect to the Debentures. (Section 512)

The holders of not less than a majority in principal amount of the outstanding Debentures may on behalf of the holders of all the Debentures and any related coupons waive any past default under the Indenture with respect to such series and its consequences, except a default (i) in the payment of the principal of (or premium, if any) or interest on or Additional Amounts payable in respect of any Debentures, or (ii) in respect of a covenant or provision that cannot be modified or amended without the consent of the holder of each outstanding Debenture affected thereby. (Section 513)

Merger or Consolidation

The Indenture provides that the Company may not consolidate with or merge with or into any other corporation or convey or transfer its properties and assets substantially as an entirety to any person, unless either the Company is the continuing corporation or such corporation or person assumes by supplemental indenture all the obligations of the Company under the Indenture and the securities issued under the Indenture (the "Indenture Securities") and immediately after the transaction no default shall exist. In addition, no such consolidation, merger or transfer may be made if as a result thereof any property or assets of the Company or a restricted subsidiary would become subject to any mortgage or other encumbrance, unless either (i) such mortgage or other encumbrance could be created pursuant to Section 1004 (see "Limitation on Liens" below) without equally and ratably securing the any Indenture Securities or (ii) such Securities Indenture are secured equally and ratably with or prior to the debt secured by such mortgage or other encumbrance. (Section 801)

Modification and Amendment

Modification and amendment of the Indenture may be made by the Company and the Trustee with the consent of the holders of not less than a majority in principal amount of all outstanding Indenture Securities that are affected by such modification or amendment; provided that no such modification or amendment may, without the consent of the holder of each outstanding Indenture Security affected thereby, among other things: (i) change the stated maturity of the principal of (or premium, if any, on) or any installment of principal of or interest on any such Indenture Security; (ii) reduce the principal amount or the rate of interest on or any Additional Amounts payable in respect of, or any premium payable upon the redemption of, any such Indenture Security; (iii) change any obligation of the Company to pay Additional Amounts in respect of any such Indenture Security; (iv) reduce the amount of the principal of an original issue discount Indenture Security that would be due and payable upon a declaration of acceleration of the maturity thereof;(v) adversely affect any right of repayment at the option of the holder of any such Indenture Security; (vi) change the place or currency of payment of principal of, or any premium or interest on, any such Indenture Security; (vii) impair the right to institute suit for the enforcement of any such payment on or after the stated maturity thereof or any redemption date or repayment date therefor; (viii) reduce the above-stated percentage of holders of such outstanding Indenture Securities necessary to modify or amend the Indenture or to consent to any waiver thereunder or reduce the requirements for voting or quorum described below; or (ix) modify the foregoing requirements or reduce the percentage of such outstanding Indenture Securities necessary to waive any past default or compliance with certain restrictive provisions. (Section 902)

The holders of a majority in aggregate principal amount of outstanding Indenture Securities have the right to waive compliance by the Company with certain covenants. (Section 1008)

Modification and amendment of the Indenture may be made by the Company and Trustee without the consent of any holder, for any of the following purposes: (i) to evidence the succession of another person to the Company as obligor under the Indenture; (ii) to add to the covenants of the Company for the benefit of the holders of all or any series of Indenture Securities; (iii) to add Events of Default for the benefit of the holders of all or any series of Indenture Securities; (iv) to add or change any provisions of the Indenture to facilitate the issuance of Bearer Securities; (v) to change or eliminate any provisions of the Indenture, provided that any such change or elimination shall become effective only when there are no outstanding Indenture Securities of any series created prior thereto which are entitled to the benefit of such provision; (vi) to secure the Indenture Securities pursuant to the requirements of Section 801 or Section 1004 of the Indenture, or otherwise; (vii) to establish the form or terms of Indenture Securities of any series and any related coupons; (viii) to provide for the acceptance of appointment by a successor Trustee or facilitate the administration of the trusts under the Indenture by more than one Trustee; (ix) to cure any ambiguity, defect or inconsistency in the Indenture, provided such action does not adversely affect the interests of holders of Indenture Securities of any series in any material respect; or (x) to supplement any of the provisions of the Indenture to the extent necessary to permit or facilitate defeasance and discharge of any

series of Indenture Securities, provided such action shall not adversely affect the interests of the holders of any Indenture Securities in any material respect. (Section 901)

Defeasance and Covenant Defeasance

The Indenture provides that the Company may elect either (a) to defease and be discharged from any and all obligations with respect to such Debentures and any related coupons (except for the obligation to pay Additional Amounts, if any, upon the occurrence of certain events of tax, assessment or governmental charge with respect to payments on such Debentures and the obligations to register the transfer or exchange of such Debentures and any related coupons, to replace temporary or mutilated, destroyed, lost or stolen Debentures and any related coupons, to maintain an office or agency in respect of such Debentures and any related coupons and to hold moneys for payment in trust) ("defeasance") (Section 1402) or (b) to be released from its obligations with respect to such Debentures and any related coupons under Sections 1004 and 1005 of the Indenture (being the restrictions described under "Limitation on Liens" and "Limitation on Sale and Lease-back Transactions", respectively)or, if provided pursuant to Section 301 of the Indenture, its obligations with respect to any other covenant, and any omission to comply with such obligations shall not constitute a default or an Event of Default with respect to such Debentures and any related coupons ("covenant defeasance") (Section 1403), in either case upon the irrevocable deposit by the Company with the Trustee (or other qualifying trustee), in trust, of an amount, in such currency or currencies, currency unit or units or composite currency or currencies in which such Debentures and any related coupons are then specified as payable at stated maturity, or Government Obligations (as defined below), or both, applicable to such Debentures and any related coupons (with such applicability being determined on the basis of the currency, currency unit or composite currency in which such Debentures are then specified as payable at stated maturity) which through the payment of principal and interest in accordance with their terms will provide money in an amount sufficient to pay the principal of (and premium, if any) and interest, if any, on such Debentures and any related coupons, and any mandatory sinking fund or analogous payments thereon, on the scheduled due dates therefor.

Such a trust may only be established if, among other things, the Company has delivered to the Trustee an Opinion of Counsel (as specified in the Indenture) to the effect that the holders of such Debentures and any related coupons will not recognize income, gain or loss for United States federal income tax purposes as a result of such defeasance or covenant defeasance and will be subject to United States federal income tax on the same amounts, in the same manner and at the same times as would have been the case if such defeasance or covenant defeasance had not occurred, and such Opinion of Counsel, in the case of defeasance under clause (a) above, must refer to and be based upon a ruling of the Internal Revenue Service or a change in applicable United States federal income tax law occurring after the date of the Indenture. (Section 1404)

"Government Obligations" means securities which are (i) direct obligations of the United States of America or the government which issued the foreign currency in which the Debentures of a particular series are payable, for the payment of which its full faith and credit is pledged or (ii) obligations of a person controlled or supervised by and acting as an agency or instrumentality of the United States of America or such government which issued the foreign currency in which the Debentures are payable, the payment of which is unconditionally guaranteed as a full faith and credit obligation by the United States of America or such other government, which, in either case, are not callable or redeemable at the option of the issuer thereof, and shall also include a depository receipt issued by a bank or trust company as custodian with respect to any such Government Obligation or a specific payment of interest on or principal of any such Government Obligation held by such custodian for the account of the holder of a depository receipt, *provided* that (except as required by law) such custodian is not authorized to make any deduction from the amount payable to the holder of such depository receipt from any amount received by the custodian in respect of the Government Obligation or the specific payment of interest on or principal of the Government Obligation evidenced by such depository receipt. (Section 101)

If, after the Company has deposited funds and/or Government Obligations to effect defeasance or

covenant defeasance with respect to Debentures of any series, (a) the holder of a Debenture is entitled to, and does, elect pursuant to the terms of such Debenture to receive payment in a currency, currency unit or composite currency other than that in which such deposit has been made in respect of such Debenture, or (b) the currency, currency unit or composite currency in which such deposit has been made in respect of any Debenture ceases to be used by its government of issuance, the indebtedness represented by such Debenture shall be deemed to have been, and will be, fully discharged and satisfied through the payment of the principal of (and premium, if any) and interest, if any, on such Debenture as they become due out of the proceeds yielded by converting the amount so deposited in respect of such Debenture into the currency, currency unit or composite currency in which such Debenture becomes payable as a result of such election or such cessation of usage based on the applicable Market Exchange Rate. (Section 1405)

In the event the Company effects covenant defeasance with respect to any Debentures and any related coupons and such Debentures and any related coupons are declared due and payable because of the occurrence of any Event of Default other than the Event of Default described in clause (iv) under "Events of Default" with respect to Sections 1004 and 1005 of the Indenture (which Sections would no longer be applicable to such Debentures or any related coupons)or described in clause (iv) or (vi) under "Events of Default" with respect to any other covenant with respect to which there has been defeasance, the amount in such currency, currency unit or composite currency in which such Debentures and any related coupons are payable, and Government Obligations on deposit with the Trustee will be sufficient to pay amounts due on such Debentures and any related coupons at the time of their stated maturity but may not be sufficient to pay amounts due on such Debentures and any related coupons at the time of the acceleration resulting from such Event of Default. However, the Company would remain liable to make payment of such amounts due at the time of acceleration.

Resignation of Trustee

The Trustee may resign or be removed with respect to one or more series of the Indenture Securities and a successor Trustee may be appointed to act with respect to such series. (Section 608) In the event that two or more persons are acting as Trustee with respect to different series of Indenture Securities, the Trustee shall be a Trustee of a trust under the Indenture separate and apart from the trust administered by any other such Trustee (Section 609), and any action described herein to be taken by the "Trustee" may then be taken by each such Trustee with respect to, and only with respect to, the one or more series of Indenture Securities for which it is Trustee.

Limitation on Liens

The Company covenants in the Indenture that it will not, nor will it permit any restricted subsidiary to, incur, assume or guarantee any debt (herein referred to as "Debt") if such Debt is secured by any mortgage, security interest, pledge, lien or other encumbrance (herein referred to as "mortgage" or "mortgages") upon any Important Property of the Company or any restricted subsidiary or any shares of stock or indebtedness of any restricted subsidiary, whether owned at the date of the Indenture or thereafter acquired, without effectively securing the Indenture Securities equally and ratably with or prior to such Debt. The foregoing restriction does not apply to: (i) mortgages on any property acquired, constructed or improved after the date of the Indenture which are created or assumed within 120 days after such acquisition, construction or improvement to secure or provide for the payment of the purchase price or cost thereof incurred after the date of the Indenture, or existing mortgages on property acquired, provided such mortgages shall not apply to any Important Property theretofore owned by the Company or a restricted subsidiary other than theretofore unimproved real property; (ii) mortgages existing on any property acquired from a corporation merged with or into, or substantially all of the assets of which are acquired by, the Company or a restricted subsidiary; (iii) mortgages on property of any corporation existing at the time it becomes a restricted subsidiary; (iv) mortgages securing Debt owed by a restricted subsidiary to the Company or to another restricted subsidiary; (v) mortgages in favor of governmental bodies to secure advance or other payments pursuant to any contract or statute or to secure indebtedness incurred to finance the purchase price or cost of constructing or improving the property subject to such mortgages, including mortgages to secure tax

exempt pollution control revenue bonds;(vi) sales of receivables; (vii) certain other liens not related to the borrowing of money; and (viii) extensions, renewals or replacements of the foregoing. (Section 1004)

The foregoing restrictions do not apply to the incurrence, assumption or guarantee by the Company or any restricted subsidiary of Debt secured by a mortgage that would otherwise be subject to such restrictions up to an aggregate amount which, together with all other Debt secured by mortgages (not including secured Debt permitted under the foregoing exceptions) and the Attributable Debt (generally defined as the discounted present value of net rental payments) associated with Sale and Lease-back Transactions (as defined) existing at such time (other than Sale and Lease-back Transactions the proceeds of which have been or will be applied as set forth in clause (iii) or (iv) under "Limitation on Sale and Lease-back Transactions", and other than Sale and Lease-back Transactions in which the property involved would have been permitted to be mortgaged under clause (i) above), does not exceed 5% of Consolidated Net Tangible Assets (as de fined) of the Company and its consolidated subsidiaries, as shown on the audited consolidated balance sheet contained in the latest annual report to stockholders of the Company. (Section 1004)

The term "restricted subsidiary" is defined in the Indenture to mean any subsidiary (i) engaged in, or whose principal assets consist of property used by the Company or any restricted subsidiary in, the manufacture of products within the United States of America or Canada or in the sale of products principally to customers located in the United States of America or Canada except any corporation which is a retail dealer in which the Company has, directly or indirectly, an investment under an arrangement providing for the liquidation of such investment, or (ii) which the Company shall designate as a restricted subsidiary. (Section 1004)

The term "Important Property" is defined in the Indenture to include: (i) any manufacturing plant, including its machinery and equipment, used by the Company or a restricted subsidiary primarily for the manufacture of products to be sold by the Company or such restricted subsidiary; (ii) the executive office and administrative building of the Company in Moline, Illinois; and (iii) research and development facilities; except in any case property of which the fair value as determined by the Board of Directors does not at the time exceed 1% of Consolidated Net Tangible Assets of the Company and its consolidated subsidiaries, as shown on the audited consolidated balance sheet contained in the latest annual report to stockholders of the Company. (Section 1004)

Limitation on Sale and Lease-back Transactions

The Company covenants in the Indenture that neither it nor any restricted subsidiary will enter into any arrangement providing for the leasing to the Company or any restricted subsidiary of any Important Property (except for temporary leases for a term, including renewals, of not more than three years) which has been or is to be sold by the Company or such restricted subsidiary to the lessor unless the net proceeds are at least equal to the fair value (as determined by the Board of Directors) of such property and either (i) the Company or such restricted subsidiary would be entitled to incur Debt secured by a mortgage on the Important Property to be leased without securing the Indenture Securities under clause (i) of the first paragraph under the preceding caption "Limitation on Liens", or (ii) the Attributable Debt associated therewith would be an amount permitted under the second paragraph under the preceding caption, or (iii) the Company applies an amount equal to the fair value of such property to the retirement of Indenture Securities or certain long-term indebtedness of the Company or a restricted subsidiary, or (iv) the Company enters into a bona fide commitment to expend for the acquisition or improvement of an Important Property an amount at least equal to the fair value of such property. (Section 1005)

The Trustee

The Bank of New York Mellon is a bank with which the Company maintains ordinary banking relationships and from which the Company has obtained credit facilities and lines of credit. The Bank of New York Mellon also serves as trustee under other indentures under which the Company or a subsidiary of the Company is the obligor.

Exhibit 4.6

DESCRIPTION OF THE 6.55% DEBENTURES DUE 2028

The following summary of our 6.55% Debentures due 2028 (the "Debentures") is based on and qualified by the Indenture, dated as of October 1, 1998, between Deere & Company (the "Company") and the Bank of New York Mellon (formerly known as The Bank of New York, successor Trustee to The Chase Manhattan Bank), as trustee (the "Trustee") (the "Indenture"). This summary is not complete and is subject to, and qualified in its entirety by reference to, the actual Indenture. For a complete description of the terms and provisions of the Company's notes, refer to the Indenture, which is filed as an exhibit to the Company's Form 10-K for the fiscal year ended October 31, 1998. Throughout this exhibit, references to the "Company," "we," "our," and "us" refer to Deere & Company.

We issued $200,000,000 aggregate principal amount of the Debentures on October 6, 1998. The Debentures were issued under the Indenture and pursuant to a Prospectus dated October 1, 1998 (the "Prospectus") and the Prospectus Supplemented dated October 1, 1998 (the "Prospectus Supplement"). The Debentures were initially limited to $200,000,000 principal amount in total.

The Indenture governs our obligations under the Debentures. The terms of the Debentures include those stated in the Indenture and those made part of the Indenture by reference to the Trust Indenture Act of 1939, as amended (the "TIA"). The Debentures are subject to all such terms.

The Debentures are traded on the New York Stock Exchange under the symbol "DE28."

We have issued a significant amount of other debt securities under the Indenture that have neither been registered pursuant to Section 12 of the Securities Exchange Act of 1934 nor listed on the NYSE. You should refer to our description of the amount of debt outstanding as disclosed in our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q and in other filings with the Securities and Exchange Commission. The Indenture does not limit the amount of debt securities, including Debentures, that the Company may issue under the Indenture.

Defined terms used in this description but not defined in this summary have the meanings assigned to them in the Indenture.

General

The Debentures will mature on October 1, 2028 (the "Maturity Date"). The Debentures are senior securities of the Company and rank equally with all unsecured and unsubordinated indebtedness of the Company. The Debentures are unsecured obligations of the Company.

The Debentures are not subject to any sinking fund.

The Debentures were issued in minimum denominations of $1,000 with integral multiples of $1,000 thereafter.

The Company may, without the consent of the Debenture holders, issue additional debentures having the same ranking and the same interest rate, maturity and other terms as the Debentures. Any additional debentures and the Debentures will constitute a single series under the Indenture. No additional debentures may be issued if an Event of Default (as defined below) has occurred with respect to the Debentures.

Interest and Interest Rates

Interest on the Debentures accrues at a rate of 6.55% per year and is payable on April 1 and October 1 of each year (each an "Interest Payment Date"), commencing on April 1, 1999. We pay interest to those persons who were holders of record of the Debentures on the March 15 or September 15 immediately before the Interest Payment Dates. Interest is computed on the basis of a 360-day year of twelve 30-day months.

The place of payment for the Debentures is The City of New York, and the Company will initially designate the office of the Trustee for this purpose. Notwithstanding the foregoing, at the option of the Company, interest, if any, may be paid on the Debentures (i) by check mailed to the address of the person entitled thereto as such person's address appears in the security register or (ii) by wire transfer to an account located in the United States maintained by the person entitled thereto as specified in the security register. Payment of any installment of interest on the Debentures will be made to the person in whose name such registered security is registered at the close of business on regular record date for such interest.

Book-Entry Debt Securities

The Debentures were issued in the form of global securities (the "Global Securities") that were deposited with, or on behalf of The Depository Trust Company ("DTC"), New York New York, and the global securities were registered in the name of DTC's nominee.

So long as DTC or its nominee is the registered owner of a Global Security, DTC or its nominee, as the case may be, will be considered the sole holder of the Debentures represented by such Global Security for all purposes under the Indenture. Except as provided in the Prospectus, owners of beneficial interests in a Global Security will not be entitled to have Debentures represented by such Global Security registered in their names, will not receive or be entitled to receive physical delivery of Debentures in certificated form and will not be considered the owners or holders thereof under the Indenture.

Redemption

The Debentures are not redeemable prior to the Maturity Date.

Events of Default

The Indenture provides, with respect to the Debentures, that the following will constitute Events of Default: (i) default in the payment of any interest upon the Debentures, or of any coupon appertaining thereto, when the same becomes due and payable, continued for 30 days; (ii) default in the payment of the principal of (or premium, if any, on) the Debentures at their maturity; (iii) default in the performance, or breach, of any covenant or agreement of the Company in the Indenture with respect to the Debentures, continued for 60 days after written notice to the Company; (iv) certain events of bankruptcy, insolvency or reorganization affecting the Company; and (v) any other Event of Default provided with respect to the Debentures. (Section 501 of the Indenture) The Company is required to file with the Trustee, annually, an officer's certificate as to the Company's compliance with all conditions and covenants under the Indenture. (Section 1005 of the Indenture). The Indenture provides that the Trustee may withhold notice to the holders of the Debentures of any default (except payment defaults on the Debentures) if it considers it in the interest of the Debentures to do so. (Section 601 of the Indenture)

If an Event of Default with respect to the Debentures has occurred and is continuing, the Trustee or the holders of not less than 25% in principal amount of the outstanding Debentures may declare the principal amount of all of the Debentures due and payable immediately. (Section 502 of the Indenture) Subject to the provisions of the Indenture relating to the duties of the Trustee thereunder, in case an Event of Default with

respect to the Debentures has occurred and is continuing, the Trustee is under no obligation to exercise any of its rights or powers under such Indenture at the request, order or direction of the holders of the Debentures, unless such holders have offered the Trustee reasonable indemnity against the expenses and liabilities which might be incurred by it in compliance with such request. (Section 507 of the Indenture and TIA Section 315). Subject to such provisions for the indemnification of the Trustee, the holders of a majority in principal amount of the outstanding Debentures will have the right to direct the time, method and place of conducting any proceeding for any remedy available to the Trustee, or exercising any trust or power conferred on such Trustee with respect to the Debentures. (Section 512 of the Indenture).

The holders of not less than a majority in principal amount of the outstanding Debentures may, on behalf of the holders of all Debentures and any related coupons, waive any past default under the Indenture with respect to the Debentures and its consequences, except a default (i) in the payment of the principal of (or premium, if any) or interest, if any, on the Debentures or any related coupons or (ii) in respect of a covenant or provision that cannot be modified or amended without the consent of the holder of each outstanding debt security issued under the Indenture of such series affected thereby. (Section 513 of the Indenture).

Merger or Consolidation

The Indenture provides that the Company may not consolidate with or merge with or into any other corporation or convey or transfer its properties and assets substantially as an entirety to any person, unless (i) either the Company is the continuing corporation or (ii) such corporation or person assumes by supplemental indenture the due and punctual payment of the principal (and premium, if any) and interest, if any, on the securities issued under the Indenture (the “Indenture Securities”) and the performance of every covenant thereunder and, in either case, immediately after the transaction no default shall exist. In addition, under the Indenture, no such consolidation, merger or transfer may be made if as a result thereof any property or assets of the Company or a restricted subsidiary would become subject to any mortgage or other encumbrance, unless either (i) such mortgage or other encumbrance could be created pursuant to Section 1006 of the Indenture (see “Limitation on Liens”) without equally and ratably securing the Indenture Securities or (ii) the Indenture Securities are secured equally and ratably with or prior to the debt secured by such mortgage or other encumbrance. (Section 801 of the Indenture).

Modification or Waiver

Modification and amendment of the Indenture may be made by the Company and the Trustee with the consent of the holders of not less than a majority in principal amount of all Indenture Securities that are affected by such modification or amendment; provided that no such modification or amendment may, without the consent of the holder of each outstanding Indenture Security affected thereby, among other things: (i) change the stated maturity of the principal of (or premium, if any, on) or any installment of principal of or interest on any such Indenture Security; (ii) reduce the principal amount of, the rate of interest on or any Additional Amounts payable in respect of, or any premium payable upon the redemption of, any such Indenture Security; (iii) change any obligation of the Company to pay Additional Amounts in respect of any such Indenture Security; (iv) reduce the portion of the principal of an Original Issue Discount Security or Indexed Security that would be due and payable upon a declaration of acceleration of the maturity thereof or provable in bankruptcy; (v) adversely affect any right of repayment at the option of the holder of any such Indenture Security; (vi) change the place or currency of payment of principal of, or any premium or interest on, any such Indenture Security; (vii) impair the right to institute suit for the enforcement of any such payment on or after the stated maturity thereof or on or after any redemption date or repayment date therefor; (viii) adversely affect any right to convert or exchange any such Indenture Security as may be provided pursuant to such Indenture; (ix) reduce the percentage in principal amount of such outstanding Indenture Securities (or of such outstanding Indenture securities of any series, as the case may be), the consent of whose holders is required to amend or waive compliance with certain provisions of such

Indenture or to waive certain defaults thereunder; (x) reduce the requirements for voting or quorum described below; or (xi) modify any of the provisions relating to supplemental indentures requiring the consent of holders, relating to the waiver of past defaults or relating to the waiver of certain covenants, except to increase the percentage of such outstanding Indenture Securities required for such actions or to provide that certain other provisions of the Indenture cannot be modified or waived without the consent of the holder of each outstanding Indenture Security affected thereby. (Section 902 of the Indenture).

The holders of a majority in aggregate principal amount of outstanding Indenture Securities have the right to waive compliance by the Company with certain covenants in the Indenture. (Section 1008 of the Indenture).

Modification and amendment of the Indenture may be made by the Company and the Trustee without the consent of any holder for any of the following purposes: (i) to evidence the succession of another person to the Company as obligor under the Indenture; (ii) to add to the covenants of the Company for the benefit of the holders of all or any series of Indenture Securities and any related coupons or to surrender any right or power conferred upon the Company thereunder; (iii) to add Events of Default for the benefit of the holders of all or any series of Indenture Securities; (iv) to add or change any provisions of the Indenture to facilitate the issuance of, or to liberalize certain terms of, Bearer Securities, or to permit or facilitate the issuance of securities under the Indenture in uncertificated form, provided that any such actions do not adversely affect the holders of such Indenture Securities or any related coupons; (v) to change or eliminate any provisions of the Indenture, provided that any such change or elimination will become effective only when there are no such Indenture Securities outstanding of any series created prior thereto which are entitled to the benefit of such provisions; (vi) to secure Indenture Securities pursuant to the requirements of Section 801 or Section 1006 therein, or otherwise; (vii) to establish the form or terms of the Indenture Securities of any series and any related coupons, including any provisions and procedures relating to conversion or exchange; (viii) to provide for the acceptance of appointment by a successor Trustee or facilitate the administration of the trusts under the Indenture by more than one Trustee; (ix) to cure any ambiguity, defect or inconsistency in the Indenture, provided such action does not adversely affect the interests of holders of Indenture Securities of a series issued thereunder or any related coupons in any material respect; or (x) to supplement any of the provisions of the Indenture to the extent necessary to permit or facilitate defeasance and discharge of any series of Indenture Securities, provided that such action will not adversely affect the interests of the holders of any such Indenture Securities and any related coupons or of any other series of Indenture Securities in any material respect. (Section 901 of the Indenture).

Satisfaction and Discharge; Defeasance and Covenant Defeasance

The Company may discharge certain obligations to holders of Debentures that have not already been delivered to the Trustee for cancellation and that either have become due and payable or are by their terms due and payable within one year (or scheduled for redemption within one year) by irrevocably depositing with the Trustee, in trust, funds in an amount sufficient to pay the entire indebtedness on the Debentures for principal (and premium, if any) and interest, if any, with respect thereto, to the date of such deposit (if the Debentures have become due and payable) or to the stated maturity or redemption date, as the case may be. (Section 401 of the Indenture).

The Indenture provides that the Company may elect either (i) to defease and be discharged from any and all obligations with respect to the Debentures and coupons (except for the obligations to pay Additional Amounts, if any; to register the transfer or exchange of the Debentures and coupons; to replace temporary or mutilated, destroyed, lost or stolen Debentures and coupons; to maintain one or more offices or agencies in respect of Debentures and coupons; and to hold moneys for payment in trust) ("defeasance") or (ii) to be released (a) from its obligations under Sections 1006 and 1007 of the Indenture (being the restrictions described under "—Limitation on Liens" and "—Limitation on Sale and Leaseback Transactions") or (b) from its obligations with respect to any other covenant relating to the Debentures and, in the case of either (a) or (b) above, any omission to comply with such obligations will not constitute a default or an Event of Default with respect to the Debentures

and coupons ("covenant defeasance"), in either case upon the irrevocable deposit by the Company with the Trustee (or other qualifying trustee), in trust, of (1) an amount, in the currency or currencies in which the Debentures and coupons are then specified as payable at stated maturity, (2) Government Obligations (as defined below) applicable to the Debentures and coupons (with such applicability being determined on the basis of the currency in which the Debentures are then specified as payable at stated maturity) that, through the payment of principal and interest in accordance with their terms, will provide money in an amount, or (3) a combination thereof in an amount, sufficient to pay the principal of (and premium, if any) and interest, if any, on the Debentures and coupons, and any mandatory sinking fund or analogous payments thereon, on the scheduled due dates therefor.

Such a trust may only be established if, among other things, the Company has delivered to the Trustee an Opinion of Counsel (as specified in the Indenture) to the effect that the holders of such Debentures and related coupons to be defeased will not recognize income, gain or loss for United States federal income tax purposes as a result of such defeasance or covenant defeasance and will be subject to United States federal income tax on the same amounts, in the same manner and at the same times as would have been the case if such defeasance or covenant defeasance had not occurred, and such Opinion of Counsel, in the case of defeasance under clause (i) above, must refer to and be based upon a ruling of the Internal Revenue Service or a change in applicable United States federal income tax law occurring after the date of the Indenture. (Article Fourteen of the Indenture)

"Government Obligations" means securities which are (i) direct obligations of the United States or the government which issued the foreign currency in which the Debentures are payable, for the payment of which its full faith and credit is pledged, or (ii) obligations of a person controlled or supervised by and acting as an agency or instrumentality of the United States or the government which issued such foreign currency, as the case may be, the payment of which is unconditionally guaranteed as a full faith and credit obligation by the United States or such other government, which, in either case, are not callable or redeemable at the option of the issuer thereof. Such term also includes a depository receipt issued by a bank or trust company as custodian with respect to any such Government Obligation or a specific payment of interest on or principal of any such Government Obligation held by such custodian for the account of the holder of a depository receipt; provided that (except as required by law) such custodian is not authorized to make any deduction from the amount payable to the holder of such depository receipt from the amount received by such custodian in respect of the Government Obligation or the specific payment of interest on or principal of the Government Obligation evidenced by such depository receipt. (Section 101 of the Indenture).

If, after the Company has deposited funds, Government Obligations or both to effect defeasance or covenant defeasance with respect to the Debentures, (i) the holder of the Debentures is entitled to, and does, elect pursuant to the terms of the Debentures to receive payment in a currency other than that in which such deposit has been made in respect of the Debentures or (ii) a Conversion Event occurs, then the indebtedness represented by the Debentures will be deemed to have been, and will be, fully discharged and satisfied through the payment of the principal of (and premium, if any) and interest, if any, on the Debentures as they become due out of the proceeds yielded by converting the amount so deposited in respect of the Debentures into the currency in which the Debentures become payable as a result of such election or such Conversion Event (as defined in the Indenture) based on the applicable Market Exchange Rate (as defined in the Indenture). (Section 1405 of the Indenture).

In the event the Company effects covenant defeasance with respect to the Debentures and any related coupons and the Debentures and coupons are declared due and payable because of the occurrence of any Event of Default other than the Event of Default described in clause (iv) under "Events of Default" with respect to Sections 1006 and 1007 of the Indenture (which Sections would no longer be applicable to the Debentures or related coupons) or described in clause (iv) or (vi) under "Events of Default" with respect to any other covenant with respect to which there has been defeasance, the amount of Government Obligations and funds on deposit with the Trustee will be sufficient to pay amounts due on the Debentures and coupons at the time of their stated maturity but may not be sufficient to pay amounts due on the Debentures and coupons at the time of the acceleration

resulting from such Event of Default. In such a case, the Company would remain liable to make payment of such amounts due at the time of acceleration.

If the Trustee or any Paying Agent is unable to apply any money in accordance with the Indenture by reason of any order or judgment of any court or governmental authority enjoining, restraining or otherwise prohibiting such application, then the Company's obligations under the Indenture and the Debentures and coupons shall be revived and reinstated as though no deposit had occurred pursuant to such Indenture, until such time as the Trustee or Paying Agent is permitted to apply all such money in accordance with such Indenture; provided, however, that, if the Company makes any payment of principal of (or premium, if any) or interest, if any, on the Debenture or coupon following the reinstatement of its obligations, the Company shall be subrogated to the rights of the holders of the Debentures and coupons to receive such payment from the money held by the Trustee or Paying Agent.

Resignation of Trustee

The Trustee may resign or be removed with respect to the Debentures and a successor Trustee may be appointed to act with respect to the Debentures. (Section 608 of the Indenture) In the event that two or more persons are acting as Trustee with respect to different series of Indenture Securities, each such Trustee will be a Trustee of a trust thereunder separate and apart from the trust administered by any other such Trustee (Section 609 of the Indenture), and any action described herein to be taken by the "Trustee" may then be taken by each such Trustee with respect to, and only with respect to, the one or more series of Indenture Securities for which it is Trustee.

Limitation on Liens

The Company covenants in the Indenture that it will not, nor will it permit any restricted subsidiary to, incur, assume or guarantee any debt (herein referred to as "Debt") if such Debt is secured by any mortgage, security interest, pledge, lien or other encumbrance (herein referred to as "mortgage" or "mortgages") upon any Important Property (as defined below) of the Company or any restricted subsidiary or any shares of stock or indebtedness of any restricted subsidiary, whether owned at the date of the Indenture or thereafter acquired, without effectively securing the Indenture Securities equally and ratably with or prior to such Debt. The foregoing restriction will not apply to: (i) mortgages on any property acquired, constructed or improved after the date of the Indenture which are created or assumed within 120 days after such acquisition, construction or improvement to secure or provide for the payment of the purchase price or cost thereof incurred after the date of the Indenture, or existing mortgages on property acquired after the date of the Indenture, provided that such mortgages do not apply to any Important Property theretofore owned by the Company or a restricted subsidiary other than theretofore unimproved real property; (ii) existing mortgages on any property acquired from a corporation consolidated with or merged into, or substantially all of the assets of which are acquired by, the Company or a restricted subsidiary; (iii) mortgages on property of any corporation existing at the time it becomes a restricted subsidiary; (iv) mortgages securing Debt owed by a restricted subsidiary to the Company or to another restricted subsidiary; (v) mortgages in favor of governmental bodies to secure advance or other payments pursuant to any contract or statute or to secure indebtedness incurred to finance the purchase price or cost of constructing or improving the property subject to such mortgages, including mortgages to secure tax exempt pollution control revenue bonds; (vi) sales of receivables that are reflected as secured indebtedness; (vii) certain other liens not related to the borrowing of money; (viii) extensions, renewals or replacements of the foregoing; (ix) mortgages on margin stock owned by the Company and restricted subsidiaries to the extent such margin stock exceeds 25% of the fair market value of Important Property of the Company and the restricted subsidiaries plus certain stock and indebtedness of the restricted subsidiaries; and (x) mortgages on Important Property of, or any shares of stock or indebtedness issued or incurred by, any restricted subsidiary organized under the laws of Canada. (Section 1006 of the Indenture)

The foregoing restrictions do not apply to the incurrence, assumption or guarantee by the Company or any restricted subsidiary of Debt secured by a mortgage that would otherwise be subject to such restrictions up to an aggregate amount which, together with all other Debt secured by mortgages (not including secured Debt permitted under the foregoing exceptions) and the Attributable Debt (generally defined as the discounted present value of net rental payments) associated with Sale and Lease-back Transactions existing at such time (other than Sale and Lease-back Transactions the proceeds of which have been or will be applied as set forth in clause (iii) or (iv) under "Limitation on Sale and Lease-back Transactions" below, and other than Sale and Lease-back Transactions in which the property involved would have been permitted to be mortgaged under clause (i) above), does not exceed 5% of Consolidated Net Tangible Assets of the Company and its consolidated subsidiaries, as shown on the audited consolidated balance sheet contained in the latest annual report to stockholders of the Company. (Section 1006 of the Indenture)

The term “restricted subsidiary” is defined in the Indenture to mean any subsidiary (i) engaged in, or whose principal assets consist of property used by the Company or any restricted subsidiary in, the manufacture of products within the United States or Canada or in the sale of products principally to customers located in the United States or Canada except any corporation which is a retail dealer in which the Company has, directly or indirectly, an investment under an arrangement providing for the liquidation of such investment; or (ii) which the Company shall designate as a restricted subsidiary. (Section 1006 of the Indenture)

The term Important Property is defined in the Indenture to include: (i) any manufacturing plant, including its machinery and equipment, used by the Company or a restricted subsidiary primarily for the manufacture of products to be sold by the Company or such restricted subsidiary; (ii) the executive office and administrative building of the Company in Moline, Illinois; and (iii) research and development facilities; except, in each case, property the fair value of which as determined by the Board of Directors of the Company does not at the time exceed 1% of Consolidated Net Tangible Assets of the Company and its consolidated subsidiaries, as shown on the audited consolidated balance sheet contained in the latest annual report to stockholders of the Company. (Section 1006 of the Indenture)

Limitation on Sale and Leaseback Transactions

The Company covenants in the Indenture that it will not nor will it permit any restricted subsidiary to enter into any arrangement with any person providing for the leasing to the Company or any restricted subsidiary of any Important Property (except for temporary leases for a term, including renewals, of not more than three years) which has been or is to be sold by the Company or such restricted subsidiary to such person unless the net proceeds are at least equal to the fair value (as determined by the Company’s Board of Directors) of such property and either (i) the Company or such restricted subsidiary would be entitled to incur Debt secured by a mortgage on such Important Property without securing the Indenture Securities issued under the Indenture under clause (i) of the first paragraph under “Limitation on Liens” above; (ii) the Attributable Debt associated therewith would be an amount permitted under the second paragraph under “Limitation on Liens” above; (iii) the Company applies an amount equal to the fair value of such Important Property to the retirement of Indenture Securities or certain long-term indebtedness of the Company or a Restricted Subsidiary, as the case may be; or (iv) the Company enters into a bona fide commitment to expend for the acquisition or improvement of an Important Property an amount at least equal to the fair value of such property. (Section 1007 of the Indenture)

The Trustee Under the Indenture

The Bank of New York Mellon is a bank with which the Company maintains ordinary banking relationships and from which the Company has obtained credit facilities and lines of credit. The Bank of New York Mellon also serves as trustee under other indentures under which the Company or a subsidiary of the Company is the obligor.

Exhibit 10.20

AMENDED & RESTATED
CHANGE IN CONTROL SEVERANCE PROGRAM
OF DEERE & COMPANY

Effective as of 29 May 2018

TABLE OF CONTENTS

1.	Purpose	1
2.	Definitions	1
3.	Eligibility	6
4.	Severance Benefits	7
5.	Form and Timing of Severance Benefits	11
6.	Excise Tax	11
7.	The Company’s Payment Obligation	12
8.	Covenants and Release of the Participants	12
9.	Funding	13
10.	Administration	13
11.	Claims Procedure	14
12.	Legal Fees	14
13.	Successors and Assignment	14
14.	Miscellaneous	15
15.	Effect on Prior Agreements	16

AMENDED & RESTATED
CHANGE IN CONTROL SEVERANCE PROGRAM
OF DEERE & COMPANY

1. Purpose

The purposes of the Program are (i) to provide Participants with severance payments and benefits in the event of a Qualifying Termination, (ii) to assure the Company that it will have the continued dedication of the Participants and the availability of their advice and counsel notwithstanding the possibility, threat, or occurrence of a Change in Control of the Company, and (iii) to provide an additional incentive for the Participants to remain in the employ of the Company. The Program is intended to be a "top-hat" plan for a select group of management or highly compensated employees of the Company, but is not intended to meet the qualification requirements of Section 401 of the Internal Revenue Code of 1986, as amended (the "Code").

2. Definitions

Whenever used in the Program, the following terms shall have the meanings set forth below and, when the meaning is intended, the initial letter of the word is capitalized:

(a) "Administrator" means the Company's Senior Vice President and Chief Administrative Officer or such other person designated by the Committee.

(b) "Base Salary" means a Participant's annual rate of salary, excluding amounts received under incentive or other bonus plans, whether or not deferred.

(c) "Beneficial Owner" shall have the meaning ascribed to such term in Rule 13d-3 of the General Rules and Regulations under the Exchange Act.

(d) "Board" means the Board of Directors of the Company.

(e) "Bonus" means the target bonus amount for a Participant for the fiscal year in which the Effective Date of Termination occurs pursuant to the John Deere Short -Term Incentive Bonus Plan or any successor plan or arrangement thereto. The Bonus will be determined (i) for the CEO and for Tier 1 Participants by the Committee and (ii) for Tier 2 Participants in accordance with the terms and procedures of the Deere Short -Term Incentive Bonus Plan or any successor plan or arrangement thereto. For purposes of the Program, the term "Bonus" shall not include any payments made pursuant to the Company's Long Term Incentive Cash Plan, Long-Term Incentive Plan or any successor plans or arrangements thereto.

(f) "Cause" means (i) a Participant's willful and continued failure to substantially perform his duties with the Company (other than any such failure resulting from Disability or occurring after issuance by a Participant of a Notice of Termination for Good Reason), after a written demand for substantial performance is delivered to

such Participant that specifically identifies the manner in which the Company believes that such Participant has willfully failed to substantially perform his duties, and after such Participant has failed to resume substantial performance of his duties on a continuous basis within thirty (30) calendar days of receiving such demand; (ii) a Participant's willfully engaging in conduct (other than conduct covered under (i) above) which is demonstrably and materially injurious to the Company, monetarily or otherwise; or (iii) a Participant's having been convicted of, or having entered a plea of *nolo contendere* to, a felony. For purposes of this definition, no act, or failure to act, on a Participant's part shall be deemed "willful" unless done, or omitted to be done, by a Participant not in good faith and without reasonable belief that the action or omission was in the best interests of the Company.

(g) "CEO" means the Chief Executive Officer of the Company.

(h) "Change in Control" means a change in control of a nature that would be required to be reported in response to Schedule 14A of Regulation 14A promulgated under the Exchange Act whether or not the Company is then subject to such reporting requirement, provided that, without limitation, such a Change in Control shall be deemed to have occurred if:

(i) any "person" (as defined in Sections 13(d) and 14(d) of the Exchange Act) (other than a Participant or group of Participants, the Company or a subsidiary, any employee benefit plan of the Company including its trustee, or any corporation or similar entity which becomes the Beneficial Owner of securities of the Company in connection with a transaction excepted from the provisions of clause (iii) below) is or becomes the "beneficial owner" (as defined in Rule 13(d-3) under the Exchange Act), directly or indirectly, of securities of the Company (not including the securities beneficially owned or any securities acquired directly from the Company) representing thirty percent (30%) or more of the combined Voting Power of the Company's then outstanding securities;

(ii) the following individuals shall cease to constitute a majority of the Board: individuals who on the Participation Date constitute the Board and any new director(s) whose appointment or election by the Board or nomination for election by the Company's stockholders was approved by a vote of at least two-thirds (2/3) of the directors then still in office who either were directors on the Participation Date or whose appointment or election or nomination for election was previously so approved but excluding, for this purpose, any such new director whose initial assumption of office occurs as a result of an actual or threatened election contest with respect to the election or removal of directors or other actual or threatened solicitation of proxies or consents by or on behalf of a person other than the Board;

(iii) there is consummated a merger, consolidation or similar business combination transaction of the Company (including, for the avoidance of doubt, any business combination structured as a forward or reverse triangular merger involving any direct or indirect subsidiary of the Company) with any other

company, other than a merger, consolidation or similar business combination transaction which would result in the voting securities of the Company outstanding immediately prior thereto continuing to represent (either by remaining outstanding or by being converted into voting securities of the surviving entity or any parent thereof) at least sixty percent (60%) of the combined Voting Power of the voting securities of the Company or such surviving entity or parent thereof outstanding immediately after such merger, consolidation or similar business combination transaction; or

(iv) the stockholders of the Company approve a plan of complete liquidation of the Company or there is consummated an agreement for the sale or disposition by the Company of all or substantially all of the Company's assets.

(i) "CIC Agreement" means a change in control agreement entered into between the Company and an executive or other employee.

(j) "Code" means the United States Internal Revenue Code of 1986, as amended, and any successors thereto.

(k) "Committee" means the Compensation Committee of the Board or any other committee of the Board appointed by the Board to perform the functions of the Compensation Committee.

(l) "Company" means Deere & Company, a Delaware corporation, or any successor thereto as provided in Section 13(a) herein.

(m) "Disability" means complete and permanent inability by reason of illness or accident to perform the duties of the occupation at which a Participant was employed when such disability commenced.

(n) "Divestiture" means a transaction in which (x) the entity that employs a Participant is sold, spun-off or otherwise disposed of by the Company with the result that such entity is no longer a 409A Affiliate, or (y) the business unit or division in which the Participant is employed is spun-off as a separate entity that is not a 409A Affiliate or is sold or otherwise transferred to a third party that is not a 409A Affiliate.

(o) "Effective Date of Termination" means the date on which a Qualifying Termination occurs which triggers the payment of Severance Benefits hereunder.

(p) "Employment" means a Participant's employment with the Company or any of its 409A Affiliates.

(q) "ERISA" means the Employee Retirement Income Security Act of 1974, as amended.

(r) "Exchange Act" means the United States Securities Exchange Act of 1934, as amended.

(s) "Good Reason" means, without a Participant's express written consent, the occurrence of any one or more of the following:

(i) The assignment of a Participant to duties materially inconsistent with such Participant's authorities, duties, responsibilities, and status (including offices and reporting requirements) as an employee of the Company, or a reduction or alteration in the nature or status of a Participant's authorities, duties, or responsibilities from the greater of (i) those in effect on the Participation Date; (ii) those in effect during the fiscal year immediately preceding the year of the Change in Control; or (iii) those in effect immediately preceding the Change in Control;

(ii) The Company's requiring a Participant to be based at a location which is at least fifty (50) miles further from the current primary residence than is such residence from the Company's current headquarters, except for required travel on the Company's business to an extent substantially consistent with such Participant's business obligations as of the Participation Date;

(iii) A reduction by the Company in a Participant's Base Salary as in effect on the Participation Date or as the same shall be increased from time to time;

(iv) A material reduction in a Participant's level of participation in any of the Company's short- and/or long-term incentive compensation plans, or employee benefit or retirement plans, policies, practices, or arrangements in which such Participant participates from the levels in place during the fiscal year immediately preceding the Change in Control; provided, however, that reductions in the levels of participation in any such plans shall not be deemed to be "Good Reason" if a Participant's reduced level of participation in each such program remains substantially consistent with the average level of participation of other executives who have positions commensurate with such Participant's position;

(v) The failure of the Company to obtain a satisfactory agreement from any successor to the Company to assume and agree to perform the obligations under the Program, as contemplated in 13(a) herein; or

(vi) Any involuntary termination of a Participant's Employment that is not effected pursuant to a Notice of Termination.

The existence of Good Reason shall not be affected by a Participant's temporary incapacity due to physical or mental illness not constituting a Disability. A Participant's continued employment shall not constitute a waiver of such Participant's rights with respect to any circumstance constituting Good Reason.

(t) "Multiplier" shall mean (i) three (3) in the case of the CEO, (ii) two (2) in the case of a Tier 1 Participant and (ii) one and one-half (1.5) in the case of a Tier 2 Participant.

(u) "Notice of Termination" shall mean a written notice which shall indicate the specific termination provision in the Program relied upon, and shall set forth in reasonable detail the facts and circumstances claimed to provide a basis for termination of a Participant's Employment under the provision so indicated.

(v) "Participant" means the CEO and each person who is designated to be a Tier 1 Participant or Tier 2 Participant under the Program.

(w) "Participation Date" means, with respect to each Participant, the date specified by the Committee or the Administrator as provided in Section 3(a) as of which such individual becomes a Participant in the Program. If (i) a Participant who is designated a Tier 1 Participant is subsequently designated as the CEO, (ii) a Participant who is designated a Tier 2 Participant is subsequently designated a Tier 1 Participant, (iii) or if a Tier 1 Participant is subsequently designated in accordance with Section 3(c) a Tier 2 Participant, then from and after the effective date of such later designation, the Participant's Participation Date will be such effective date.

(x) "Payment Date" shall have the meaning ascribed to such term in Section 5(a) herein.

(y) "Person" shall have the meaning ascribed to such term in Section 3(a)(9) of the Exchange Act and used in Sections 13(d) and 14(d) thereof, including a "group" as provided in Section 13(d).

(z) "Post-Divestiture Employer" means, in the case of a Participant whose employment is with an entity, business unit or division that is the subject of a Divestiture and who immediately following the Divestiture continues to be employed with such entity, business unit or division, the Participant's employer immediately following the Divestiture (including all entities that are considered to be a single employer with such party under the default provisions in Treasury Regulations Section 1.409A-1(h)).

(aa) "Potential Change in Control" of the Company means the happening of any of the following:

(i) the entering into an agreement by the Company, the consummation of which would result in a Change in Control of the Company as defined in Section 2(g) hereof; or

(ii) the acquisition of beneficial ownership, directly or indirectly, by any entity, person or group (other than a Participant or group of Participants, the Company or a subsidiary, or any employee benefit plan of the Company including its trustee) of securities of the Company representing fifteen percent (15%) or more of the combined voting power of the Company's outstanding securities and the adoption by the Board of a resolution to the effect that a

Potential Change in Control of the Company has occurred for purposes of the Program.

(bb) "Program" means this Change in Control Severance Program of Deere & Company and its Subsidiaries, as subsequently amended from time to time.

(cc) "Release" shall have the meaning ascribed to such term in Section 8 herein.

(dd) "Release Deadline" shall have the meaning ascribed to such term in Section 8 herein.

(ee) "Qualifying Termination" means any of the events described in Section 4(b) herein, the occurrence of which triggers the payment of Severance Benefits hereunder.

(ff) "SEC" means the United States Securities and Exchange Commission.

(gg) "Severance Benefits" means the payment of severance compensation as provided in Section 4(d) herein.

(hh) "Subsidiary" means any corporation or other entity of which ownership interests having ordinary Voting Power to elect a majority of the board of directors or other persons performing similar functions are at the time directly or indirectly owned by the Company.

(ii) "Tier 1 Participant" means each person who is designated by the Committee as a Tier 1 Participant.

(jj) "Tier 2 Participant" means each person who is designated by the Administrator as a Tier 2 Participant.

(kk) "Voting Power" of a corporation or other entity means the combined voting power of the then-outstanding voting securities of such corporation or other entity entitled to vote generally in the election of directors.

(ll) "409A Affiliate" means any corporation that is included in a controlled group of corporations (within the meaning of Section 414(b) of the Code) that includes the Company and any trade or business (whether or not incorporated) that is under common control with the Company (within the meaning of Section 414(c) of the Code).

3. Eligibility

(a) Designation of Participants. The CEO shall be a Participant in the Plan. Tier 1 Participants shall be designated in writing from time to time by the Committee in its discretion. Tier 2 Participants shall be designated in writing from time

to time by the Committee or the Administrator. At the time an individual is designated as a Participant, the Committee or the Administrator, as the case may be, shall specify such individual's Participation Date (which may, but need not, be the date of the Committee or the Administrator action designating the individual as a Participant). The books and records of the Company shall be definitive for purposes of determining whether and as of when an individual has been designated as a Participant.

(b) Participation Exclusive. Unless and until an individual has been designated as a Participant and the relevant Participation Date has occurred, such individual shall have no rights under the Program, regardless of whether any other individual with a similar position, rate of compensation or responsibilities has become a Participant. No individual shall become a Participant while such individual is party to an effective CIC Agreement, and in no event may any individual have entitlements under both the Program and a CIC Agreement.

(c) Termination of Participation. The Committee, with respect to Tier 1 Participants (including, for this purpose, a Tier 1 Participant who is being converted to a Tier 2 Participant), and the Committee or the Administrator, with respect to Tier 2 Participants, may provide notice to a Participant at any time that such Participant shall cease to be a Participant. Any such termination or reduction of Participant status shall become effective on the earliest anniversary of the relevant Participant's Participation Date that is at least six (6) months from the date of the notice of termination or reduction of Participant status, provided, however, that no such termination or reduction of Participant status shall be effective prior to the second anniversary of the Participant's Participation Date; provided, further, that no notice of termination or reduction of Participant status shall be given within six (6) months following a Potential Change in Control; and provided, further, that following a Change in Control, no such termination or reduction of Participant status shall be given effect until the later of (i) twenty-four (24) months after the month in which the Change in Control occurs or (ii) if a Participant experiences a Qualifying Termination before the end of such twenty-four (24) month period, until all obligations of the Company under the Program have been fulfilled and all benefits required under the Program have been paid or provided to the Participant.

4. Severance Benefits

(a) Right to Severance Benefits. Subject to Section 8, a Participant shall be entitled to receive from the Company the Severance Benefits described in Section 4(d) if a Qualifying Termination of such Participant has occurred. A Participant shall not be entitled to receive Severance Benefits if he or she is terminated for Cause, or if his or her Employment ends due to death or Disability or due to a voluntary termination of Employment without Good Reason. An individual who has ceased to be a Participant in the Program in accordance with Section 3(c) shall not be entitled to any Severance Benefits under the Program in connection with his or her termination of Employment for any reason, even if such termination of Employment would have qualified as a Qualifying Termination had the individual been a Participant at the time of his or her termination of Employment. No Severance Benefits shall be payable

under the Program to any individual if the Program has been terminated as to such individual in accordance with Section 14(d) at the time of such individual's termination of Employment.

(b) Qualifying Termination. Subject to Section 8, the occurrence of any one or more of the following events shall trigger the payment of Severance Benefits to a Participant under the Program:

(i) An involuntary termination of a Participant's Employment for reasons other than Cause within six (6) months preceding or within twenty-four (24) calendar months following a Change in Control of the Company; any such involuntary termination shall be pursuant to a Notice of Termination (specifying the Effective Date of Termination which shall be not less than five (5) days from the date of the Notice of Termination) delivered to such Participant by the Company; or

(ii) A Participant's voluntary termination of Employment for Good Reason within twenty-four (24) calendar months following a Change in Control of the Company pursuant to a Notice of Termination delivered to the Company by such Participant.

For purposes of the Program, a Participant's Employment will be considered to have terminated upon (and only upon) such Participant's "separation from service" from the Company and its 409A Affiliates as determined under the default provisions in Treasury Regulation Section 1.409A-1(h).

(c) Divestitures. Without limiting the generality of the foregoing Section 4(b), if the entity, business unit or division that employs a Participant is the subject of a Divestiture, the Participant will be considered to have experienced an involuntary termination of Employment as of the date such entity ceases to be a 409A Affiliate or such business unit or division is sold or transferred, regardless of whether the Participant is considered to have experienced a termination of Employment with the Company and its affiliates for any other purpose; provided, however, that if a Divestiture occurs within six (6) months preceding or within twenty-four (24) months following a Change in Control of the Company, then the Divestiture itself will not be considered to cause a termination of the Participant's employment, and whether the Participant experiences a Qualifying Termination following such Divesture will be determined by reference to the Participant's employment with the Post-Divestiture Employer (so that, for example, an involuntary termination of the Participant's employment with the Post-Divestiture Employer for reasons other than Cause within 24 calendar months following a Change in Control of the Company will trigger the payment of Severance Benefits). Nothing in this Agreement is intended to conflict with 18 U.S.C. § 1833(b) or create liability for disclosures of trade secrets that are expressly allowed by such section.

(d) Description of Severance Benefits. Subject to Section 8, in the event a Participant becomes entitled to receive Severance Benefits, the Company shall pay or provide to the Participant all of the following:

(i) An amount equal to the product of (x) the sum of the Participant's Base Salary in effect at the Effective Date of Termination (without regard to any decreases therein which constitute Good Reason) plus his Bonus and (y) the Multiplier.

(ii) An amount equal to his unpaid Base Salary, accrued vacation pay, and earned but not taken vacation pay through the Effective Date of Termination.

(iii) An amount equal to his Bonus multiplied by a fraction, the numerator of which is the number of days he was employed by the Company in the then-existing fiscal year through the Effective Date of Termination, and the denominator of which is three hundred sixty-five (365) less, in the case of a Participant who began Employment after the beginning of the fiscal year, the number of days from the beginning of the fiscal year to the date he commenced Employment.

(iv) A continuation of the welfare benefits of health care, life and accidental death and dismemberment, and disability insurance coverage for (A) three (3) full years after the Effective Date of Termination for the CEO, (B) two (2) full years after the Effective Date of Termination for Tier 1 Participants, (C) and eighteen (18) months after the Effective Date of Termination for Tier 2 Participants; provided, however, that the Participant shall pay (or promptly reimburse the Company for the cost of) any portion of the premiums for such coverage that results in taxable income to the Participant attributable to the first six (6) months following the Effective Date of Termination in excess of $5,000, and in such case, the Company shall repay the Participant the amount of such payment or reimbursement at the time provided in Section 5(a) for the payment of Severance Benefits. These benefits shall be provided to the Participant at the same premium cost, and at the same coverage level, as in effect as of his Effective Date of Termination. However, in the event the premium cost and/or level of coverage shall change for all employees of the Company, or for management employees with respect to supplemental benefits, the cost and/or coverage level, likewise, shall change for the Participant in a corresponding manner. The continuation of these welfare benefits shall be discontinued prior to the end of the three (3) year, two (2) year, or eighteen (18) month period, as applicable, to the extent such Participant has available substantially similar benefits at a comparable cost from a subsequent employer, as determined by the Committee.

(v) In a single payment, an amount in cash equal to the amount of the Company's employer contributions made on behalf of the Participant under all defined contribution plans of the Company for the plan year immediately

preceding the Effective Date of Termination (or, if higher, for the plan year immediately prior to the Change in Control).

(e) Other Benefits. Compensation which has been deferred under the Company's nonqualified deferred compensation plans, increased with applicable notional interest and adjusted for applicable notional gains and losses, shall be distributed pursuant to the terms of the applicable plan. In addition, the Participant's benefits, if any, under the John Deere Supplemental Pension Benefit Plan, the John Deere Senior Supplementary Pension Benefit Plan and any other nonqualified defined benefit pension plan will be calculated and distributed pursuant to the terms of the applicable plan.

(f) Termination for Disability. Following a Change in Control of the Company, if a Participant's Employment is terminated due to Disability, such Participant shall receive his Base Salary through the date of termination, at which point in time such Participant's benefits shall be determined in accordance with the Company's disability, retirement, insurance, and other applicable plans and programs then in effect. In the event a Participant's Employment is terminated due to Disability, such Participant shall not be entitled to the Severance Benefits described in Section 4(d).

(g) Termination for Death. Following a Change in Control of the Company, if a Participant's Employment is terminated by reason of the Participant's death, such Participant's benefits shall be determined in accordance with the Company's retirement, survivor's benefits, insurance, and other applicable programs of the Company then in effect. In the event a Participant's Employment is terminated by reason of his death, such Participant shall not be entitled to the Severance Benefits described in Section 4(d).

(h) Termination for Cause, or Other Than for Good Reason. Following a Change in Control of the Company, if a Participant's Employment is terminated either (i) by the Company for Cause; or (ii) by such Participant (other than for Good Reason), the Company shall pay such Participant his full Base Salary and accrued vacation through the date of termination, at the rate then in effect, plus all other amounts to which such Participant is entitled under any compensation and benefit plans of the Company, at the time such payments are due, and the Company shall have no further obligations to such Participant under the Program.

(i) Notice of Termination. Any termination of Employment by a Participant for Good Reason shall be communicated by a Notice of Termination.

5. Form and Timing of Severance Benefits

(a) Form and Timing of Severance Benefits. The Severance Benefits described in Section 4(d) (other than those described in Section 4(d)(iv)) herein shall be paid in cash to such Participant in a single lump sum 185 days following the

Effective Date of Termination (or if such date is not a business day, the next business day) (the "Payment Date").

(b) Withholding of Taxes. The Company shall be entitled to withhold from any amounts payable under the Program all taxes as legally shall be required (including, without limitation, any United States federal taxes and any other state, city, or local taxes).

6. Excise Tax

(a) Excise Tax. Subject to the last sentence of this Section 6(a), in the event that a Participant becomes entitled to Severance Benefits or any other payment or benefit under the Program, or under any other agreement with or plan of the Company (in the aggregate, the "Total Payments"), if all or any part of the Total Payments will be subject to the tax (the "Excise Tax") imposed by Section 4999 of the Code (or any similar tax that may hereafter be imposed), and if such Participant would receive a greater net after-tax amount if the Total Payments paid to such Participant were reduced to avoid the imposition of the Excise Tax, then the Total Payments paid to such Participant shall be reduced, such that the value of the aggregate payments that such Participant receives shall be one dollar ($1) less than the maximum amount which such Participant may receive without becoming subject to the Excise Tax, or which the Company may pay without loss of deduction under Section 280G(a) of the Code. The reductions, if applicable, required by this Section 6(a) shall be made only from the following amounts in the following order: first, from the lump sum payment contemplated by Section 5(a); and then, to the extent necessary, from other amounts payable to the Participant that do not constitute deferred compensation for purposes of Section 409A of the Code.

(b) Tax Computation. All calculations done pursuant to Section 6(a), shall be made and determined reasonably and in good faith by the auditing firm which served as the Company's independent auditors immediately prior to the Change in Control, and all such calculations made reasonably and in good faith shall be final and binding on the Company and such Participant, even if such calculations are subsequently challenged or revised by a court or applicable regulatory authority. For purposes of the calculations done pursuant to Section 6(a), a Participant shall be deemed to pay federal income taxes at the highest marginal rate of federal income taxation in the calendar year in which the Payment Date occurs and state and local income taxes at the highest marginal rate of taxation in the state and locality of such Participant's residence on the Payment Date, net of the maximum reduction in federal income taxes which could be obtained from deduction of such state and local taxes.

(c) Expenses. All of the fees and expenses of the accounting firm in performing the calculations referred to in Sections 6(a) and 6(b) above shall be borne solely by the Company.

7. The Company's Payment Obligation

(a) Payment Obligations Absolute. Subject to Section 8, the Company's obligation to pay or provide the Severance Benefits provided for herein shall be absolute and unconditional, and shall not be affected by any circumstances, including, without limitation, any offset, counterclaim, recoupment, defense, or other right which the Company may have against a Participant or anyone else. All amounts payable by the Company hereunder shall be paid without notice or demand. Each and every payment made hereunder by the Company shall be final, and the Company shall not seek to recover all or any part of such payment from a Participant or from whomsoever may be entitled thereto, for any reasons whatsoever.

Notwithstanding anything else herein to the contrary, however, if the Company (or any subsidiary or affiliate of the Company) is obligated by law to pay to a Participant severance pay, a termination indemnity, notice pay, or the like (but excluding for this purpose accrued and unused vacation pay), or is obligated by law to provide to a Participant advance notice of separation ("Notice Period"), then any Severance Benefits hereunder shall be reduced by the amount of any such severance pay, termination indemnity, notice pay or the like, as applicable, and by the amount of any compensation received during any Notice Period.

A Participant shall not be obligated to seek other employment in mitigation of the amounts payable or arrangements made under any provision of the Program, and the obtaining of any such other employment shall in no event effect any reduction of the Company's obligations to make the payments and arrangements required to be made under the Program, except to the extent provided in Section 4(d)(iv) herein.

(b) Contractual Rights to Benefits. Subject to Sections 3 and 14(d), the Program establishes and vests in a Participant a contractual right to the benefits to which he or she is entitled hereunder. However, nothing herein contained shall require or be deemed to prohibit the Company to segregate, earmark, or otherwise set aside any funds or other assets, in trust or otherwise, to provide for any payments to be made or required hereunder.

8. Covenants and Release of the Participants. Notwithstanding any other provision of the Program, a Participant's entitlement to Severance Benefits shall be conditioned on the Participant's executing a Restrictive Covenant and Release Agreement (the "Release"), substantially in the form attached hereto as Exhibit A, within sixty (60) days after the Participant's Qualifying Termination (the "Release Deadline") and such Release remaining in effect and becoming irrevocable after the expiration of any statutory period in which the Participant is permitted to revoke a release. If the Participant fails to execute and deliver the Release by the Release Deadline, or if the Participant thereafter effectively revokes the Release, the Company shall be under no obligation to make any further payments or provide any further benefits to the Participant, and the Participant shall promptly repay the Company any payments made to the Participant and the Company's direct cost for any benefits provided to the Participant pursuant to the Program.

9. Funding

Benefits payable under the Program shall be unfunded, as that term is used in Sections 201(2), 301(a)(3), 401(a)(1) and 4021(b)(6) of ERISA, with respect to unfunded plans maintained primarily for the purpose of providing deferred compensation to a select group of management or highly compensated employees, and the Administrator shall administer the Program in a manner that will ensure that benefits are unfunded and that Participants will not be considered to have received a taxable economic benefit prior to the time at which benefits are actually payable hereunder. Accordingly, the Company shall not be required to segregate or earmark any of its assets for the benefit of Participants or their spouses or other beneficiaries, and each such person shall have only a contractual right against the Company for benefits hereunder. The Company may from time to time establish a trust and deposit with the trustee thereof funds to be held in trust for the payment of benefits hereunder; provided, that the use of such funds for such purpose shall be subject to the claims of the Company's general creditors as set forth in the agreement establishing any such trust. The rights and interests of a Participant under the Program shall not be subject in any manner to anticipation, alienation, sale, transfer, assignment, pledge or encumbrance by a Participant or any person claiming under or through a Participant, nor shall they be subject to the debts, contracts, liabilities or torts of a Participant or anyone else prior to payment. The Administrator may from time to time appoint an investment manager or managers for the funds held in any such trust.

10. Administration

The Program shall be operated under the direction of the Committee and administered by the Administrator. Subject to Section 6(b), the calculation of all benefits payable under the Program shall be performed by the Administrator, subject to the review of the Committee. The Administrator shall have sole and complete discretionary authority and control to manage the operation and administration of the Plan, including but not limited to, the interpretation of all Plan provisions, determination of the amount of benefits payable to any Participant, spouse, heirs or estate, all legal and factual determinations, and construction of disputed or ambiguous term, and all such

determinations shall be binding on all parties. Notwithstanding the preceding sentence, all determinations of eligibility for participation and benefits under the Program as a Tier 1 Participant shall be made by the Committee. The Administrator may delegate responsibilities under the Plan. With respect to any instance where the Plan is administered relative to the Administrator, the Chief Executive Officer of the Company shall act as Administrator.

11. Claims Procedure

All claims for benefits under the Program shall be determined under the claims procedure in effect under the Company's tax-qualified defined benefit pension plan on the date that such claims are submitted, except that the Administrator shall make initial determinations with respect to claims hereunder and the Committee shall decide appeals of such determinations.

In the event that any dispute under the provisions of the Program is not resolved to the satisfaction of the affected Participant through the Program's claims procedures described in the preceding paragraph, any dispute or controversy arising under or in connection with the Program may, at the sole election of the affected Participant, be settled by arbitration, conducted before a panel of three (3) arbitrators sitting in a location selected by the Participant within fifty (50) miles from the location of his employment with the Company, in accordance with the rules of the American Arbitration Association then in effect.

Judgment may be entered on the award of the arbitrator in any court having proper jurisdiction. All expenses of such arbitration, including the fees and expenses of the counsel for a Participant, shall be borne by the Company. If applicable, payment or reimbursement of the Participant's reasonable attorneys' fees and expenses shall be made not later than December 31st of the calendar year following the year in which they are incurred.

12. Legal Fees. To the extent permitted by law, the Company shall pay all reasonable legal fees, costs of litigation or arbitration, prejudgment interest, and other expenses incurred in good faith by a Participant as a result of:

(a) the Company's refusal to provide the Severance Benefits to which a Participant becomes entitled under the Program, or

(b) the Company's contesting the validity, enforceability, or interpretation of the Program, or

(c) any conflict between the parties pertaining to the Program.

If applicable, payment or reimbursement of the Participant's reasonable attorneys' fees and expenses shall be made not later than December 31st of the calendar year following the year in which they are incurred.

13. Successors and Assignment

(a) Successors to the Company. The Company will require any successor (whether direct or indirect, by purchase, merger, consolidation, a similar business combination transaction or otherwise) of all or substantially all of the business and/or assets of the Company and its affiliates thereof to expressly assume and agree to perform the Company's obligations under the Program in the same manner and to the same extent that the Company would be required to perform them if no such succession had taken place. Assuming that such transaction otherwise constitutes a Change in Control, the date on which any such succession becomes effective shall be deemed to be the date of the Change in Control.

(b) Divestitures. In the event of a Divestiture, the Company may, but shall not be obligated to, assign its obligations under the Program with respect to any Participant who immediately following such Divestiture will be employed by the entity that owns the divested entity, business unit or division to the Participant's Post-Divestiture Employer or any of its affiliates. Upon the effectiveness of the agreement by such Post-Divestiture Employer or one of its affiliates to perform such obligations, the Company shall have no further obligations under the Program to such Participant.

(c) Assignment by a Participant. The Program shall inure to the benefit of and be enforceable by a Participant's personal or legal representatives, executors, administrators, successors, heirs, distributees, devisees, and legatees. If a Participant dies while any amount would still be payable to him or her hereunder had he or she continued to live, all such amounts, unless otherwise provided herein, shall be paid in accordance with the terms of the Program to such Participant's beneficiary. If a Participant has not named a beneficiary, then such amounts shall be paid to such Participant's devisee, legatee, or other designee, or if there is no such designee, to such Participant's estate.

14. Miscellaneous

(a) Employment Status. Except as may be provided under any other agreement between a Participant and the Company or one of its 409A Affiliates, a Participant's Employment is "at will," and may be terminated by either the Participant or the Participant's employer at any time, subject to applicable law.

(b) Beneficiaries. The primary and/or contingent beneficiaries designated by a Participant pursuant to Company-provided life insurance benefits shall be the persons or entities who or which are the Beneficiaries of any Severance Benefits owing to such Participant under the Program.

(c) Severability. In the event any provision of the Program shall be held illegal or invalid for any reason, the illegality or invalidity shall not affect the remaining parts of the Program, and the Program shall be construed and enforced as if

the illegal or invalid provision had not been included. Further, the captions of the Program are not part of the provisions hereof and shall have no force and effect.

(d) Amend, Modify or Terminate. Subject to the restrictions and limitations set forth in this Section 14(d), the Board (or any committee of the Board to whom the Board delegates it authority hereunder) may amend, modify or terminate the Program at any time in whole or in part without prior notice to, or without the consent of, any Participant or other person. Notwithstanding the previous sentence, without the express written consent of an affected Participant, (i) the Board may not amend, modify or terminate the Program in any respect for a Participant for whom a Qualifying Separation has occurred or (ii) amend, modify or terminate the Program in a manner that is adverse to the Participant in any material respect during the twenty-four month period following a Change in Control or the six month period following a Potential Change in Control. In addition, any amendment, modification or termination of the Program that would be precluded under the previous sentence without the express written consent of an affected Participant on or after a Change in Control shall not be given effect without the express written consent of the affected Participant if it is adopted within six months prior to the occurrence of a Potential Change in Control or a Change in Control. Nothing in this Section 14(d) shall preclude a termination or reduction of a Participant's status in the Program in accordance with Section 3(c).

(e) Applicable Law. TO THE EXTENT NOT PREEMPTED BY THE LAWS OF THE UNITED STATES OR ANY OTHER LAW MANDATORILY APPLYING TO A PARTICIPANT'S EMPLOYMENT, THE LAWS OF THE STATE OF ILLINOIS SHALL BE THE CONTROLLING LAW IN ALL MATTERS RELATING TO THE PROGRAM.

15. Effect on Prior Agreements. By virtue of a Participant's participation in the Program, the Participant and the Company acknowledge that: (a) the Program supersedes all prior written or oral agreements between them, including, but not limited to, any Change in Control Agreement or Severance Protection Agreement which a Participant and the Company may have entered into; and (b) as of the Participation Date, any and all such prior agreements are null and void.

EXHIBIT A

RESTRICTIVE COVENANT AND RELEASE AGREEMENT

This Restrictive Covenant and Release Agreement (this "Agreement") is entered into by the undersigned effective as of [INSERT DATE][1] ("Effective Date").

In consideration of the severance benefits to be provided to me under the Change in Control Severance Program of Deere & Company (the "Severance Program"), I agree as follows:

1. Return of Property. All Company files, access keys and codes, desk keys, ID badges, computers, records, manuals, electronic devices, computer programs, papers, electronically stored information or documents, telephones and credit cards, and any other property of the Deere & Company or any of its affiliates (the "Company") in my possession must be returned no later than the Effective Date.

2. Non-Disclosure and Non-Solicitations Covenants.

(a) Disclosure of Information. As a result of my employment with the Company, I had access to and knowledge of certain confidential and proprietary information of the Company. I shall not, in whole or in part, disclose such information to any person, firm, corporation, association, or other entity for any reason or purpose whatsoever, nor shall I make use of any such information for my own purposes.

(b) Covenants Regarding Other Employees. For a period beginning on the date of my Qualifying Termination (as defined in the Severance Program) and ending two (2) years following the payment of the lump sum severance benefits provided for in Section 4(c) of the Severance Program, I agree not to:

(i) attempt to induce any employee of the Company to (i) terminate his or her employment with the Company, or (ii) accept employment with any competitor of the Company; or

(ii) interfere in a similar manner with the business of the Company.

3. General Release and Waiver of Claims.

(a) Release. In consideration of the payments and benefits provided to me under the Severance Program and after consultation with counsel, I and each of my respective heirs, executors, administrators, representatives, agents, insurers, successors and assigns (collectively, the "Releasors") hereby irrevocably and unconditionally release and forever discharge the Company, its subsidiaries and affiliates and each of their respective officers, employees, directors, shareholders and

---

1 PURSUANT TO SECTION 8 OF PROGRAM, THE EFFECTIVE DATE SHOULD BE NO MORE THAN 60 DAYS FOLLOWING DATE OF QUALIFYING TERMINATION.

agents ("Releasees") from any and all claims, actions, causes of action, rights, judgments, obligations, damages, demands, accountings or liabilities of whatever kind or character (collectively, "Claims"), including, without limitation, any Claims under any federal, state, local or foreign law, that the Releasors may have, or in the future may possess, arising out of (i) my employment relationship with and service as an employee, officer or director of the Company or any subsidiaries or affiliated companies and the termination of such relationship or service, and (ii) any event, condition, circumstance or obligation that occurred, existed or arose on or prior to the date hereof; provided, however, that I does not release, discharge or waive any rights to (i) payments and benefits provided under the Severance Program that are contingent upon my execution of this Agreement and (ii) any indemnification rights I may have in accordance with the Company's governance instruments or under any director and officer liability insurance maintained by the Company with respect to liabilities arising as a result of my service as an officer and employee of the Company. This Section 3(a) does not apply to any Claims that the Releasors may have as of the date I sign this Agreement arising under the Federal Age Discrimination in Employment Act of 1967, as amended, and the applicable rules and regulations promulgated thereunder ("ADEA"). Claims arising under ADEA are addressed in Section 3(b) of this Agreement.

(b) Specific Release of ADEA Claims. In further consideration of the payments and benefits provided to me under the Severance Program, the Releasors hereby unconditionally release and forever discharge the Releasees from any and all Claims arising under ADEA that the Releasors may have as of the date I sign this Agreement. By signing this Agreement, I hereby acknowledge and confirm the following: (i) I was advised by the Company in connection with my termination to consult with an attorney of my choice prior to signing this Agreement and to have such attorney explain to me the terms of this Agreement, including, without limitation, the terms relating to my release of claims arising under ADEA, and I have in fact consulted with an attorney; (ii) I was given a period of not fewer than 21 days to consider the terms of this Agreement and to consult with an attorney of my choosing with respect thereto; (iii) I knowingly and voluntarily accept the terms of this Agreement; and (iv) I am providing this release and discharge only in exchange for consideration in addition to anything of value to which I am already entitled. I also understand that I have seven days following the date on which I sign this Agreement within which to revoke the release contained in this paragraph, by providing the Company with a written notice of my revocation of the release and waiver contained in this paragraph.

(c) No Assignment. I represent and warrant that I have not assigned any of the Claims being released under this Agreement. The Company may assign this Agreement, in whole or in part, to any affiliated company or subsidiary of, or any successor in interest to, the Company.

4. Proceedings.

(a) General Agreement Relating to Proceedings. I have not filed, and except as provided in Sections 4(b) and 4(c), I agree not to initiate or cause to be initiated on my behalf, any complaint, charge, claim or proceeding against the

Releasees before any local, state or federal agency, court or other body relating to my employment or the termination of my employment, other than with respect to the obligations of the Company to me under the Severance Program (each, individually, a "Proceeding"), and agree not to participate voluntarily in any Proceeding. I waive any right I may have to benefit in any manner from any relief (whether monetary or otherwise) arising out of any Proceeding.

(b) Proceedings Under ADEA. Section 4(a) shall not preclude me from filing any complaint, charge, claim or proceeding challenging the validity of my waiver of Claims arising under ADEA (the ADEA waiver is set forth in Section 3(b) of this Agreement). However, both the Company and I confirm our belief that my waiver of claims under ADEA is valid and enforceable, and my intention is that all claims under ADEA will be waived.

(c) Certain Administrative Proceedings. In addition, Section 4(a) shall not preclude me from filing a charge with or participating in any administrative investigation or proceeding by the Equal Employment Opportunity Commission or another Fair Employment Practices agency. I am, however, waiving my right to recover money in connection with any such charge or investigation. I am also waiving my right to recover money in connection with a charge filed by any other entity or individual, or by any federal, state or local agency.

5. Remedies. In the event I initiate or voluntarily participate in any Proceeding in violation of this Agreement, or if I fail to abide by any of the terms of this Agreement or if I revoke the ADEA release contained in paragraph 3(b) within the seven-day period provided under paragraph 3(b), the Company shall be under no obligation to make any further payments or provide any further benefits to me, and I shall promptly repay the Company any payments made to me and the Company's direct cost for any benefits provided to me pursuant to the Severance Program, without waiving the release granted herein. I acknowledge and agree that the remedy at law available to the Company for breach of any of my obligations under paragraphs 2, 3 and 4 herein would be inadequate and that damages flowing from such a breach may not readily be susceptible to measurement in monetary terms. Accordingly, I acknowledge, consent and agree that, in addition to any other rights or remedies that the Company may have at law or in equity, the Company shall be entitled to seek a temporary restraining order or a preliminary or permanent injunction, or both, without bond or other security, restraining me from breaching my obligations under paragraphs 2, 3 and 4 herein. Such injunctive relief in any court shall be available to the Company, in lieu of, or prior to or pending determination in, any arbitration proceeding.

I understand that by entering into this Agreement I shall be limiting the availability of certain remedies that I may have against the Company and limiting also my ability to pursue certain claims against the Company.

6. Severability Clause. If any provision or part of this Agreement is found to be invalid or unenforceable, only that particular provision or part, and not the entire Agreement, shall be inoperative.

7. GOVERNING LAW AND FORUM. I acknowledge that this agreement has been executed, in whole or in part, in Illinois. Accordingly, I agree that this Agreement and all matters or issues arising out of or relating to my employment with the Company shall be governed by the laws of the State of Illinois applicable to contracts entered into and performed entirely therein. Any action to enforce this Agreement shall be brought solely in the state or federal courts located in the Moline, Illinois.

I ACKNOWLEDGE THAT I HAVE READ THIS AGREEMENT AND THAT I FULLY KNOW, UNDERSTAND AND APPRECIATE ITS CONTENTS, AND THAT I HEREBY EXECUTE THE SAME AND MAKE THIS AGREEMENT AND THE COVENANTS AND RELEASE PROVIDED FOR HEREIN VOLUNTARILY AND OF MY OWN FREE WILL.

THE EXECUTIVE

____
[Insert name of Executive]

Dated: ________________________________

Exhibit 21

DEERE & COMPANY
AND CONSOLIDATED SUBSIDIARIES

SUBSIDIARIES OF THE REGISTRANT

As of November 3, 2019

Subsidiary companies of Deere & Company are listed below. Except where otherwise indicated, 100 percent of the voting securities of the companies named is owned directly or indirectly by Deere & Company.

Name of subsidiary	Organized under the laws of
Subsidiaries included in consolidated financial statements *	
Banco John Deere S.A.	Brazil
Chamberlain Holdings Limited	Australia
Deere Capital, Inc.	Nevada
Deere Credit, Inc.	Delaware
Deere Credit Services, Inc.	Delaware
Deere Receivables LLC	Nevada
Farm Plan Corporation	Delaware
FPC Receivables, Inc.	Nevada
Hamm AG	Germany
Industrias John Deere Argentina S.A.	Argentina
John Deere (China) Investment Co., Ltd.	China
John Deere (Jiamusi) Agricultural Machinery Co., Ltd.	China
John Deere (Ningbo) Agricultural Machinery Co., Ltd.	China
John Deere (Tianjin) International Trading Co., Ltd.	China
John Deere Agricultural Holdings, Inc.	Delaware
John Deere Asia (Singapore) Private Limited	Singapore
John Deere Bank S.A.	Luxembourg
John Deere Brasil Ltda.	Brazil
John Deere Canada ULC	Canada
John Deere Capital Corporation	Delaware
John Deere Cash Management	Luxembourg
John Deere Construction & Forestry Company	Delaware
John Deere Electronic Solutions, Inc.	North Dakota
John Deere Financial, f.s.b.	Federal
John Deere Financial Inc.	Canada
John Deere Financial Limited	Australia
John Deere Financial Mexico, S.A. de C.V. SOFOM, ENR	Mexico
John Deere Financial Services, Inc.	Delaware
John Deere Forestry Group LLC	Illinois
John Deere Funding Corporation	Nevada
John Deere GmbH & Co. KG	Germany
John Deere Iberica S.A.	Spain
John Deere India Private Limited	India
John Deere International GmbH	Switzerland
John Deere-Lanz Verwaltungs GmbH	Germany
John Deere Leasing Company	Delaware
John Deere Limited	Australia
John Deere Limited	United Kingdom

John Deere Polska Sp. z o.o.	Poland
John Deere Receivables, Inc.	Nevada
John Deere Rus. Limited Liability Company	Russia
John Deere S. de R.L. de C.V.	Mexico
John Deere S.A.S.	France
John Deere Shared Services, Inc.	Delaware
John Deere Thibodaux, Inc.	Louisiana
John Deere Walldorf GmbH & Co. KG	Germany
John Deere Warranty, Inc.	Vermont
Joseph Vögele Aktiengesellschaft	Germany
Motores John Deere S.A. de C.V.	Mexico
Nortrax, Inc.	Delaware
Waratah Forestry Equipment Canada Ltd.	Canada
Wirtgen GmbH	Germany
Wirtgen Road Technologies GmbH	Germany

---

* One hundred seventy-four consolidated subsidiaries and forty-five unconsolidated affiliates, whose names are omitted, considered in the aggregate as a single subsidiary, would not constitute a significant subsidiary.

Exhibit 23

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in Registration Statement Nos. 333-165069, 333-62669, 333-132013, 333-140980, 333-140981 and 333-202299 on Form S-8 and in Registration Statement No. 333-218760 on Form S-3 of our report dated December 19, 2019, relating to the consolidated financial statements of Deere & Company and subsidiaries ("Deere & Company"), and the effectiveness of Deere & Company's internal control over financial reporting, appearing in this Annual Report on Form 10-K of Deere & Company for the year ended November 3, 2019.

/s/ DELOITTE & TOUCHE LLP
Chicago, Illinois

December 19, 2019

Exhibit 31.1

CERTIFICATIONS

I, John C. May, certify that:

1. I have reviewed this annual report on Form 10-K of Deere & 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(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

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

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

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

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

5. The registrant's other certifying officer(s) 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: December 19, 2019

By: */s/ John C. May*
John C. May
Chief Executive Officer, President and Director
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATIONS

I, Ryan D. Campbell, certify that:

1. I have reviewed this annual report on Form 10-K of Deere & 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(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

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

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

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

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

5. The registrant's other certifying officer(s) 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: December 19, 2019

By: */s/ Ryan D. Campbell*
Ryan D. Campbell
Senior Vice President and Chief Financial Officer
(Principal Financial Officer and Principal Accounting Officer)

Exhibit 32

STATEMENT PURSUANT TO
18 U.S.C. SECTION 1350
AS REQUIRED BY
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of Deere & Company (the "Company") on Form 10-K for the period ending November 3, 2019, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned hereby certify that to the best of our knowledge:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

December 19, 2019	*/s/ John C. May* John C. May	Chief Executive Officer, President and Director (Principal Executive Officer)
December 19, 2019	*/s/ Ryan D. Campbell* Ryan D. Campbell	Senior Vice President and Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)

A signed original of this written statement required by Section 906 has been provided to Deere & Company and will be retained by Deere & Company and furnished to the Securities and Exchange Commission or its staff upon request.