Table of Contents

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 1, 2020
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.

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

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

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

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

The aggregate quoted market price of voting stock of registrant held by non-affiliates at May 1, 2020 was $43,155,250,076. At November 30, 2020, 313,361,302 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 24, 2021 are incorporated by reference into Part III of this Form 10-K.

TABLE OF CONTENTS

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, golf course equipment, utility vehicles, and commercial mowing equipment, along with a broad line of associated implements; integrated agricultural solutions and precision technologies; 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, roadbuilding, 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; and precision technologies.

The products and services produced by the segments above are marketed primarily through independent retail dealer networks and major retail outlets, and, as it relates to roadbuilding products, primarily through Company-owned sales and service subsidiaries.

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 26 – 27. 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

Agriculture and Turf. Industry sales of agricultural equipment in the U.S. and Canada are forecast to increase 5 to 10 percent driven by gains in larger models. Full year industry sales in Europe are forecast to be about the same as 2020 to 5 percent higher. In South America, industry sales of tractors and combines are forecast to be about 5 percent higher while Asian sales are expected to be slightly lower than 2020. Industry sales of turf and utility equipment in the U.S. and Canada are expected to be about the same to 5 percent higher for 2021.

Construction and Forestry. Full year 2021 North American construction equipment industry sales are expected to be down about 5 percent with sales of compact equipment up about 5 percent. Global forestry industry sales are forecast to be about the same to 5 percent higher in 2021.

Financial Services. Results for the full year 2021 are expected to benefit from favorable financing spreads, lower losses on operating lease residual values, and income earned on a higher average portfolio, partially offset by a higher provision for credit losses.

2020 Consolidated Results Compared with 2019

For fiscal 2020, worldwide net income attributable to the Company was $2.751 billion, or $8.69 per share, compared with $3.253 billion, or $10.15 per share, in 2019. Worldwide net sales and revenues decreased 9 percent to $35.540 billion in 2020, compared with $39.258 billion in 2019. Net income in 2020 was negatively affected by impairment charges and employee-separation costs of $458 million after-tax (see Notes 4 and 5). In 2019, the similar charges were $82 million. In addition, the provision for income taxes was adversely affected by non-deductible impairments and charges in 2020 and less favorably affected by discrete adjustments in 2020 than in 2019. Net sales of worldwide equipment operations decreased in fiscal 2020 to $31.272 billion, compared with $34.886 billion last year. Both Agriculture and Turf and Construction and Forestry sales decreased for 2020 due to lower shipment volumes and the unfavorable effects of currency translation, partially offset by price realization.

Worldwide equipment operations had an operating profit of $3.559 billion in fiscal 2020, compared with $3.721 billion in fiscal 2019. Operating profit for Agricultural and Turf increased largely due to price realization, reduced selling, administrative, and general expenses, lower research and development expenses, lower warranty expenses, and improved production costs. These items were partially offset by lower sales volumes / mix, employee-separation expenses, impairments, and the unfavorable effects of currency exchange. Construction and Forestry's operating profit declined mainly due to lower sales volume / mix, employee-separation expenses, impairments, and the unfavorable effects of currency exchange. The operating profit decrease was partially offset by price realization, lower research and development expenses, reduced selling, administrative and general expenses, and improved production costs.

Net income of the Company's equipment operations was $2.185 billion for fiscal 2020, compared with $2.714 billion in fiscal 2019. The equipment operations' provision for income taxes and net income were adversely affected by non-deductible impairments and charges in 2020 and less favorably affected by discrete adjustments to the provision for income taxes in 2020 than in 2019.

The financial services operations reported net income attributable to the Company of $566 million for fiscal 2020 compared with $539 million in fiscal 2019. The increase was mainly due to lower impairments and reduced losses on operating lease residual values and income earned on a higher average portfolio, partially offset by a higher provision for credit losses, employee-separation expenses, and unfavorable financing spreads.

The cost of sales to net sales ratio for 2020 was 75.7 percent, compared with 76.8 percent for 2019. The cost of sales to net sales ratio decreased compared to 2019 mainly due to price realization, improved production costs, and lower warranty expenses, partially offset by impairments, employee-separation expenses (see Note 5), and the unfavorable effects of foreign currency exchange.

Additional information on fiscal 2020 results is presented on pages 24 – 27.

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. This equipment includes large, medium and utility tractors and related attachments; tractor loaders; combines; cotton pickers; cotton strippers; sugarcane harvesters; related harvesting front-end equipment; sugarcane loaders; pull-behind scrapers; turf and utility equipment, including riding lawn equipment, commercial mowing equipment, golf course equipment, utility vehicles, 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 equipment, including self-propelled forage harvesters and attachments, balers and mowers; and tillage, seeding and application equipment, including sprayers, nutrient management and soil preparation machinery. John Deere also purchases certain products from other manufacturers for resale.

The segment consolidates all markets into four geographical customer focus areas to deliver measurable customer value. Beginning in fiscal 2021, the segment's operations are organized around the systems used by customers to produce output. These production systems include large grains (such as corn and soy), small grains (such as wheat, oats, and barley), sugarcane, and cotton.

The segment also provides integrated agricultural solutions and precision technologies across its portfolio of large equipment. John Deere has developed a unique, system-level approach designed to improve customer profitability, productivity, and sustainability. This approach includes precise global navigation satellite systems technology, advanced connectivity and telematics, on-board sensors and computing power, automation software, digital tools, and applications and analytics that together enable seamless integration of information, designed to improve customer decision making and execution of jobs. 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, and carbon fiber sprayer booms under the King Agro brand name. The segment also sells sugarcane harvester aftermarket parts under the Unimil 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. These customers are increasingly adopting and integrating precision agricultural technologies like guidance, telematics, and data management in their operations. 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 large 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 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 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 roadbuilding 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 advanced connectivity and telematics solutions designed to improve customer productivity, efficiency, and worksite management through access to fleet location, utilization, performance, and maintenance information.

The prevailing levels of residential, commercial and public construction, investment in infrastructure, and the condition of the forestry products industry influence retail sales of John Deere construction, earthmoving, roadbuilding, material handling, and forestry equipment. General economic conditions, the level of interest rates, the availability of credit and certain commodity prices, such as oil and gas and 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, roadbuilding, 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 Industrial 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. As technology becomes increasingly important to enable productivity in agriculture, the industry is attracting non-traditional competitors including more technology-focused companies and start-up ventures. The agricultural equipment industry continues to undergo significant changes and is becoming even more competitive through the emergence and expanding global capability of many competitors, particularly in high potential markets such as Brazil and India where John Deere seeks to increase market share. 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 Industrial N.V., Doosan Infracore Co., Ltd. and its subsidiary Doosan Bobcat Inc., Fayat Group, Komatsu Ltd., Kubota Tractor Corporation, Ponsse Plc, SANY Group Co., Ltd., 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 roadbuilding 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, roadbuilding, 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; earthmoving equipment factories in Brazil and China; engine, engine/power train, hydraulic, or electronic component factories in Argentina, China, France, India, and Mexico; roadbuilding 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 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 Factors–Intellectual Property Risks–*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 sales branch located in Grimsby, Ontario; and one roadbuilding equipment sales, service, and administration office located in Nashville, Tennessee. In addition, the equipment operations operate a centralized parts distribution warehouse in coordination with ten 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 1,981 dealer locations, most of which are independently owned and operated. Of these, approximately 1,544 sell agricultural equipment, while approximately 437 sell construction, earthmoving, material handling and/or forestry equipment. Nortrax owns some of the 437 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 358 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, Thailand, Ukraine, and the United Kingdom. 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 Kingdom. Some of these dealers are independently owned while John Deere owns others. Roadbuilding 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, Guinea, 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, cyber security, and weather-related events, including natural disasters. In fiscal 2020, some of John Deere's operations were temporarily impacted by certain material or component shortages due to the COVID-19 pandemic (COVID).

Backlog Orders

The dollar amount of backlog orders for the agriculture and turf segment believed to be firm was approximately $8.1 billion at November 1, 2020, compared with $5.5 billion at November 3, 2019. The agriculture and turf backlog is generally highest in the second and third quarters due to seasonal buying trends in these industries. The dollar amount of backlog orders for the construction and forestry segment believed to be firm was approximately $2.1 billion at November 1, 2020, compared with $1.7 billion at November 3, 2019. Backlog orders for the agricultural and turf and construction and forestry segments include all orders deemed to be firm as of the referenced date.

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 less than one year to seven years, 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 0 percent to 20 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. 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. The Company was in compliance with all of its obligations under this agreement as of November 1, 2020, and no payments were required under this agreement in fiscal 2020 or 2019.

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 24 – 27 and 31 – 32.

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 Company does not expect to incur material capital expenditures for environmental control facilities during fiscal 2021.

The European Union's Stage V Regulation, parts of which became effective in 2019 and 2020, applies to non-road diesel engines across various power categories for machines used in construction, agriculture, materials handling, industrial use and generator applications. Governmental agencies throughout the world are enacting similar laws to reduce off-road engine emissions, including India's Bharat Stage IV Regulation that will become effective in 2021. These standards continue the reduction of particulate and NOx 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.

GOVERNMENT REGULATIONS

John Deere is subject to a wide variety of local, state, and federal laws and regulations in the countries where it conducts business. Compliance with these laws and regulations often requires the dedication of time and effort of employees, as well as financial resources. In fiscal 2020, compliance with the regulations applicable to John Deere did not have a material effect on John Deere's capital expenditures, earnings, or competitive position. Additional information about the impact of government regulations on John Deere's business is included in Item 1A. "Risk Factors" under the headings Geopolitical Uncertainties; Data Security and Privacy; Environmental, Climate and Weather Risks; and Bribery and Corruption Risks.

HUMAN CAPITAL

John Deere's employees, its human capital, are guided by the company's higher purpose: We run so life can leap forward. The employees are further guided by the company's code of business conduct, helping them to uphold and strengthen the standards of honor and integrity that have defined John Deere since its founding. In their everyday work, employees embody John Deere's core values of integrity, quality, commitment and innovation, and in doing so, directly contribute to the company's long-standing character and reputation.

Employees take pride in their work and value learning from one another. While they hold many values in common, John Deere employees appreciate different perspectives and embrace the opportunity to work with those of diverse backgrounds. John Deere encourages employees to become involved in their communities and many employees do contribute their time and talents to community efforts. John Deere's employees contribute to the company's efforts to provide a safe and healthy workplace for all, especially through 2020.

At November 1, 2020, John Deere had approximately 69,600 employees, including approximately 27,500 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 8,740 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, 2020), and year elected to office				Principal occupation during last five years other than office of the Company currently held
John C. May	51	Chairman and Chief Executive Officer	2020	2019 Chief Executive Officer and President, 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	46	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
Marc A. Howze	57	Group President, Lifecycle Solutions & Chief Administrative Officer	2020	2016 – 2020 Senior Vice President and Chief Administrative Officer, 2012 – 2016 Vice President, Global Human Resources & Employee Communications
Mary K.W. Jones	52	Senior Vice President, General Counsel & Public Affairs	2019	2013 – 2019 Senior Vice President and General Counsel
Rajesh Kalathur	52	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	50	President, Worldwide Agriculture & Turf Division, Production & Precision Ag, Sales & Marketing Regions of the Americas and Australia	2020	2019 – 2020 President, Worldwide Agriculture & Turf Division, Americas and Australia, Global Harvesting and Turf Platforms, Agricultural Solutions, 2016 – 2019 President, John Deere Financial, 2013 – 2016 Senior Vice President, Intelligent Solutions Group
John H. Stone	50	President, Worldwide Construction & Forestry and Power Systems	2020	2016 – 2020 Senior Vice President, Intelligent Solutions Group, 2015 Vice President, Corporate Strategy
Markwart von Pentz	57	President, Worldwide Agriculture & Turf Division, Small Ag & Turf, Sales & Marketing Regions of Europe, CIS, Asia and Africa	2020	2019 – 2020 President, Worldwide Agriculture & Turf Division Tractor and Hay & Forage, Regions 1 & 2, and Advanced Engineering, 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 material 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 24, including the risks and uncertainties described in the Safe Harbor Statement on pages 27 – 29, and the Notes to Consolidated Financial Statements beginning on page 44. 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 the risks are organized by headings, and 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.

Risks Related to the COVID Pandemic

The COVID pandemic resulted in additional risks that could materially adversely affect John Deere's business, financial condition, results of operations and/or cash flows.

COVID was identified in late 2019 and has spread globally. The pandemic has resulted in governments and other authorities implementing numerous measures to try to contain the virus, such as travel bans and restrictions, quarantines, shelter in place orders and business closures. These measures have impacted and may further impact all or portions of the Company's workforce and operations and the operations of customers and suppliers. Countries around the world have been affected by the pandemic and have taken containment actions. Considerable uncertainty exists regarding such measures and potential future measures. Restrictions on access to the Company's manufacturing facilities or on the support operations or workforce, or similar limitations for suppliers and dealers, restrictions or disruptions of transportation, port closures, increased border controls or closures, and material and component shortages have limited and could continue to limit the Company's ability to meet customer demand, which could have a material adverse effect on the Company's financial condition, cash flows and results of operations. There is no certainty that measures taken by governmental authorities will be sufficient to mitigate the risks posed by the virus, and the Company's ability to perform critical functions could be harmed.

The COVID pandemic caused a global recession and there is no certainty about when a sustained economic recovery may occur. The COVID pandemic has also significantly increased economic and demand uncertainty and has led to disruption and volatility in demand for the Company's products and services, suppliers' ability to fill orders, and global capital markets. Economic uncertainties could continue to affect demand for the Company's products and services, the value of the equipment financed or leased, the demand for financing and the financial condition and credit risk of our dealers and customers.

Uncertainties related to the magnitude and duration of the COVID pandemic may significantly adversely affect our business and outlook. These uncertainties include: the duration and impact of the resurgence in COVID cases in any country, state, or region; prolonged reduction or closure of the Company's operations, or a delayed recovery in our operations; additional closures as mandated or otherwise made necessary by governmental authorities; disruptions in the supply chain and a prolonged delay in resumption of operations by one or more key suppliers, or the failure of any key suppliers; the Company's ability to meet commitments to our customers on a timely basis as a result of increased costs and supply challenges; the ability to receive goods on a timely basis and at anticipated costs; increased logistics costs; delays in the Company's strategic initiatives as a result of reduced spending on research and development; additional operating costs due to remote working arrangements, adherence to social distancing guidelines and other COVID-related challenges; increased risk of cyber attacks on network connections used in remote working arrangements; increased privacy-related risks due to processing health-related personal information; legal claims related to personal protective equipment designed, made, or provided by the Company or alleged exposure to COVID on Company premises; absence of employees due to illness; the impact of the pandemic on the Company's customers and dealers, and their delays in their plans to invest in new equipment; requests by the Company's customers or dealers for payment deferrals and contract modifications; the impact of disruptions in the global capital markets and/or declines in our financial performance, outlook or credit ratings, which could impact the Company's ability to obtain funding in the future; and the impact of the pandemic on demand for our products and services as discussed above. It is unclear when a sustained economic recovery could occur and what a recovery may look like. All of these factors could materially and adversely affect our business, liquidity, results of operations and financial position.

The ultimate magnitude of COVID effects, including the extent of its impact on the Company's financial and operational results, which could be material, will be determined by the length of time that the pandemic continues, its effect on the demand for the Company's products and services and the supply chain, as well as the effect of governmental regulations imposed in response to the pandemic. We cannot at this time predict the impact of the COVID pandemic, but it could have a material adverse effect on our business, financial condition, results of operations and/or cash flows.

Geopolitical Uncertainties

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, or those of our customers, 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, 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, market access and 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, embargoes, sanctions, and export controls imposed by the U.S. and other governments restricting or prohibiting transactions with certain persons or entities, including financial institutions, to certain countries or regions, or involving certain products, limit the sales of Deere products and expose John Deere to potential criminal and civil sanctions. Embargoes, sanctions, and export control laws are changing rapidly for certain geographies, including with respect to Russia, China, Venezuela, and Nicaragua. In particular, changing U.S. export controls and sanctions on China, as well as other restrictions affecting transactions involving China and Chinese parties, could affect John Deere's ability to collect receivables, provide aftermarket and warranty support for John Deere equipment, sell products, and otherwise impact Deere's reputation and business. 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 harm John Deere's reputation and business, and may subject John Deere to civil and criminal sanctions, any of which could have a material adverse effect on John Deere's results of operations and financial condition.

Greater political, economic and social uncertainty and the evolving globalization of businesses could significantly change the dynamics of John Deere's competition, customer base and product offerings and impact John Deere's growth opportunities globally.

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. 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.

Uncertain Economic Conditions

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. As discussed under Risks Related to the COVID Pandemic–*The COVID pandemic resulted in additional risks that could materially adversely affect John Deere's business, financial condition, results of operations and/or cash flows*, the COVID pandemic caused a global recession and significantly increased economic and demand uncertainty. Sustained negative economic conditions and outlook affect housing starts, energy demand, 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 pervasive U.S. fiscal 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 following the 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.

Financial Risks

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.

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, negative economic conditions in the financial industry could materially impact John Deere's operations and financial results.

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.

Because 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 access to 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.

Changes affecting the availability of the London Interbank Offered Rate ("LIBOR") may have consequences for John Deere that may not yet be reasonably 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, the effects of any phase out of LIBOR or any adoption of alternative benchmark rates are still unclear. Any new benchmark rate will likely not replicate LIBOR exactly, which could impact our contracts that 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.

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.

Market Conditions

John Deere's ability to adapt in highly competitive markets could affect its business, results of operations and financial condition.

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 ability to understand its customers' specific preferences and requirements, and to develop, manufacture and market products that meet customer demand, could significantly affect its business results.

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 Argentina, Brazil, and India. 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.

Changing worldwide demand for food and different forms of bio-energy could affect 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-energy 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.

Manufacturing and Operations

Changes in the availability and price of certain raw materials, components, and whole goods could result in significant disruptions to the supply chain, production disruptions, and 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. Significant disruptions to the supply chain resulting from shortages of raw materials, components, and whole goods can adversely affect John Deere's ability to meet commitments to customers. For example, during fiscal 2020, some of the Company's operations were temporarily impacted by certain material or component shortages due to COVID. 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, cyber attacks, delivery issues or disruptions due to weather-related, natural disaster, or pandemic events could affect John Deere's operations and profitability.

Data Security and Privacy

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 and any inability or perceived inability of the Company to address these requirements could adversely affect our business.

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 personal information 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 and 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 personal information and other data obtained from their residents or by businesses operating within their jurisdictions. The European Union General Data Protection Regulation and the California Consumer Privacy Act impose stringent data protection requirements and provide significant penalties for noncompliance. New privacy laws will continue to come into effect around the world in 2021. 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.

Intellectual Property Risks

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 could have a material adverse effect on the Company. Infringement of the intellectual property rights of others by Deere could 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.

Human Capital Risks

John Deere's ability to attract, develop, engage, and retain qualified employees could impact its ability to execute its strategy.

John Deere's continued success depends, in part, on its ability to identify and attract qualified candidates with the requisite education, background and experience. Further, John Deere's success depends, in part, on its ability to develop, engage, and retain qualified employees. Failure to attract, develop, engage and retain qualified employees, whether as a result of an insufficient number of qualified applicants, difficulty in recruiting new employees, or inadequate resources to train, integrate and retain qualified employees, 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 employees, particularly when departures involve groups of employees, such as the voluntary and involuntary separation programs in fiscal 2020. Employee-separation programs may adversely affect the Company through decreased employee morale, the loss of knowledge of departing employees, and the devotion of resources to reorganizing and reassigning job roles and responsibilities. The Company's ability to meet its business objectives may be affected by the departure of employees, and the expected cost savings of the employee-separation programs may not be achieved due to delays or other factors. Further, the departure of groups of employees could increase the risk to the Company of claims or litigation from former employees.

Disputes with labor unions could adversely affect John Deere's ability to operate its facilities as well as its financial results.

Many of John Deere's production and maintenance employees are represented by labor unions under various collective bargaining agreements with different expiration dates. Disruptions to John Deere's manufacturing and parts-distribution facilities, through various forms of labor disputes, could adversely affect the Company. In 2021, John Deere will be renegotiating several labor agreements. Any strike, work stoppage, or other dispute with a labor union could materially adversely affect the Company's business, results of operations, and financial condition.

Environmental, Climate, and Weather Risks

Unfavorable weather conditions or natural calamities that reduce agricultural production and demand for agriculture and turf equipment could directly and indirectly affect John Deere's business.

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.

Increasingly rigorous environmental, health and safety laws and regulations of federal, state and local authorities in the U.S. and various international regulatory authorities apply to John Deere's operations, suppliers and customers, and enforcement actions or civil litigation related to those requirements could adversely affect John Deere's business results.

Enforcement actions arising from violations of environmental, health and safety laws or regulations can lead to investigation and legal 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. Further, civil litigation on these subjects continues to increase, primarily in the U.S. There can be no assurance that violations of such laws and/or regulations, 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, or other civil claims in which John Deere becomes a party, 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.

New or more stringent greenhouse gas emission standards designed to address climate change could increase costs to John Deere and the physical effects attributed to climate change could further impact 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 new international, national, regional or local legislative or regulatory responses. 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 extreme weather events and 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.

Bribery and Corruption Risks

John Deere is subject to extensive anti-corruption laws and regulations, the violation of which could adversely affect John Deere.

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.

Strategic Performance Risks

John Deere may not realize all of the anticipated benefits of our business strategies, including 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.

In addition, the Company may not realize all anticipated benefits of its reorganization and implementation of its operating model in the anticipated timeframe or at all. The factors that could affect these benefits include the adoption of new job types within the Company, changing job responsibilities of employees, the number of layers of management, ability of employees to embrace change, anxiety within the workforce, and temporary inefficiencies. Further, the ability of the Company to execute its business strategies in production systems, precision technologies, and aftermarket support could affect the Company's results of operations and financial condition.

Precision Technology Risks

If John Deere is unable to deliver precision technology and agricultural solutions to its customers, it could affect its business, results of operations, and financial condition.

John Deere's approach to precision technology involves hardware and software, guidance, connectivity and digital solutions, automation and machine intelligence, and autonomy. To create and maintain a competitive differentiation through precision technology solutions, the Company needs to successfully develop and introduce new precision technology solutions that improve profitability and sustainability for customers through the production systems. John Deere may make significant investments in: research and development; acquisitions or other business ventures; data security for precision technology solutions; and employee training. These investments may not produce solutions that provide the desired result for customers' profitability or sustainability outcomes. In addition, the Company may depend on third parties to supply components, software, and services in the precision technology solutions. The dealer channel's ability to support and service precision technology solutions may affect customers' acceptance and adoption rates of these products. Further, if John Deere is not able to deliver the precision technology solutions with differentiated features and functionality, customers may not adopt technology solutions, which could have a material adverse effect on the Company's reputation and business.

The reallocation of radio frequency (RF) spectrums could disrupt or degrade the reliability of John Deere's high precision augmented Global Positioning System (GPS) or other RF technology, which could impair John Deere's ability to develop and market GPS- and RF-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 government 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 12 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 or leases 12 facilities for the manufacture and distribution of other brands of replacement parts.

The Company owns or leases 40 administrative offices and research facilities globally and many other smaller, miscellaneous facilities globally.

Overall, John Deere owns approximately 67.0 million square feet of facilities and leases approximately 10.2 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 $300,000.

The following matter is disclosed solely pursuant to that requirement: on October 3, 2018, the Provincia Santa Fe Ministerio de Medio Ambiente of Argentina issued a Notice of Violation to Industrias John Deere Argentina in connection with alleged groundwater contamination at the site; the Company worked with the appropriate authorities to implement corrective actions to remediate the site. On December 16, 2019, the Provincia Santa Fe Ministerio de Medio Ambiente issued a Notice of Fine. The current amount of the fine is approximately $354,000. The Company has filed an appeal with the Provincia Santa Fe Ministerio de Medio Ambiente. 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 29 and 30 to the Consolidated Financial Statements.

(b) Not applicable.

(c) The Company's purchases of its common stock during the fourth quarter of 2020 were as follows:

ISSUER PURCHASES OF EQUITY SECURITIES

Period	**Total Number of Shares Purchased (thousands)**	**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) (millions)**
Aug 3 to Aug 30				39.1
Aug 31 to Sept 27	925	$ 216.22	925	38.2
Sept 28 to Nov 1	1,231	232.72	1,231	36.9
Total	2,156		2,156	

(1) The Company announced a share repurchase plan in December 2013 to purchase up to $8,000 million of shares of the Company's common stock. In December 2019, the Company announced an additional share repurchase plan authorizing the purchase of up to an additional $8,000 million of shares of the Company's common stock. The maximum number of shares that may yet be purchased under these two plans was based on the end of the fourth quarter closing share price of $225.91 per share. At the end of the fourth quarter of 2020, $8,339 million of common stock remains to be purchased under this plan.

ITEM 6. SELECTED FINANCIAL DATA.

Financial Summary

(Millions of dollars except per share amounts)	**November 1 2020**	**November 3 2019**	**October 28 2018**	**October 29 2017**	**October 30 2016**
For the Years Ended:					
Total net sales and revenues	$ 35,540	$ 39,258	$ 37,358	$ 29,738	$ 26,644
Net income attributable to Deere & Company	$ 2,751	$ 3,253	$ 2,368	$ 2,159	$ 1,524
Net income per share — basic	$ 8.77	$ 10.28	$ 7.34	$ 6.76	$ 4.83
Net income per share — diluted	$ 8.69	$ 10.15	$ 7.24	$ 6.68	$ 4.81
Dividends declared per share	$ 3.04	$ 3.04	$ 2.58	$ 2.40	$ 2.40
At Year End:					
Total assets	$ 75,091	$ 73,011	$ 70,108	$ 65,786	$ 57,918
Long-term borrowings	$ 32,734	$ 30,229	$ 27,237	$ 25,891	$ 23,703

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 24 – 38.

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 24, under "Financial Instrument Market Risk Information" on page 38 and in Note 27 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 39 – 81.

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 1, 2020, 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 1, 2020, 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 1, 2020, 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 24, 2021 (proxy statement), under the caption "Item 1 — Election of Directors" is incorporated herein by reference. The information regarding reports required by Item 405(a) of Regulation S-K in the proxy statement under the caption "Delinquent Section 16(a) Reports" 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.

(2) *Exhibits*

See the "Index to Exhibits" on pages 86 – 89 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 1, 2020, NOVEMBER 3, 2019, AND OCTOBER 28, 2018

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, roadbuilding, 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 equipment operations represents the enterprise without financial services. The equipment operations includes the company's agriculture and turf operations, construction and forestry operations, and other corporate assets, liabilities, revenues and expenses not reflected within 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 decreased 6 percent in 2020. Industry agricultural machinery sales in the U.S. and Canada for 2021 are forecast to increase 5 to 10 percent, compared to 2020. Industry sales in Europe are forecast to be about the same to 5 percent higher, and South American industry sales of tractors and combines are forecast to be about 5 percent higher in 2021. Asian sales are also forecast to be slightly lower. Industry sales of turf and utility equipment in the U.S. and Canada are expected to be about the same to 5 percent higher. The company's construction and forestry sales decreased 20 percent in 2020. On an industry basis, North American construction equipment sales are expected to be down about 5 percent with sales of compact equipment up about 5 percent. Global forestry industry sales are expected to be about the same to about 5 percent higher than 2020 sales.

Items of concern include uncertainty of the effectiveness of governmental and private sector actions to address COVID, trade agreements, the uncertainty of the results of monetary and fiscal policies, the impact of elevated levels of sovereign and state debt, capital market disruptions, changes in demand and pricing for new and 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 future financial effects of COVID are unknown due to many factors. As a result, predicting the company's forecasted financial performance is difficult and subject to many assumptions.

In the face of the ongoing challenges associated with managing the global pandemic, the company was able to complete a successful year and is positioned to continue providing differentiated solutions for customers. The company expects to benefit from improving conditions in the farm economy and stabilization in construction and forestry markets. In addition, the manufacturing location and product reviews that started in 2020 as part of the company's transition to an updated strategy will continue in 2021.

COVID Effects and Actions

During 2020, the effects of COVID and the related actions of governments and other authorities to contain COVID, have affected the company's operations, results, cash flows, and forecasts.

The U.S. government and many other governments in countries where the company operates have designated the company an essential critical infrastructure business. This designation allows the company to operate in support of its customers to the extent possible.

The company's first priority in addressing the effects of COVID continues to be the health, safety, and overall welfare of its employees. The company effectively activated previously established business continuity plans and proactively implemented health and safety measures at its operations around the world.

The economic effects of COVID have reduced customer demand for some of the company's products and services, particularly construction and forestry equipment (see Note 6), which resulted in lower shipment volumes. During most of 2020, all of the company's factories have operated, some at reduced capacity due to component shortages or lower demand. During the year, the company broadened the supply base and increased the inventory level of certain essential materials and components to address potential supplier issues. The measures taken beginning in the second quarter to aggressively decrease operational and selling, administrative and general expenses have been effective. Additional information is presented in "Business Segment and Geographic Area Results."

In addition, the company's actions taken in the second quarter to increase borrowings, along with significant cash generated from operations, provided a strong financial position (see Note 20 for additional information on long-term borrowings). Cash and cash equivalents were $7,066 million at November 1, 2020 and the company's revolving credit facilities were undrawn. The company's share repurchase programs were suspended in the second quarter and all of the third quarter. These programs were reinstated in the fourth quarter with $487 million of shares repurchased. Additional information is presented in "Capital Resources and Liquidity."

The company continued to work closely with distribution channel and equipment user customers during 2020, and, as necessary, provided short-term payment relief on obligations owed to the company. The payment relief provided on balances of trade receivables, financing receivables, and operating lease payments outstanding at November 1, 2020 was about 2 percent, 4 percent, and 4 percent of the portfolio balances, respectively. Additional information is presented in Notes 13 and 25.

2020 COMPARED WITH 2019

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:

	2020	2019
Net income attributable to Deere & Company	$ 2,751	$ 3,253
Diluted earnings per share	8.69	10.15
Basic earnings per share	8.77	10.28

Net income in 2020 was negatively affected by impairment charges and employee-separation costs of $458 million after-tax (see Notes 4 and 5). Annual savings from the separation programs are estimated to be approximately $250 million, of which $85 million was realized in 2020. In 2019, the similar charges were $82 million. In addition, the provision for income taxes was adversely affected by non-deductible impairments and charges in 2020 and less favorably affected by discrete adjustments in 2020 than in 2019.

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:

	2020	2019	% Change
Worldwide net sales and revenues	$ 35,540	$ 39,258	-9
Worldwide equipment operations net sales	31,272	34,886	-10
Price realization			+3
Currency translation (unfavorable)			-2
U.S. and Canada equipment operations net sales	17,954	20,264	-11
Price realization			+3
Outside U.S. and Canada equipment operations net sales	13,318	14,622	-9
Price realization			+4
Currency translation (unfavorable)			-4

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

	2020	2019	% Change
Equipment operations operating profit	$ 3,559	$ 3,721	-4
Equipment operations net income*	2,185	2,714	-19
Financial services net income	566	539	+5

*Includes equity income (loss) from unconsolidated affiliates.

The discussion on net sales and operating profit is included in the Business Segment and Geographic Area Results below. The equipment operations' provision for income taxes and net income were adversely affected by non-deductible impairments and charges in 2020 and was less favorably affected by discrete adjustments to the provision for income taxes in 2020 than in 2019.

Financial services segment net income increased compared to 2019 mainly due to lower impairments and reduced losses on operating lease residual values and income earned on a higher average portfolio, partially offset by a higher provision for credit losses, employee-separation expenses, and unfavorable financing spreads. 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:

	2020	2019	% Change
Cost of sales to net sales	75.7%	76.8%	
Finance and interest income	$ 3,450	$ 3,493	-1
Other income	818	879	-7
Research and development expenses	1,644	1,783	-8
Selling, administrative and general expenses	3,477	3,551	-2
Interest expense	1,247	1,466	-15
Other operating expenses	1,612	1,578	+2

The cost of sales to net sales ratio decreased compared to 2019 mainly due to price realization, improved production costs, and lower warranty expenses, partially offset by impairments, employee-separation expenses (see Note 5), and the unfavorable effects of foreign currency exchange. Finance and interest income decreased slightly in 2020 due to lower average interest rates, largely offset by a higher average credit portfolio. Other income declined primarily due to lower service income compared to 2019. Research and development expenses decreased compared to 2019 as a result of targeted project reductions related to COVID spending adjustments. Selling, administrative and general expenses decreased primarily due to spending reductions and the favorable effects of currency translation, mostly offset by employee-separation expenses (see Note 5) and an increase in the provision for credit losses. Interest expense decreased in 2020 due to lower average borrowing rates, partially offset by higher average borrowings. Other operating expenses increased compared to 2019 largely due to increased depreciation of equipment on operating leases, employee-separation expenses (see Note 5), and a loss on sale of a business (see Note 4). These items were mostly offset by lower impairments and reduced losses on operating lease residual values and reduced service related expenses.

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 2020 were $341 million, compared with $235 million in 2019. The long-term expected return on plan assets, which is reflected in these costs, was an expected gain of 6.4 percent in 2020 and 6.5 percent in 2019, or $869 million and $838 million, respectively. The actual return was a gain of $1,177 million in 2020 and $2,163 million in 2019. In 2021, the expected return will be approximately 5.9 percent. The company's costs under these plans in 2021 are expected to decrease approximately $150 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 $951 million in 2020 and $518 million in 2019, which included voluntary contributions and direct benefit payments. The voluntary contributions to plan assets were $700 million in 2020 to a U.S. OPEB plan, and $306 million in 2019, which included $300 million to the same U.S. OPEB plan. Total company contributions in 2021 are expected to be approximately $950 million. The anticipated contributions include a voluntary U.S. OPEB plan contribution of $700 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 2021 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

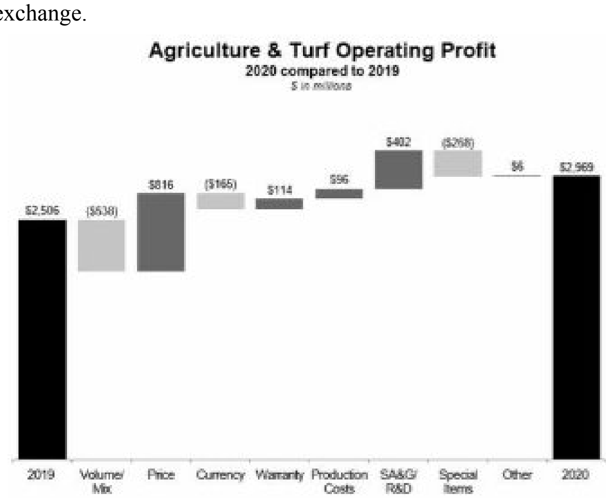
The following discussion relates to operating results by reportable segment and geographic area. Operating profit is income before corporate expenses, certain external interest expense, certain foreign exchange gains or losses, and income taxes. However, the financial services segment operating profit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

	2020	2019	% Change
Net sales	$ 22,325	$ 23,666	-6
Operating profit	2,969	2,506	+18
Operating margin	13.3%	10.6%	

Segment sales decreased due to lower shipment volumes and the unfavorable effects of currency translation, partially offset by price realization. Operating profit increased largely due to price realization, reduced selling, administrative and general expenses, lower research and development expenses, lower warranty expenses, and improved production costs. These items were partially offset by lower sales volumes / mix, employee-separation expenses, impairments, and the unfavorable effects of currency exchange.

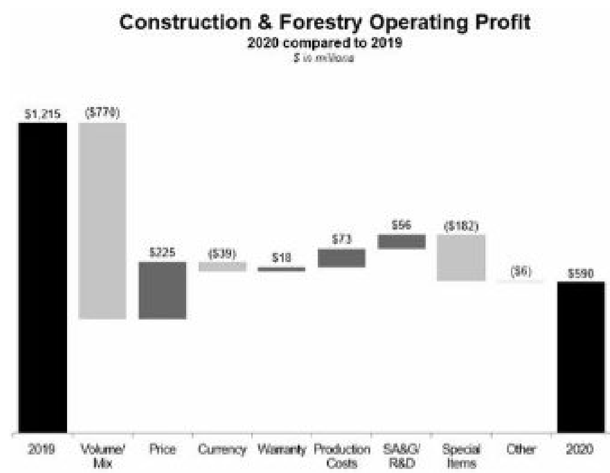


Worldwide Construction and Forestry Operations

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

	2020	2019	% Change
Net sales	$ 8,947	$ 11,220	-20
Operating profit	590	1,215	-51
Operating margin	6.6%	10.8%	

Segment sales decreased in 2020 primarily due to lower shipment volumes and the unfavorable effect of currency translation, partially offset by price realization. Operating profit declined mainly due to lower sales volume / mix, employee-separation expenses, impairments, and the unfavorable effects of currency exchange. The operating profit decrease was partially offset by price realization, lower research and development expenses, reduced selling, administrative and general expenses, and improved production costs.



Worldwide Financial Services Operations

The financial services segment revenue, interest expense, and operating profit in millions of dollars follow:

	2020	2019	% Change
Revenue (including intercompany revenue)	$ 3,867	$ 3,969	-3
Interest expense	942	1,234	-24
Operating profit	746	694	+7

Operating profit in 2020 increased mainly due to lower impairments and reduced losses on operating lease residual values and income earned on a higher average portfolio, partially offset by a higher provision for credit losses, employee-separation expenses, and unfavorable financing spreads. The average balance of receivables and leases financed was 2 percent higher in 2020, compared with 2019. Interest expense decreased in 2020 as a result of lower average borrowing rates, partially offset by 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:

	2020	2019	% Change
Net sales	$ 17,954	$ 20,264	-11
Operating profit	2,194	2,335	-6
Operating margin	12.2%	11.5%	

The operating profit decrease was due primarily to lower sales volume / mix and employee-separation expenses, partially offset by price realization, lower research and development costs, reduced selling, general and administrative expenses, improved production costs, and lower warranty expenses. Net sales decreased in 2020 due primarily to lower sales volumes, partially offset by price realization. The physical volume of sales decreased 14 percent compared with 2019.

Equipment Operations outside U.S. and Canada

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

	2020	2019	% Change
Net sales	$ 13,318	$ 14,622	-9
Operating profit	1,365	1,386	-2
Operating margin	10.2%	9.5%	

Operating profit decreased primarily due to lower sales volume / mix, impairments, employee-separation expenses, and the unfavorable effects of currency exchange, largely offset by price realization, reduced selling, general and administrative expenses, lower research and development costs, improved production costs, and lower warranty expenses. The net sales decrease in 2020 compared to 2019 was primarily the result of lower sales volume and the unfavorable effects of currency translation, partially offset by price realization. The physical volume of sales decreased 9 percent compared with 2019.

MARKET CONDITIONS

Agriculture and Turf. Industry sales of agricultural equipment in the U.S. and Canada are forecast to increase 5 to 10 percent driven by gains in larger models. Full year industry sales in Europe are forecast to be about the same as 2020 to 5 percent higher. In South America, industry sales of tractors and combines are forecast to be about 5 percent higher while Asian sales are expected to be slightly lower than 2020. Industry sales of turf and utility equipment in the U.S. and Canada are expected to be about the same to 5 percent higher for 2021.

Construction and Forestry. Full year 2021 North American construction equipment industry sales are expected to be down about 5 percent with sales of compact equipment up about 5 percent. Global forestry industry sales are forecast to be about the same to 5 percent higher in 2021.

Financial Services. Results for the full year 2021 are expected to benefit from favorable financing spreads, lower losses on operating lease residual values, and income earned on a higher average portfolio, partially offset by a higher provision for credit losses.

SAFE HARBOR STATEMENT

Safe Harbor Statement under the Private Securities Litigation Reform Act of 1995: Statements under "Overview," "Market Conditions," 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, 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 and the impact of the COVID pandemic on the agricultural industry including demand for, and production and exports of, agricultural products, and commodity prices.

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. Many of these factors have been and may continue to be impacted by global economic effects, including the downturn resulting from the COVID pandemic and responses to the pandemic taken by governments and other authorities.

Consumer spending patterns, real estate and housing prices, the number of housing starts, interest rates, commodity prices such as oil and gas, the levels of public and non-residential construction, and investment in infrastructure 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. Many of these factors affecting the outlook for the company's construction and forestry equipment have been and may continue to be impacted by global economic effects, including the downturn resulting from the COVID pandemic and responses to the pandemic taken by governments and other authorities.

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 (including the COVID pandemic) and government and industry responses to epidemics such as travel restrictions and extended shut down of businesses.

Uncertainties related to the magnitude and duration of the COVID pandemic may significantly adversely affect the company's business and outlook. These uncertainties include: the duration and impact of the resurgence in COVID cases in any country, state, or region; prolonged reduction or closure of the company's operations, or a delayed recovery in our operations; additional closures as mandated or otherwise made necessary by governmental authorities; disruptions in the supply chain and a prolonged delay in resumption of operations by one or more key suppliers, or the failure of any key suppliers; the company's ability to meet commitments to customers on a timely basis as a result of increased costs and supply challenges; the ability to receive goods on a timely basis and at anticipated costs; increased logistics costs; delays in the company's strategic initiatives as a result of reduced spending on research and development; additional operating costs due to remote working arrangements, adherence to social distancing guidelines and other COVID-related challenges; increased risk of cyber attacks on network connections used in remote working arrangements; increased privacy-related risks due to processing health-related personal information; legal claims related to personal protective equipment designed, made, or provided by the company or alleged exposure to COVID on company premises; absence of employees due to illness; the impact of the pandemic on the company's customers and dealers, and their delays in their plans to invest in new equipment; requests by the company's customers or dealers for payment deferrals and contract modifications; the impact of disruptions in the global capital markets and/or continued declines in the company's financial performance, outlook or credit ratings, which could impact the company's ability to obtain funding in the future; and the impact of the pandemic on demand for our products and services as discussed above. It is unclear when a sustained economic recovery could occur and what a recovery may look like. All of these factors could materially and adversely affect our business, liquidity, results of operations and financial position.

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 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) uncertainty regarding any new or modified trade arrangements between the United Kingdom and the European Union and/or other countries, (ii) the risk that one or more other European Union countries could come under increasing pressure to leave the European Union, or (iii) 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; governmental programs, policies, and tariffs for the benefit of certain industries or sectors; sanctions in particular jurisdictions; 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; changes to and compliance with economic sanctions and export controls laws and 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 customers, dealers, suppliers or the company to comply with laws, regulations and company policy pertaining to employment, human rights, health, safety, the environment, sanctions, export controls, 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, including as a result of the COVID pandemic, 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 forward-looking statements are 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 forward-looking statements, 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 (including, but not limited to, the factors discussed in Item 1A. Risk Factors of this annual report on Form 10-K and subsequent quarterly reports on Form 10-Q).

2019 COMPARED WITH 2018

The comparison of the 2019 results with 2018 can be found under the heading "2019 Compared With 2018" in the "Management's Discussion and Analysis" section of the company's 2019 Form 10-K, which comparison is incorporated by reference herein.

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 2020 were $7,483 million. This resulted primarily from net income adjusted for non-cash provisions, a decrease in receivables related to sales, and a decrease in inventories, which were partially offset by a change in net retirement benefits (see Note 8). Cash outflows from investing activities were $3,319 million in 2020, 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 $2,637 million, purchases of property and equipment of $820 million, acquisition of businesses, net of cash acquired, of $66 million (see Note 4), and purchases of marketable securities exceeding proceeds from maturities and sales by $37 million, partially offset by a change in collateral on derivatives – net of $268 million. Cash outflows from financing activities were $980 million in 2020, due primarily to dividends paid of $956 million and repurchases of common stock of $750 million, partially offset by an increase in borrowings of $528 million and proceeds from the issuance of common stock (resulting from the exercise of stock options) of $331 million. Cash, cash equivalents, and restricted cash increased $3,216 million during 2020. The increase in cash was primarily to provide added liquidity due to the financial uncertainty created by COVID.

Over the last three years, operating activities have provided an aggregate of $12,717 million in cash. Cash inflows were also provided by increases in borrowings of $5,687 million, proceeds from issuance of common stock (resulting from the exercise of stock options) of $726 million, a change in collateral on derivatives

– net of $268 million, and proceeds from sales of businesses and unconsolidated affiliates of $249 million. The aggregate amount of these cash inflows 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 $7,480 million, acquire businesses of $5,311 million, repurchase common stock of $2,961 million, purchase property and equipment of $2,836 million, and pay dividends of $2,705 million. Cash, cash equivalents, and restricted cash decreased $2,295 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 1, 2020 and November 3, 2019 was $1,238 million and $2,698 million, respectively, while the total cash and cash equivalents and marketable securities position was $7,707 million and $4,438 million, respectively. The amount of the total cash and cash equivalents and marketable securities held by foreign subsidiaries was $5,010 million and $2,731 million at November 1, 2020 and November 3, 2019, 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 $8,413 million at November 1, 2020, $6,801 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 1, 2020 was a 364-day credit facility agreement of $3,000 million, expiring in fiscal April 2021. In addition, total credit lines included long-term credit facility agreements of $2,500 million, expiring in fiscal April 2024, and $2,500 million, expiring in fiscal April 2025. 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 1, 2020 was $12,892 million. Alternatively under this provision, the equipment operations had the capacity to incur additional debt of $23,942 million at November 1, 2020. 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 decreased by $1,059 million in 2020 due primarily to lower shipment volumes. The ratio of trade accounts and notes receivable at November 1, 2020 and November 3, 2019 to fiscal year net sales was 13 percent in 2020 and 15 percent in 2019. Total worldwide agriculture and turf receivables decreased $343 million and construction and forestry receivables decreased $716 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 both November 1, 2020 and November 3, 2019.

Deere & Company's stockholders' equity was $12,937 million at November 1, 2020, compared with $11,413 million at November 3, 2019. The increase of $1,524 million resulted from net income attributable to Deere & Company of $2,751 million, an increase in common stock of $253 million, and a change in the cumulative translation adjustment of $55 million, which was partially offset by dividends declared of $955 million and an increase in treasury stock of $591 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 2020, including intercompany cash flows, was $4,760 million due primarily to net income adjusted for non-cash provisions, a decrease in inventories, and a decrease in trade, notes and financing receivables related to sales, partially offset by a change in net retirement benefits (see Note 8) and a decrease in accounts payable and accrued expenses.

Over the last three years, these operating activities, including intercompany cash flows, have provided an aggregate of $11,241 million in cash.

Trade receivables held by the equipment operations decreased by $469 million during 2020. The equipment operations sell a significant portion of their trade receivables to financial services (see previous consolidated discussion).

Inventories decreased by $976 million in 2020 due primarily to a planned reduction based on the uncertainty related to COVID and other macroeconomic issues. A majority 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 15), which approximates current cost, to fiscal year cost of sales were 28 percent and 29 percent at November 1, 2020 and November 3, 2019, respectively.

Total interest-bearing debt, excluding finance lease liabilities, of the equipment operations was $10,382 million at the end of 2020, compared with $6,446 million at the end of 2019 and $6,223 million at the end of 2018. The ratio of total debt to total capital (total interest-bearing debt and Deere & Company's stockholders' equity) at the end of 2020, 2019, and 2018 was 45 percent, 36 percent, and 36 percent, respectively.

In 2020, the equipment operations issued three tranches of notes in the U.S. with aggregate principal totaling $2,250 million that are due from 2025 to 2050. The equipment operations also issued Euro notes with aggregate principal totaling €2,000 million (approximately $2,170 million based on the exchange rate at the issue date) that are due from 2024 to 2032 (see Note 20). In 2020, the equipment operations issued commercial paper in the U.S. with aggregate principal totaling $466 million, of which $448 million had an original term greater than 90 days. This commercial paper was repaid in 2020 and is presented in "Increase (decrease) in total short-term borrowings" in the statement of consolidated cash flows.

Property and equipment cash expenditures for the equipment operations in 2020 were $816 million, compared with $1,118 million in 2019. Capital expenditures in 2021 are estimated to be $900 million.

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 activities was used for investing and financing activities. Cash flows from the financial services' operating activities, including intercompany cash flows, were $1,976 million in 2020. Cash used by investing activities totaled $1,216 million in 2020 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 $3,414 million, and purchases of marketable securities exceeding proceeds from maturities and sales by $33 million. Partially offsetting the use of cash was a decrease in trade receivables and wholesale notes of $1,999 million and a change in collateral on derivatives – net of $274 million. Cash used for financing activities totaled $460 million in 2020, resulting primarily from a decrease in external borrowings of $3,274 million and dividends paid to Deere & Company of $386 million, partially offset by an increase in borrowings from Deere & Company of $3,207 million. Cash, cash equivalents, and restricted cash increased $256 million.

Over the last three years, the operating activities, including intercompany cash flows, have provided $6,036 million in cash. In addition, an increase in total borrowings of $5,916 million and a change in collateral on derivatives – net of $274 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 $10,615 million, pay dividends to Deere & Company of $1,277 million, purchase $161 million of marketable securities in excess of maturities and sales, and fund an increase in trade and wholesale receivables of $158 million. Cash, cash equivalents, and restricted cash decreased $277 million over the three-year period.

Receivables and equipment on operating leases decreased by $332 million in 2020, compared with 2019. Total acquisition volumes of receivables (excluding trade and wholesale) and cost of equipment on operating leases increased 2 percent in 2020, compared with 2019. The volume of retail notes increased approximately 9 percent. The volume of revolving charge accounts remained about the same. The volumes of operating leases and financing leases decreased 18 percent and 5 percent, respectively. During 2020, the wholesale notes and trade receivables portfolios decreased 25 percent and 17 percent, respectively.

Total external interest-bearing debt of the financial services operations was $35,556 million at the end of 2020, compared with $38,888 million at the end of 2019 and $36,033 million at the end of 2018. 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 7.8 to 1 at the end of 2020, 8.0 to 1 at the end of 2019, and 7.5 to 1 at the end of 2018.

The Capital Corporation has a revolving credit agreement to utilize bank conduit facilities to securitize retail notes (see Note 14). At November 1, 2020, 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 2020 with a capacity of $2,000 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 1, 2020, $1,802 million of short-term securitization borrowings was outstanding under the agreement.

During 2020, the financial services operations issued $3,274 million and retired $2,895 million of retail note securitization borrowings. During 2020, the financial services operations also issued $4,685 million and retired $6,776 million of long-term borrowings, which were primarily medium-term notes.

OFF-BALANCE-SHEET ARRANGEMENTS

At November 1, 2020, the company had approximately $380 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 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 1, 2020 was approximately seven years.

AGGREGATE CONTRACTUAL OBLIGATIONS

The payment schedule for the company's contractual obligations at November 1, 2020 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**	$ 10,441	$ 292	$ 1,804	$ 1,635	$ 6,710
Financial services**	34,948	10,634	14,215	5,444	4,655
Total	45,389	10,926	16,019	7,079	11,365
Interest relating to debt***	5,937	951	1,231	781	2,974
Accounts payable	3,022	2,933	63	24	2
Operating leases	323	90	126	66	41
Finance leases	62	22	30	8	2
Off-balance-sheet					
Purchase obligations	2,708	2,640	61	5	2
Total	$ 57,441	$ 17,562	$ 17,530	$ 7,963	$ 14,386

* Principal payments.

** Payments related to securitization borrowings of $4,687 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 18).

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

The previous table does not include unrecognized tax benefit liabilities of approximately $668 million at November 1, 2020, 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, 18, 20, and 25, 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 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 1, 2020, November 3, 2019, and October 28, 2018 were $1,718 million, $2,033 million, and $1,850 million, respectively. The total accrual is recorded $1,109 million, $1,443 million, and $1,297 million in trade accounts and notes receivable – net, and $609 million, $590 million, and $553 million in accounts payable and accrued expenses at November 1, 2020, November 3, 2019, and October 28, 2018, respectively. The decrease in 2020 primarily resulted from lower sales volume and the increase in 2019 primarily related 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 .6 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 .6 percent, the sales incentive accrual at November 1, 2020 would increase or decrease by approximately $42 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 1, 2020, November 3, 2019, and October 28, 2018 were $1,105 million, $1,218 million, and $1,146 assumptions could have a significant effect on the financial million, respectively. The decrease in 2020 primarily related to lower sales volume and the increase in 2019 was 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 .07 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 .07 percent, the warranty accrual at November 1, 2020 would increase or decrease by approximately $27 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 1, 2020 and November 3, 2019 were $447 million and $226 million, respectively. The pension assets, net of pension liabilities, recognized on the balance sheet at October 28, 2018 were $494 million. The increases in pension net liabilities in 2020 and 2019 were due primarily to decreases in discount rates and interest on the liabilities, largely offset by the return on plan assets. The OPEB liabilities, net of OPEB assets, at November 1, 2020, November 3, 2019, and October 28, 2018 were $3,892 million, $4,686 million, and $4,753 million, respectively. The decrease in OPEB net liabilities in 2020 was due primarily to contributions to a U.S. OPEB plan. 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 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:

		November 1, 2020	2021
Assumptions	Percentage Change	Increase (Decrease) PBO/APBO*	Increase (Decrease) Expense
Pension			
Discount rate**	+/-.5	$ (840)/972	$ (37)/43
Expected return on assets	+/-.5		(59)/59
OPEB			
Discount rate**	+/-.5	(304)/336	3/(3)
Expected return on assets	+/-.5		(7)/7
Health care cost trend rate**	+/-1.0	577/(482)	54/(33)

* 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 2020, 2019, or 2018. 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 2020.

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 1, 2020, November 3, 2019, and October 28, 2018 was $223 million, $222 million, and $248 million, respectively. The allowance was about the same in 2020 compared to 2019 with an increase in the financing receivable allowance largely offset by a decrease in the allowance for trade accounts and notes receivable (see Note 13). The allowance decrease in 2019 was mainly due to improvement in credit loss experience in certain foreign markets.

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 .02 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 .02 percent, the allowance for credit losses at

November 1, 2020 would increase or decrease by approximately $9 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 estimated residual values are based on several factors, including lease term, expected hours of usage, historical wholesale sales prices, return experience, intended equipment use, market dynamics and trends, and dealer residual guarantees. The company reviews residual value estimates during the lease term and tests carrying value of its operating leases when events or circumstances necessitate. 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 1, 2020, November 3, 2019, and October 28, 2018 were $5,254 million, $5,259 million, and $5,089 million, respectively. The minor decrease in 2020 primarily related to a lower average operating lease portfolio and the increase in 2019 was due primarily to 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 (see Note 9) included additional requirements that became 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.

SUPPLEMENTAL CONSOLIDATING INFORMATION

The supplemental consolidating data presented on the subsequent pages is presented for informational purposes. The equipment operations represents the enterprise without financial services. The equipment operations includes the company's agriculture and turf operations, construction and forestry operations, and other corporate assets, liabilities, revenues, and expenses not reflected within financial services. Transactions between the "equipment operations" and "financial services" have been eliminated to arrive at the consolidated financial statements.

The equipment operations and financial services participate in different industries. The equipment operations primarily generate earnings and cash flows by manufacturing and distributing equipment, service parts, and technology solutions to dealers and end users. Financial services primarily finances sales and leases by dealers of new and used equipment that is largely manufactured by the company. Those earnings and cash flows generally are the difference between the finance income received from customer payments less interest expense, and depreciation on equipment subject to an operating lease. The two businesses are capitalized differently and have different performance metrics. The supplemental consolidating data is also used by management due to these differences.

SUPPLEMENTAL CONSOLIDATING DATA

INCOME STATEMENT
For the Years Ended November 1, 2020, November 3, 2019, and October 28, 2018
(In millions of dollars) Unaudited

	EQUIPMENT OPERATIONS [1]			FINANCIAL SERVICES			ELIMINATIONS			CONSOLIDATED			
	2020	2019	2018	2020	2019	2018	2020	2019	2018	2020	2019	2018	
Net Sales and Revenues													
Net sales	$ 31,272	$ 34,886	$ 33,351							$ 31,272	$ 34,886	$ 33,351	
Finance and interest income	112	118	126	$ 3,610	$ 3,735	$ 3,311	$ (272)	$ (360)	$ (330)	3,450	3,493	3,107	[2]
Other income	808	881	875	257	234	249	(247)	(236)	(224)	818	879	900	[3]
Total	32,192	35,885	34,352	3,867	3,969	3,560	(519)	(596)	(554)	35,540	39,258	37,358	
Costs and Expenses													
Cost of sales	23,679	26,793	25,573				(2)	(1)	(2)	23,677	26,792	25,571	[4]
Research and development expenses	1,644	1,783	1,658							1,644	1,783	1,658	
Selling, administrative and general expenses	2,878	3,031	2,935	606	528	528	(7)	(8)	(8)	3,477	3,551	3,455	[4]
Interest expense	329	256	298	942	1,234	936	(24)	(24)	(30)	1,247	1,466	1,204	[5]
Interest compensation to Financial Services	248	336	300				(248)	(336)	(300)				[5]
Other operating expenses	278	299	315	1,572	1,506	1,298	(238)	(227)	(214)	1,612	1,578	1,399	[6]
Total	29,056	32,498	31,079	3,120	3,268	2,762	(519)	(596)	(554)	31,657	35,170	33,287	
Income before Income Taxes	3,136	3,387	3,273	747	701	798				3,883	4,088	4,071	
Provision (credit) for income taxes	899	689	1,869	183	163	(142)				1,082	852	1,727	
Income after Income Taxes	2,237	2,698	1,404	564	538	940				2,801	3,236	2,344	
Equity in income (loss) of unconsolidated affiliates	(50)	20	25	2	1	2				(48)	21	27	
Net Income	2,187	2,718	1,429	566	539	942				2,753	3,257	2,371	
Less: Net income attributable to noncontrolling interests	2	4	3							2	4	3	
Net Income Attributable to Deere & Company	$ 2,185	$ 2,714	$ 1,426	$ 566	$ 539	$ 942				$ 2,751	$ 3,253	$ 2,368	

[1] The equipment operations represents the enterprise without financial services. The equipment operations includes the company's agriculture and turf operations, construction and forestry operations, and other corporate assets, liabilities, revenues, and expenses not reflected within financial services.
[2] Elimination of financial services' interest income earned from equipment operations.
[3] Elimination of equipment operations' margin from inventory transferred to equipment on operating leases (see Note 7).
[4] Elimination of intercompany service fees.
[5] Elimination of equipment operations' interest expense to financial services.
[6] Elimination of financial services' lease depreciation expense related to inventory transferred to equipment on operating leases.

SUPPLEMENTAL CONSOLIDATING DATA (continued)

CONDENSED BALANCE SHEET
As of November 1, 2020 and November 3, 2019
(In millions of dollars) Unaudited

	EQUIPMENT OPERATIONS [1]		FINANCIAL SERVICES		ELIMINATIONS		CONSOLIDATED		
	2020	2019	2020	2019	2020	2019	2020	2019	
ASSETS									
Cash and cash equivalents	$ 6,145	$ 3,175	$ 921	$ 682			$ 7,066	$ 3,857	
Marketable securities	7	1	634	580			641	581	
Receivables from unconsolidated affiliates	5,290	2,017			$ (5,259)	$ (1,971)	31	46	7
Trade accounts and notes receivable - net	1,013	1,482	4,238	5,153	(1,080)	(1,405)	4,171	5,230	8
Financing receivables - net	106	65	29,644	29,130			29,750	29,195	
Financing receivables securitized - net	26	44	4,677	4,339			4,703	4,383	
Other receivables	1,117	1,376	151	116	(48)	(5)	1,220	1,487	8
Equipment on operating leases - net			7,298	7,567			7,298	7,567	
Inventories	4,999	5,975					4,999	5,975	
Property and equipment - net	5,778	5,929	39	44			5,817	5,973	
Investments in unconsolidated affiliates	174	199	19	16			193	215	
Goodwill	3,081	2,917					3,081	2,917	
Other intangible assets - net	1,327	1,380					1,327	1,380	
Retirement benefits	859	836	59	58	(55)	(54)	863	840	9
Deferred income taxes	1,763	1,896	45	57	(309)	(487)	1,499	1,466	10
Other assets	1,439	1,158	994	741	(1)		2,432	1,899	
Total Assets	$ 33,124	$ 28,450	$ 48,719	$ 48,483	$ (6,752)	$ (3,922)	$ 75,091	$ 73,011	
LIABILITIES AND STOCKHOLDERS' EQUITY									
LIABILITIES									
Short-term borrowings	$ 292	$ 987	$ 8,290	$ 9,797			$ 8,582	$ 10,784	
Short-term securitization borrowings	26	44	4,656	4,277			4,682	4,321	
Payables to unconsolidated affiliates	104	142	5,260	1,970	$ (5,259)	$ (1,970)	105	142	7
Accounts payable and accrued expenses	9,114	9,232	2,127	1,836	(1,129)	(1,412)	10,112	9,656	8
Deferred income taxes	385	414	443	568	(309)	(487)	519	495	10
Long-term borrowings	10,124	5,415	22,610	24,814			32,734	30,229	
Retirement benefits and other liabilities	5,366	5,912	102	94	(55)	(53)	5,413	5,953	9
Total liabilities	25,411	22,146	43,488	43,356	(6,752)	(3,922)	62,147	61,580	
Commitments and contingencies (Note 21)									
Redeemable noncontrolling interest (Note 5)		14						14	
STOCKHOLDERS' EQUITY									
Total Deere & Company stockholders' equity	12,937	11,413	5,231	5,127	(5,231)	(5,127)	12,937	11,413	11
Noncontrolling interests	7	4					7	4	
Financial Services equity	(5,231)	(5,127)			5,231	5,127			11
Adjusted total stockholders' equity	7,713	6,290	5,231	5,127			12,944	11,417	
Total Liabilities and Stockholders' Equity	$ 33,124	$ 28,450	$ 48,719	$ 48,483	$ (6,752)	$ (3,922)	$ 75,091	$ 73,011	

[1] The equipment operations represents the enterprise without financial services. The equipment operations includes the company's agriculture and turf operations, construction and forestry operations, and other corporate assets, liabilities, revenues, and expenses not reflected within financial services.
[7] Elimination of receivables / payables between equipment operations and financial services.
[8] Reclassification of sales incentive accruals on receivables sold to financial services.
[9] Reclassification of net pension assets / liabilities.
[10] Reclassification of deferred tax assets / liabilities in the same taxing jurisdictions.
[11] Elimination of financial services' equity.

Table of Contents

SUPPLEMENTAL CONSOLIDATING DATA (continued)

STATEMENT OF CASH FLOWS
For the Years Ended November 1, 2020, November 3, 2019, and October 28, 2018
(In millions of dollars) Unaudited

	EQUIPMENT OPERATIONS [1]			FINANCIAL SERVICES			ELIMINATIONS			CONSOLIDATED			
	2020	2019	2018	2020	2019	2018	2020	2019	2018	2020	2019	2018	
Cash Flows from Operating Activities													
Net income	$ 2,187	$ 2,718	$ 1,429	$ 566	$ 539	$ 942				$ 2,753	$ 3,257	$ 2,371	
Adjustments to reconcile net income to net cash provided by operating activities:													
Provision for credit losses	5	14	39	105	29	51				110	43	90	
Provision for depreciation and amortization	1,016	1,015	974	1,227	1,135	1,077	$ (125)	$ (131)	$ (124)	2,118	2,019	1,927	[12]
Impairment charges	162			32	77					194	77		
Share-based compensation expense							81	82	84	81	82	84	[13]
(Gain) loss on sale of businesses and unconsolidated affiliates	24	5	(25)							24	5	(25)	
Undistributed earnings of unconsolidated affiliates	381	437	439	(2)	(2)	(2)	(386)	(426)	(463)	(7)	9	(26)	[14]
Provision (credit) for deferred income taxes	105	(222)	1,504	(116)	(243)	(24)				(11)	(465)	1,480	
Changes in assets and liabilities:													
Trade, notes, and financing receivables related to sales	373	(142)	(239)				1,636	(727)	(1,292)	2,009	(869)	(1,531)	[15, 17, 18]
Inventories	1,011	(102)	(917)				(614)	(678)	(855)	397	(780)	(1,772)	[16]
Accounts payable and accrued expenses	(331)	13	793	(1)	163	120	325	(130)	(191)	(7)	46	722	[17]
Accrued income taxes payable/receivable	(14)	(355)	103	22	528	(569)				8	173	(466)	
Retirement benefits	(544)	(235)	(985)	7	2	(41)				(537)	(233)	(1,026)	
Other	385	54	166	136	190	88	(170)	(196)	(260)	351	48	(6)	[12, 13, 16]
Net cash provided by operating activities	4,760	3,200	3,281	1,976	2,418	1,642	747	(2,206)	(3,101)	7,483	3,412	1,822	
Cash Flows from Investing Activities													
Collections of receivables (excluding receivables related to sales)				18,829	18,190	17,032	(1,448)	(1,484)	(1,443)	17,381	16,706	15,589	[15]
Proceeds from maturities and sales of marketable securities		12	11	93	77	65				93	89	76	
Proceeds from sales of equipment on operating leases				1,783	1,648	1,483				1,783	1,648	1,483	
Proceeds from sales of businesses and unconsolidated affiliates, net of cash sold		93	156								93	156	
Cost of receivables acquired (excluding receivables related to sales)				(21,360)	(20,321)	(18,778)	1,395	1,448	1,765	(19,965)	(18,873)	(17,013)	[15]
Acquisitions of businesses, net of cash acquired	(66)		(5,245)							(66)		(5,245)	
Purchases of marketable securities	(4)	(3)		(126)	(137)	(133)				(130)	(140)	(133)	
Purchases of property and equipment	(816)	(1,118)	(893)	(4)	(2)	(3)				(820)	(1,120)	(896)	
Cost of equipment on operating leases acquired				(2,666)	(3,246)	(3,209)	830	917	1,155	(1,836)	(2,329)	(2,054)	[16]
Increase in investment in Financial Services	(21)	(8)					21	8					[14]
Decrease (increase) in trade and wholesale receivables				1,999	(935)	(1,222)	(1,999)	935	1,222				[15]
Collateral on derivatives - net	(6)			274	59	(59)				268	59	(59)	
Other	(78)	35	17	(38)	(54)	(36)	89	(38)	(61)	(27)	(57)	(80)	[18]
Net cash used for investing activities	(991)	(989)	(5,954)	(1,216)	(4,721)	(4,860)	(1,112)	1,786	2,638	(3,319)	(3,924)	(8,176)	
Cash Flows from Financing Activities													
Increase (decrease) in total short-term borrowings	(177)	(149)	16	(1,183)	(768)	457				(1,360)	(917)	473	
Change in intercompany receivables/payables	(3,207)	(305)	(748)	3,207	305	748							
Proceeds from long-term borrowings	4,586	1,348	149	4,685	8,638	8,139				9,271	9,986	8,288	
Payments of long-term borrowings	(607)	(972)	(163)	(6,776)	(5,454)	(6,082)				(7,383)	(6,426)	(6,245)	
Proceeds from issuance of common stock	331	178	217							331	178	217	
Repurchases of common stock	(750)	(1,253)	(958)							(750)	(1,253)	(958)	
Capital investment from Equipment Operations				21	8		(21)	(8)					[14]
Dividends paid	(956)	(943)	(806)	(386)	(427)	(464)	386	427	464	(956)	(943)	(806)	[14]
Other	(105)	(79)	(60)	(28)	(38)	(32)		1	(1)	(133)	(116)	(93)	
Net cash provided by (used for) financing activities	(885)	(2,175)	(2,353)	(460)	2,264	2,766	365	420	463	(980)	509	876	
Effect of Exchange Rate Changes on Cash, Cash Equivalents, and Restricted Cash	76	(42)	54	(44)	(14)	(28)				32	(56)	26	
Net Increase (Decrease) in Cash, Cash Equivalents, and Restricted Cash	2,960	(6)	(4,972)	256	(53)	(480)				3,216	(59)	(5,452)	
Cash, Cash Equivalents, and Restricted Cash at Beginning of Year	3,196	3,202	8,174	760	813	1,293				3,956	4,015	9,467	
Cash, Cash Equivalents, and Restricted Cash at End of Year	$ 6,156	$ 3,196	$ 3,202	$ 1,016	$ 760	$ 813				$ 7,172	$ 3,956	$ 4,015	

[1] The equipment operations represents the enterprise without financial services. The equipment operations includes the company's agriculture and turf operations, construction and forestry operations, and other corporate assets, liabilities, revenues, and expenses not reflected within financial services.
[12] Elimination of depreciation on leases related to inventory transferred to equipment on operating leases (see Note 7).
[13] Reclassification of share-based compensation expense.
[14] Elimination of dividends from financial services to the equipment operations, which are included in the equipment operations net cash provided by operating activities, and capital investments in financial services from the equipment operations.
[15] Primarily reclassification of receivables related to the sale of equipment.
[16] Reclassification of lease agreements with direct customers.
[17] Reclassification of sales incentive accruals on receivables sold to financial services
[18] Elimination and reclassification of the effects of financial services partial financing of the construction and forestry retail locations sales and subsequent collection of those amounts (see Note 4).

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 1, 2020 would have been approximately $50 million. The net loss from increasing the interest rates by 10 percent at November 3, 2019 would have been approximately $22 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 strengthening of the U.S. dollar relative to other currencies through 2021 would decrease the 2021 expected net cash inflows by approximately $90 million. At November 3, 2019, a hypothetical 10 percent weakening of the U.S. dollar under similar assumptions and calculations indicated a potential $11 million adverse effect on the 2020 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 1, 2020, November 3, 2019, and October 28, 2018
(In millions of dollars and shares except per share amounts)

	2020	2019	2018
Net Sales and Revenues			
Net sales	$ 31,272	$ 34,886	$ 33,351
Finance and interest income	3,450	3,493	3,107
Other income	818	879	900
Total	35,540	39,258	37,358
Costs and Expenses			
Cost of sales	23,677	26,792	25,571
Research and development expenses	1,644	1,783	1,658
Selling, administrative and general expenses	3,477	3,551	3,455
Interest expense	1,247	1,466	1,204
Other operating expenses	1,612	1,578	1,399
Total	31,657	35,170	33,287
Income of Consolidated Group before Income Taxes	3,883	4,088	4,071
Provision for income taxes	1,082	852	1,727
Income of Consolidated Group	2,801	3,236	2,344
Equity in income (loss) of unconsolidated affiliates	(48)	21	27
Net Income	2,753	3,257	2,371
Less: Net income attributable to noncontrolling interests	2	4	3
Net Income Attributable to Deere & Company	$ 2,751	$ 3,253	$ 2,368
Per Share Data			
Basic	$ 8.77	$ 10.28	$ 7.34
Diluted	$ 8.69	$ 10.15	$ 7.24
Dividends declared	$ 3.04	$ 3.04	$ 2.58
Average Shares Outstanding			
Basic	313.5	316.5	322.6
Diluted	316.6	320.6	327.3

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 1, 2020, November 3, 2019, and October 28, 2018
(In millions of dollars)

	2020	2019	2018
Net Income	$ 2,753	$ 3,257	$ 2,371
Other Comprehensive Income (Loss), Net of Income Taxes			
Retirement benefits adjustment	(3)	(678)	1,052
Cumulative translation adjustment	55	(448)	(195)
Unrealized gain (loss) on derivatives	2	(75)	9
Unrealized gain (loss) on debt securities	14	29	(13)
Other Comprehensive Income (Loss), Net of Income Taxes	68	(1,172)	853
Comprehensive Income of Consolidated Group	2,821	2,085	3,224
Less: Comprehensive income attributable to noncontrolling interests	2	4	2
Comprehensive Income Attributable to Deere & Company	$ 2,819	$ 2,081	$ 3,222

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

DEERE & COMPANY
CONSOLIDATED BALANCE SHEET
As of November 1, 2020 and November 3, 2019
(In millions of dollars)

	2020	2019
ASSETS		
Cash and cash equivalents	$ 7,066	$ 3,857
Marketable securities	641	581
Receivables from unconsolidated affiliates	31	46
Trade accounts and notes receivable - net	4,171	5,230
Financing receivables - net	29,750	29,195
Financing receivables securitized - net	4,703	4,383
Other receivables	1,220	1,487
Equipment on operating leases - net	7,298	7,567
Inventories	4,999	5,975
Property and equipment - net	5,817	5,973
Investments in unconsolidated affiliates	193	215
Goodwill	3,081	2,917
Other intangible assets - net	1,327	1,380
Retirement benefits	863	840
Deferred income taxes	1,499	1,466
Other assets	2,432	1,899
Total Assets	$ 75,091	$ 73,011
LIABILITIES AND STOCKHOLDERS' EQUITY		
LIABILITIES		
Short-term borrowings	$ 8,582	$ 10,784
Short-term securitization borrowings	4,682	4,321
Payables to unconsolidated affiliates	105	142
Accounts payable and accrued expenses	10,112	9,656
Deferred income taxes	519	495
Long-term borrowings	32,734	30,229
Retirement benefits and other liabilities	5,413	5,953
Total liabilities	62,147	61,580
Commitments and contingencies (Note 21)		
Redeemable noncontrolling interest (Note 5)		14
STOCKHOLDERS' EQUITY		
Common stock, $1 par value (authorized – 1,200,000,000 shares; issued – 536,431,204 shares in 2020 and 2019), at paid-in amount	4,895	4,642
Common stock in treasury, 222,775,254 shares in 2020 and 223,290,789 shares in 2019, at cost	(18,065)	(17,474)
Retained earnings	31,646	29,852
Accumulated other comprehensive income (loss)	(5,539)	(5,607)
Total Deere & Company stockholders' equity	12,937	11,413
Noncontrolling interests	7	4
Total stockholders' equity	12,944	11,417
Total Liabilities and Stockholders' Equity	$ 75,091	$ 73,011

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

Table of Contents

DEERE & COMPANY
STATEMENT OF CONSOLIDATED CASH FLOWS
For the Years Ended November 1, 2020, November 3, 2019, and October 28, 2018
(In millions of dollars)

	2020	2019	2018
Cash Flows from Operating Activities			
Net income	$ 2,753	$ 3,257	$ 2,371
Adjustments to reconcile net income to net cash provided by operating activities:			
Provision for credit losses	110	43	90
Provision for depreciation and amortization	2,118	2,019	1,927
Impairment charges	194	77	
Share-based compensation expense	81	82	84
(Gain) loss on sales of businesses and unconsolidated affiliates	24	5	(25)
Undistributed earnings of unconsolidated affiliates	(7)	9	(26)
Provision (credit) for deferred income taxes	(11)	(465)	1,480
Changes in assets and liabilities:			
Trade, notes, and financing receivables related to sales	2,009	(869)	(1,531)
Inventories	397	(780)	(1,772)
Accounts payable and accrued expenses	(7)	46	722
Accrued income taxes payable/receivable	8	173	(466)
Retirement benefits	(537)	(233)	(1,026)
Other	351	48	(6)
Net cash provided by operating activities	7,483	3,412	1,822
Cash Flows from Investing Activities			
Collections of receivables (excluding receivables related to sales)	17,381	16,706	15,589
Proceeds from maturities and sales of marketable securities	93	89	76
Proceeds from sales of equipment on operating leases	1,783	1,648	1,483
Proceeds from sales of businesses and unconsolidated affiliates, net of cash sold		93	156
Cost of receivables acquired (excluding receivables related to sales)	(19,965)	(18,873)	(17,013)
Acquisitions of businesses, net of cash acquired	(66)		(5,245)
Purchases of marketable securities	(130)	(140)	(133)
Purchases of property and equipment	(820)	(1,120)	(896)
Cost of equipment on operating leases acquired	(1,836)	(2,329)	(2,054)
Collateral on derivatives - net	268	59	(59)
Other	(27)	(57)	(80)
Net cash used for investing activities	(3,319)	(3,924)	(8,176)
Cash Flows from Financing Activities			
Increase (decrease) in total short-term borrowings	(1,360)	(917)	473
Proceeds from long-term borrowings	9,271	9,986	8,288
Payments of long-term borrowings	(7,383)	(6,426)	(6,245)
Proceeds from issuance of common stock	331	178	217
Repurchases of common stock	(750)	(1,253)	(958)
Dividends paid	(956)	(943)	(806)
Other	(133)	(116)	(93)
Net cash provided by (used for) financing activities	(980)	509	876
Effect of Exchange Rate Changes on Cash, Cash Equivalents, and Restricted Cash	32	(56)	26
Net Increase (Decrease) in Cash, Cash Equivalents, and Restricted Cash	3,216	(59)	(5,452)
Cash, Cash Equivalents, and Restricted Cash at Beginning of Year	3,956	4,015	9,467
Cash, Cash Equivalents, and Restricted Cash at End of Year	$ 7,172	$ 3,956	$ 4,015

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 28, 2018, November 3, 2019, and November 1, 2020
(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 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
Net income	2,752			2,751		1	1
Other comprehensive income	68				68		
Repurchases of common stock	(750)		(750)				
Treasury shares reissued	159		159				
Dividends declared	(956)			(955)		(1)	(1)
Noncontrolling interest redemption (Note 5)							(14)
Stock options and other	254	253		(2)		3	
Balance November 1, 2020	$ 12,944	$ 4,895	$ (18,065)	$ 31,646	$ (5,539)	$ 7	

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

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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 – Represents the enterprise without financial services, while including the company's agriculture and turf operations, construction and forestry operations, and other corporate assets, liabilities, revenues, and expenses not reflected within financial services.

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 2020, 2019, and 2018 were November 1, 2020, November 3, 2019, and October 28, 2018, respectively. Fiscal years 2020 and 2018 contained 52 weeks compared to 53 weeks in fiscal year 2019.

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. In 2020, the investment in the joint venture was impaired (see Note 5). The maximum exposure to loss was $5 million and $22 million at November 1, 2020 and November 3, 2019, respectively.

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. The COVID pandemic has resulted in uncertainties in the company's business, which may result in actual results differing 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. In 2020, short-term payment relief was provided to dealers due to the economic effects of COVID (see Note 13). 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 statement of consolidated 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 21).

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 $196 million in 2020, $215 million in 2019, and $188 million in 2018.

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 26).

Derivative Financial Instruments
The company’s policy is 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 27).

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 gain (loss) for foreign exchange in 2020, 2019, and 2018 was $18 million, $(13) million, and $(8) million, respectively.

3. NEW ACCOUNTING STANDARDS

New Accounting Standards Adopted

In the first quarter of 2020, the company adopted Financial Accounting Standards Board (FASB) Accounting Standards Update (ASU) No. 2016-02, Leases (Topic 842), which supersedes Accounting Standards Codification (ASC) 840, Leases. This ASU was adopted using a modified-retrospective approach. 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 did not significantly change the lessee's recognition, measurement, and presentation of expenses and cash flows from the previous accounting standard. Lessors' accounting under the ASC is largely unchanged from the previous accounting standard. The ASU adds new disclosures about the company's leasing activities. The company elected 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 did not elect the hindsight practical expedient. In addition, the company elected to combine lease and nonlease components for all asset classes and to not recognize a right of use asset or lease liability for arrangements that qualify as short-term leases.

The operating lease liabilities are recorded in "Accounts payable and accrued expenses" and the operating lease right of use assets are recorded in "Other assets." The finance lease liabilities are recorded in "Short-term borrowings" or "Long-term borrowings" based on the remaining lease term, and the finance lease right of use assets are recorded in "Property and equipment - net." In addition to the lease liabilities and right of use assets, land use rights were reclassified from "Other intangible assets - net" to "Other assets" and finance lease liabilities were reclassified from "Accounts payable and accrued expenses" to "Short-term borrowings" and "Long-term borrowings." The effect of adopting the ASU on the consolidated balance sheet follows in millions of dollars:

	November 3 2019	Cumulative Effect from Adoption	November 4 2019
Assets			
Other intangible assets - net	$ 1,380	$ (23)	$ 1,357
Other assets	1,899	402	2,301
Liabilities			
Short-term borrowings	$ 10,784	$ 11	$ 10,795
Accounts payable and accrued expenses	9,656	348	10,004
Long-term borrowings	30,229	20	30,249

The company implemented a new system for lessee accounting with new processes and controls at the time of adopting the ASU. The adoption did not have a material effect on the company's operating results or cash flows. See Note 25 for additional information.

The company also adopted the following standards in 2020, none of which had a material effect on the company's consolidated financial statements:

Accounting Standards Updates
No. 2017-08—Premium Amortization on Purchased Callable Debt Securities, which amends ASC 310-20, Receivables – Nonrefundable Fees and Other Costs
No. 2018-07—Improvements to Nonemployee Share-Based Payment Accounting, which amends ASC 718, Compensation – Stock Compensation
No. 2019-04—Codification Improvements to Topic 326, Financial Instruments – Credit Losses, Topic 815, Derivatives and Hedging, and Topic 825, Financial Instruments. The adoption was for clarifications to ASU No. 2017-12, Targeted Improvements to Accounting for Hedging Activities
No. 2020-04—Facilitation of the Effects of Reference Rate Reform on Financial Reporting, which establishes ASC 848, Reference Rate Reform

New Accounting Standards to be Adopted

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, along with related amendments, revises the measurement of credit losses for financial assets measured at amortized cost from an incurred loss to an expected loss methodology. The ASU affects receivables, debt securities, net investment in leases, and most other financial assets that represent a right to receive cash.

The company holds deposits from dealers (dealer deposits) to absorb certain credit losses. Prior to adopting this ASU, the allowance for credit losses was estimated on probable credit losses incurred after consideration of dealer deposits. The ASU considers dealer deposits and certain credit insurance contracts as freestanding credit enhancements. As a result, after adoption, credit losses recovered from dealer deposits and credit insurance contracts will be presented in "Other income" and no longer as part of the allowance for credit losses or the provision for credit losses. The ASU will also modify the treatment of the estimated write-off of delinquent receivables by no longer including the estimated benefit of charges to the dealer deposit in the write-off amount (see Note 13). This change will increase the estimated write-offs on delinquent financing receivables with the benefit of credit losses recovered from dealer deposits also presented in "Other income." This benefit, in both situations, will be recorded when the dealer deposits are charged and no longer based on estimated recoveries.

The ASU also requires additional disclosures about significant estimates and credit quality. The effective date is the first quarter of fiscal year 2021. The ASU will be adopted using a modified-retrospective approach resulting in an estimated after-tax reduction to "Retained earnings" of $30 million.

The company will also adopt the following standards in future periods, none of which are expected to have a material effect on the company's consolidated financial statements:

Accounting Standards Updates
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
No. 2019-04—Codification Improvements to Topic 326, Financial Instruments-Credit Losses, Topic 815, Derivatives and Hedging, and Topic 825, Financial Instruments
No. 2019-12—Simplifying the Accounting for Income Taxes, which amends ASC 740, Income Taxes
No. 2020-08—Codification Improvements to Subtopic 310-20, Receivables – Nonrefundable Fees and Other Costs

4. ACQUISITIONS AND DISPOSITIONS

Acquisitions

Unimil

In September 2020, the company acquired Unimil, a leading Brazilian company in the after-sales service parts business for sugarcane harvesters, which is based in Piracicaba, Brazil. The total cash purchase price before final adjustments, net of cash acquired of $5 million, was $66 million, with $6 million funded to an escrow to secure certain indemnity obligations. In addition to the cash purchase price, $14 million of liabilities were assumed. The preliminary asset and liability fair values at the acquisition date in millions of dollars follow:

	September 2020	
Trade accounts and notes receivable	$	5
Other receivables		2
Inventories		10
Property and equipment		22
Goodwill		28
Other intangible assets		13
Total assets	$	80
Accounts payable and accrued expenses	$	5
Deferred income taxes		9
Total liabilities	$	14

The identified intangibles were primarily related to customer relationships, trade name, and a non-compete agreement. The weighted-average amortization period is approximately nine years. The goodwill is not expected to be deductible for tax purposes.

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, 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 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 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 roadbuilding 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 for 2018 were prepared as if the acquisition closed at the beginning of fiscal year 2017 and follow in millions of dollars:

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

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 2017 and 2018 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. 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.

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 September 2020, the company sold its German lawn mower business. At the time of the sale, total assets were $26 million, which were recorded in "Other assets" and total liabilities were $5 million, which were recorded in "Accounts payable and accrued expenses." No cash proceeds were received, resulting in a loss on sale, including transaction costs, of $24 million pretax and after-tax. The loss was recorded with a pretax and after-tax accrual recognized in the third quarter of 2020 when a definitive sale agreement was finalized. The loss was recorded in "Other operating expenses" in the agriculture and turf segment.

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 were approximately $187 million, with $93 million received in 2019 and $67 million received in 2020. The remaining sales price was 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 and Other Charges

In 2020, the company recorded impairments and other charges as follows:

	Agriculture and Turf	Construction and Forestry	Financial Services	Total Pretax
Factory closure				
China - agricultural equipment				
Non-cash impairments				
Other receivables, property, and intangible assets *	$ 15			$ 15
Severance payments *	5			5
Factory closure	20			20
Non-cash fixed asset and lease impairments				
German asphalt plant factory * [1]		$ 62		62
Brazil construction equipment factory * [1]		16		16
Other international fixed assets * [1]	13	2		15
Other international fixed assets ** [1]	4			4
Equipment on operating leases *** [2]			$ 22	22
Operating lease inventory *** [2]			10	10
Fixed asset and lease - non-cash impairments	17	80	32	129
Non-cash affiliate company impairments				
Minority investment in construction equipment company headquartered in South Africa **** [3]		43		43
Construction equipment joint venture located in Brazil **** [3]		7		7
Affiliate				

impairments		50		50
Total impairments and closure costs 4, 5	$ 37	$ 130	$ 32	$ 199

* Recorded in "Cost of sales"
** Recorded in "Selling, administrative, and general expenses"
*** Recorded in "Other operating expenses"
****Recorded in "Equity in income (loss) of unconsolidated affiliate"
1 The impairment was the result of a decline in forecasted financial performance that indicated it was probable future cash flows would not cover the carrying amount of net assets.
2 The impairments were the result of a higher expected equipment return rates and lower estimated values of used construction equipment than originally estimated with the probable effect that future cash flows would not cover the carrying amount of the asset.
3 The impairment was the result of an other-than-temporary decline in value.
4 The after-tax effect was $180 million.
5 See Note 26 for a description of the valuation methodologies used to measure these 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 26).

Employee-Separation Programs

During 2020, the company implemented employee-separation programs for the company's salaried workforce in several geographic areas, including the United States, Europe, Asia, and Latin America. The programs' main purpose was to improve efficiency through a leaner, more flexible organization. The programs were largely voluntary in nature with the expense recorded primarily in the period in which the employees irrevocably accepted a separation offer. For the limited involuntary employee-separation programs, the expense was recorded when management committed to a plan, the plan was communicated to the employees, and the employees were not required to provide service beyond the legal notification period. The programs provided for cash payments based on years of service, and in some countries subsidized healthcare for a limited period and outplacement services.

The programs' total pretax expenses in 2020 were as follows:

	Agriculture and Turf	Construction and Forestry	Financial Services	Total
Cost of sales	$ 82	$ 22		$104
Research and development expenses	47	8		55
Selling, administrative and general expenses	96	24	$ 15	135
Other operating expenses*				41
Total	$ 225	$ 54	$ 15	$335

* Relates primarily to non-cash charges of $34 million from curtailments in certain OPEB plans (see Note 8) and other corporate expenses, both of which were recorded outside of operating profit. Approximately $6 million of the curtailment charge was recorded by financial services.

Total program payments will be $301 million with $166 million paid in 2020 and $135 million to be disbursed over two years. Annual savings from these programs are estimated to be approximately $250 million, of which $85 million was realized in 2020.

During 2019, the company also 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. These programs provided for cash payments based on years of service. The expenses were recorded in the period the employees irrevocably accepted the separation offer with the following total pretax expenses:

	Agriculture and Turf	Construction and Forestry	Financial Services	Total
Cost of sales	$ 5			$ 5
Research and development expenses	1			1
Selling, administrative and general expenses	13	$ 2	$ 9	24
Total	$ 19	$ 2	$ 9	$ 30

Redeemable Noncontrolling Interest

In 2020, the minority interest holder in Hagie Manufacturing Company, LLC exercised its right to sell the remaining 20 percent interest to the company for $14 million. The arrangement was accounted for as an equity transaction with no gain or loss recorded in the statement of consolidated income. This operation is included in the company's agriculture and turf segment.

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
2020				
Primary geographical markets:				
United States	$ 11,948	$ 4,548	$ 2,500	$18,996
Canada	990	802	598	2,390
Western Europe	3,764	1,479	90	5,333
Central Europe and CIS	1,391	646	35	2,072
Latin America	2,236	553	234	3,023
Asia, Africa, Australia, New Zealand, and Middle East	2,441	1,153	132	3,726
Total	$ 22,770	$ 9,181	$ 3,589	$35,540
Major product lines:				
Large Agriculture	$ 11,387			$11,387
Small Agriculture	8,102			8,102
Turf	2,390			2,390
Construction		$ 3,521		3,521
Compact Construction		1,269		1,269
Roadbuilding		2,924		2,924
Forestry		1,100		1,100
Financial Products	106	25	$ 3,589	3,720
Other	785	342		1,127
Total	$ 22,770	$ 9,181	$ 3,589	$35,540
Timing of revenue recognition:				
Revenue recognized at a point in time	$ 22,545	$ 9,071	$ 106	$31,722
Revenue recognized over time	225	110	3,483	3,818
Total	$ 22,770	$ 9,181	$ 3,589	$35,540

	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
Roadbuilding		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, 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; self-propelled forage harvesters, 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, 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 steers, landscape loaders, and related attachments and service parts.

Roadbuilding – Includes net sales of equipment used in roadbuilding 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 21, was $1,090 million and $1,010 million at November 1, 2020 and November 3, 2019, 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 $425 million in 2020 and $444 million in 2019.

The company entered into contracts with customers to deliver equipment and services that have not been recognized at November 1, 2020 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 $912 million at November 1, 2020. The estimated revenue to be recognized by fiscal year follows in millions of dollars: 2021 - $337, 2022 - $265, 2023 - $172, 2024 - $88, 2025 - $45, and later years - $5. 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 finance lease obligations and 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 $614 million, $678 million, and $855 million in 2020, 2019, and 2018, respectively. The company also had accounts payable related to purchases of property and equipment of $98 million, $152 million, and $183 million at November 1, 2020, November 3, 2019, and October 28, 2018, respectively.

The company's restricted cash held at November 1, 2020, November 3, 2019, October 28, 2018, and October 29, 2017 was as follows in millions of dollars:

	2020	2019	2018	2017
Equipment operations	$ 11	$ 21	$ 7	$ 6
Financial services	95	78	104	126
Total	$ 106	$ 99	$ 111	$ 132

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:

	2020	2019	2018
Interest:			
Equipment operations	$ 553	$ 666	$ 581
Financial services	998	1,154	925
Intercompany eliminations	(272)	(360)	(330)
Consolidated	$ 1,279	$ 1,460	$ 1,176
Income taxes:			
Equipment operations	$ 1,000	$ 1,018	$ 625
Financial services	297	(57)	387
Intercompany eliminations	(228)	150	(300)
Consolidated	$ 1,069	$ 1,111	$ 712

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:

	2020	2019	2018
Pensions			
Service cost	$ 321	$ 261	$ 293
Interest cost	347	447	390
Expected return on plan assets	(819)	(802)	(775)
Amortization of actuarial loss	256	148	226
Amortization of prior service cost	13	11	12
Settlements/curtailments	25	5	8
Net cost	$ 143	$ 70	$ 154
Weighted-average assumptions			
Discount rates - service cost	2.9%	4.0%	3.5%
Discount rates - interest cost	2.7%	4.0%	3.2%
Rate of compensation increase	3.8%	3.8%	3.8%
Expected long-term rates of return	6.4%	6.5%	6.9%
Interest crediting rate - U.S. cash balance plan	2.1%	3.3%	2.6%

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:

	2020	2019	2018
OPEB			
Service cost	$ 49	$ 41	$ 45
Interest cost	140	216	191
Expected return on plan assets	(50)	(36)	(22)
Amortization of actuarial loss	29	16	62
Amortization of prior service credit	(4)	(72)	(77)
Curtailments	34		
Net cost	$ 198	$ 165	$ 199
Weighted-average assumptions			
Discount rates - service cost	3.7%	4.8%	4.3%
Discount rates - interest cost	2.7%	4.2%	3.3%
Expected long-term rates of return	5.7%	5.7%	5.7%

The OPEB curtailments are a result of the employee-separation programs (see Note 5).

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 primarily 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:

	2020	2019	2018
Pensions			
Net cost	$ 143	$ 70	$ 154
Retirement benefit adjustments included in other comprehensive (income) loss:			
Net actuarial (gain) loss	438	887	(553)
Amortization of actuarial loss	(249)	(143)	(226)
Amortization of prior service cost	(11)	(11)	(12)
Settlements	(26)	(3)	(8)
Total (gain) loss recognized in other comprehensive (income) loss	152	730	(799)
Total recognized in comprehensive (income) loss	$ 295	$ 800	$ (645)

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:

	2020	2019	2018
OPEB			
Net cost	$ 198	$ 165	$ 199
Retirement benefit adjustments included in other comprehensive (income) loss:			
Net actuarial (gain) loss	(136)	141	(608)
Prior service cost			5
Amortization of actuarial loss	(29)	(16)	(62)
Amortization of prior service credit	4	72	77
Total (gain) loss recognized in other comprehensive (income) loss	(161)	197	(588)
Total recognized in comprehensive (income) loss	$ 37	$ 362	$ (389)

The benefit plan obligations, funded status, and the assumptions related to the obligations at November 1, 2020 and November 3, 2019, respectively, in millions of dollars follow:

	Pensions		OPEB	
	2020	**2019**	**2020**	**2019**
Change in benefit obligations				
Beginning of year balance	$ (14,250)	$ (12,108)	$ (5,622)	$ (5,472)
Service cost	(321)	(261)	(49)	(41)
Interest cost	(347)	(447)	(140)	(216)
Actuarial gain (loss)	(771)	(2,174)	119	(187)
Benefits paid	749	705	297	316
Health care subsidies			(28)	(22)
Settlements/curtailments	15			
Foreign exchange and other	(96)	35	13	
End of year balance	(15,021)	(14,250)	(5,410)	(5,622)
Change in plan assets (fair value)				
Beginning of year balance	14,024	12,602	936	719
Actual return on plan assets	1,144	2,081	33	82
Employer contribution	108	70	843	448
Benefits paid	(749)	(705)	(297)	(316)
Settlements	(12)			
Foreign exchange and other	59	(24)	3	3
End of year balance	14,574	14,024	1,518	936
Funded status	$ (447)	$ (226)	$ (3,892)	$ (4,686)
Weighted-average assumptions				
Discount rates	2.5%	3.0%	2.7%	3.2%
Rate of compensation increase	3.7%	3.8%		
Interest crediting rate - U.S. cash balance plan	1.7%	2.1%		

The company made voluntary contributions of $700 million and $300 million to a U.S. OPEB plan in 2020 and 2019, respectively.

The actuarial loss for pension for 2020 was primarily due to a decrease in discount rates partially offset by a decrease in mortality assumptions. The actuarial gain for OPEB for 2020 was primarily due to the U.S. enactment of the Setting Every Community Up for Retirement Enhancement Act (SECURE Act) that repealed the health insurance provider fee effective in 2021, a decrease in mortality assumptions, and a decrease in health care trend rates, partially offset by a decrease in discount rates. 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 mortality assumptions for the 2020 and 2019 benefit plan obligations reflect the most recent tables and scales issued by the Society of Actuaries at that time.

The amounts recognized at November 1, 2020 and November 3, 2019, respectively, in millions of dollars consist of the following:

	Pensions		OPEB	
	2020	**2019**	**2020**	**2019**
Amounts recognized in balance sheet				
Noncurrent asset	$ 863	$ 840		
Current liability	(72)	(56)	$ (36)	$ (35)
Noncurrent liability	(1,238)	(1,010)	(3,856)	(4,651)
Total	$ (447)	$ (226)	$ (3,892)	$ (4,686)
Amounts recognized in accumulated other comprehensive income – pretax				
Net actuarial loss	$ 4,475	$ 4,312	$ 747	$ 912
Prior service cost (credit)	21	32	(24)	(28)
Total	$ 4,496	$ 4,344	$ 723	$ 884

The total accumulated benefit obligations for all pension plans at November 1, 2020 and November 3, 2019, were $14,257 million and $13,430 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 $2,107 million and $1,100 million, respectively, at November 1, 2020 and $1,836 million and $924 million, respectively, at November 3, 2019. The projected benefit obligations and fair value of plan assets for pension plans with projected benefit obligations in excess of plan assets were $10,792 million and $9,482 million, respectively, at November 1, 2020 and $10,097 million and $9,031 million, respectively, at November 3, 2019.

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 $105 million to its pension plans and approximately $845 million to its OPEB plans in 2021. The anticipated OPEB contributions include a voluntary $700 million to a U.S. plan in the fourth quarter, 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*
2021	$ 765	$ 297
2022	724	297
2023	711	297
2024	707	297
2025	699	298
2026 to 2030	3,450	1,461

* 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 2020 actuarial valuation, the weighted-average composite trend rates for these obligations were assumed to be a 4.0 percent increase from 2020 to 2021, followed by an increase of 7.6 percent from 2021 to 2022, gradually decreasing to 4.7 from 2027 to 2028 and all future years. The lower estimated increase from 2021 to 2022 resulted from the SECURE Act that repealed the health insurance provider fee effective in 2021. The 2019 obligations and the cost in 2020 assumed an 8.6 percent increase from 2019 to 2020, gradually decreasing to 4.7 percent from 2027 to 2028 and all future years.

The discount rate assumptions used to determine the pension and OPEB obligations for all periods presented were primarily 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 26.

The fair values of the pension plan assets at November 1, 2020 follow in millions of dollars:

	Total	Level 1	Level 2
Cash and short-term investments	$ 309	$ 276	$ 33
Equity:			
U.S. equity securities	1,184	1,135	49
International equity securities	947	937	10
Fixed Income:			
Government and agency securities	1,133	824	309
Corporate debt securities	3,534		3,534
Mortgage-backed securities	136		136
Real estate	49	48	1
Derivative contracts – assets*	94	2	92
Derivative contracts – liabilities**	(79)	(43)	(36)
Receivables, payables, and other	(163)	(184)	21
Securities lending collateral	449	90	359
Securities lending liability	(449)	(90)	(359)
Securities sold short	(149)	(144)	(5)
Total of Level 1 and Level 2 assets	6,995	$2,851	$ 4,144
Investments at net asset value:			
Short-term investments	510		
U.S. equity funds	1,246		
International equity funds	674		
Fixed income funds	1,321		
Real estate	618		
Hedge funds	750		
Private equity/venture capital	2,038		
Other investments	422		
Total net assets	$ 14,574		

* Includes contracts for interest rates of $67 million, foreign currency of $25 million, and other of $2 million.

** Includes contracts for equity of $30 million, foreign currency of $24 million, interest rates of $23 million, and other of $2 million.

Table of Contents

The fair values of the health care assets at November 1, 2020 follow in millions of dollars:

	Total	Level 1	Level 2
Cash and short-term investments	$ 117	$ 117	
Equity:			
U.S. equity securities and funds	34	33	$ 1
International equity securities	10	10	
Fixed Income:			
Government and agency securities	180	168	12
Corporate debt securities	66		66
Mortgage-backed securities	13		13
Other	(1)	(1)	
Securities lending collateral	49	8	41
Securities lending liability	(49)	(8)	(41)
Securities sold short	(3)	(3)	
Total of Level 1 and Level 2 assets	416	$ 324	$ 92
Investments at net asset value:			
Short-term investments	9		
U.S. equity funds	539		
International equity funds	320		
Fixed income funds	185		
Hedge funds	12		
Private equity/venture capital	25		
Other investments	12		
Total net assets	$ 1,518		

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		

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, Equity Funds, and Other Funds – The values are determined 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, and Hedge Funds – 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.

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, 46 percent for debt, 4 percent for real estate, and 18 percent for other investments. The target allocations for health care assets are approximately 61 percent for equities, 34 percent for debt, and 5 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 9.2 percent during the past ten years and approximately 7.2 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 $160 million in 2020, $192 million in 2019, and $206 million in 2018. The contribution rate varies primarily based on the company's performance in the prior year and employee participation in the plans.

9. INCOME TAXES

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

	2020	2019	2018
Current:			
U.S.:			
Federal	$ 400	$ 545	$ (268)
State	53	72	123
Foreign	640	700	392
Total current	1,093	1,317	247
Deferred:			
U.S.:			
Federal	(68)	(345)	1,233
State	9	(26)	(40)
Foreign	48	(94)	287
Total deferred	(11)	(465)	1,480
Provision for income taxes	$ 1,082	$ 852	$ 1,727

Based upon the location of the company's operations, the consolidated income before income taxes in the U.S. in 2020, 2019, and 2018 was $2,082 million, $2,166 million, and $2,275 million, respectively, and in foreign countries was $1,801 million, $1,922 million, and $1,796 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.

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. The company's U.S. statutory corporate income tax rate was 21 percent for 2020 and 2019, and approximately 23.3 percent for 2018.

Beginning in 2019, the company was subject to additional provisions of the U.S. tax reform legislation. The main provisions of tax reform affecting the company beginning 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 2020 or 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.

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

	2020	2019	2018
U.S. federal income tax provision at the U.S. statutory rate (2020 and 2019 – 21 percent, 2018 – 23.3 percent)	$ 815	$ 859	$ 950
Increase (decrease) resulting from:			
Net deferred tax asset remeasurement		6	414
Deemed earnings repatriation tax		(74)	290
Effects of GILTI and FDII	39	(33)	
Other effects of tax reform			42
Differences in taxability of foreign earnings	38	(94)	(92)
Valuation allowance on deferred taxes	139	28	50
Research and business tax credits	(50)	(85)	(43)
State and local income taxes, net of federal income tax benefit	59	47	59
Excess tax benefits on equity compensation	(87)	(40)	(49)
Tax rates on foreign earnings	68	183	44
Unrecognized tax benefits	(32)	(28)	30
Other—net	93	83	32
Provision for income taxes	$ 1,082	$ 852	$ 1,727

At November 1, 2020, accumulated earnings in certain subsidiaries outside the U.S. totaled $2,579 million, of which a portion were subject to the repatriation tax in 2018 and are not subject to additional U.S. income tax. A provision for foreign withholding taxes has not 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 1, 2020 and November 3, 2019 in millions of dollars follows:

	2020		2019	
	Deferred Tax Assets	Deferred Tax Liabilities	Deferred Tax Assets	Deferred Tax Liabilities
OPEB liabilities	$ 804		$ 1,015	
Lessor lease transactions		$ 489		$ 599
Tax loss and tax credit carryforwards	937		781	
Accrual for sales allowances	362		518	
Tax over book depreciation		196		339
Goodwill and other intangible assets		368		378
Pension liability – net	316		186	
Allowance for credit losses	81		70	
Accrual for employee benefits	249		207	
Share-based compensation	41		68	
Deferred compensation	40		39	
Lessee lease transactions	56	56		
Other items	366	305	375	311
Less valuation allowances	(858)		(661)	
Deferred income tax assets and liabilities	$ 2,394	$ 1,414	$ 2,598	$ 1,627

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 1, 2020, tax loss and tax credit carryforwards of $937 million were available with $446 million expiring from 2021 through 2040 and $491 million with an indefinite carryforward period.

A reconciliation of the total amounts of unrecognized tax benefits at November 1, 2020, November 3, 2019, and October 28, 2018 in millions of dollars follows:

	2020	2019	2018
Beginning of year balance	$ 553	$ 279	$ 221
Increases to tax positions taken during the current year	63	30	36
Increases to tax positions taken during prior years	95	357	62
Decreases to tax positions taken during prior years	(30)	(30)	(39)
Decreases due to lapse of statute of limitations	(9)	(6)	(15)
Acquisitions*			31
Settlements	(1)	(75)	(5)
Foreign exchange	(3)	(2)	(12)
End of year balance	$ 668	$ 553	$ 279

* See Note 4.

The amount of unrecognized tax benefits at November 1, 2020 and November 3, 2019 that would affect the effective tax rate if the tax benefits were recognized was $134 million and $153 million, respectively. The increase during 2019 primarily relates to the interpretation of a 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 2020, interest and penalties previously recorded were reversed when tax positions were effectively settled resulting in a $3 million net benefit. During 2019 and 2018, the total amount of expense from interest and penalties was $13 million and $23 million. The interest income in 2020, 2019, and 2018 was $11 million, $25 million, and $12 million, respectively. At November 1, 2020 and November 3, 2019, the liability for accrued interest and penalties totaled $72 million and $76 million, respectively, and the receivable for interest was $6 million and $4 million, 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:

	2020	2019	2018
Other income			
Revenues from services	$ 314	$ 348	$ 347
Insurance premiums and fees earned*	223	214	217
Investment income	26	25	14
Other	255	292	322
Total	$ 818	$ 879	$ 900
Other operating expenses			
Depreciation of equipment on operating leases	$ 1,083	$ 981	$ 928
Insurance claims and expenses*	231	210	175
Cost of services	188	228	211
Operating lease residual losses and impairments	52	159	26
Pension and OPEB (benefit) cost, excluding service cost component	(31)	(67)	15
Other	89	67	44
Total	$ 1,612	$ 1,578	$ 1,399

* Primarily related to extended warranties (see Note 21).

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). 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." In 2020, the company recorded impairments on certain of these unconsolidated affiliates. The impairments were the result of an other-than-temporary decline in value (see Note 5). 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	2020	2019	2018
Sales	$ 1,793	$ 2,483	$ 2,313
Net income	7	50	91
Deere & Company's equity in net income (loss)	(48)	21	27

Financial Position	2020	2019
Total assets	$ 1,541	$ 1,694
Total external borrowings	540	488
Total net assets	598	563
Deere & Company's share of the net assets	193	215

Consolidated retained earnings at November 1, 2020 include undistributed earnings of the unconsolidated affiliates of $138 million. Dividends from unconsolidated affiliates were none in 2020, $30 million in 2019, and $12 million in 2018.

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:

	2020	2019	2018
Net sales	$ 81	$ 143	$ 161
Purchases	1,288	1,937	1,682

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. 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 1, 2020 and November 3, 2019 in millions of dollars follow:

	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
2020				
U.S. equity fund				$ 62
International equity securities				2
Total equity securities				64
U.S. government debt securities	$ 159	$ 10	$ 1	168
Municipal debt securities	63	5		68
Corporate debt securities	173	15		188
International debt securities	9		3	6
Mortgage-backed securities*	140	7		147
Total debt securities	$ 544	$ 37	$ 4	577
Marketable securities				$ 641
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				$ 581

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

Equity Securities

Proceeds and realized gains on equity securities sold during 2020, 2019, and 2018 were not material. Unrealized gains on equity securities during 2020 and 2019 in millions of dollars follow:

	2020	2019
Net gain recognized on equity securities	$ 8	$ 7
Less: Net gain on equity securities sold	1	
Unrealized gains on equity securities	$ 7	$ 7

Debt Securities

The contractual maturities of debt securities at November 1, 2020 in millions of dollars follow:

	Amortized Cost	Fair Value
Due in one year or less	$ 18	$ 18
Due after one through five years	90	94
Due after five through 10 years	113	121
Due after 10 years	183	197
Mortgage-backed securities	140	147
Debt securities	$ 544	$ 577

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 $28 million in 2020, $31 million in 2019, and $40 million in 2018. 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 2020, 2019, and 2018. Unrealized losses at November 1, 2020 and November 3, 2019 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 1, 2020 and November 3, 2019 in millions of dollars follows:

	2020	2019
Trade accounts and notes:		
Agriculture and turf	$ 2,881	$ 3,224
Construction and forestry	1,290	2,006
Trade accounts and notes receivable – net	$ 4,171	$ 5,230

The allowance for credit losses on trade accounts and notes receivable at November 1, 2020, November 3, 2019, and October 28, 2018, as well as the related activity, in millions of dollars follow:

	2020	2019	2018
Beginning of year balance	$ 72	$ 70	$ 56
Provision		8	36
Write-offs	(23)	(14)	(16)
Recoveries	1	4	
Translation adjustments	(11)	4	(6)
End of year balance	$ 39	$ 72	$ 70

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.

During 2020, the company provided short-term payment relief on trade accounts and notes receivables to independent dealers and certain other customers (customers) that were negatively affected by the economic effects of COVID. The relief was provided both in regional programs and case-by-case situations with creditworthy customers. This relief generally included payment deferrals not exceeding three months, extending interest-free periods for up to an additional three months with the total interest-free period not to exceed one year, or reducing interest rates for a maximum of three months. The trade receivable balance granted relief that remained outstanding at November 1, 2020 was $75 million, or approximately 2 percent of the trade receivable portfolio. These actions were taken in response to the economic effects of COVID on customers. Outside of these actions, the company is not modifying its normal sales terms with customers that are outlined in Note 2.

For customers who obtained payment relief, subsequent sales transactions are evaluated to confirm the revenue recognition criteria are met, including the sales price is determinable and collectability of the payments is probable based on the terms outlined in the contract.

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 1, 2020 and November 3, 2019 in millions of dollars follow:

	2020		2019	
	Unrestricted	Securitized	Unrestricted	Securitized
Retail notes:				
Agriculture and turf	$ 17,780	$ 4,134	$ 16,712	$ 3,799
Construction and forestry	3,629	680	3,134	697
Total	21,409	4,814	19,846	4,496
Wholesale notes	3,547		4,645	
Revolving charge accounts	3,962		4,004	
Financing leases (direct and sales-type)	2,364		2,263	
Total financing receivables	31,282	4,814	30,758	4,496
Less:				
Unearned finance income:				
Retail notes	1,066	98	1,141	101
Wholesale notes	18		11	
Revolving charge accounts	60		61	
Financing leases	217		212	
Total	1,361	98	1,425	101
Allowance for credit losses	171	13	138	12
Financing receivables – net	$ 29,750	$ 4,703	$ 29,195	$ 4,383

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 1, 2020 and November 3, 2019 related to the company's sales of equipment that were included in the table above consisted of the following in millions of dollars:

	2020		2019	
	Unrestricted	Securitized	Unrestricted	Securitized
Retail notes*:				
Agriculture and turf	$ 1,971		$ 2,164	
Construction and forestry	335	$ 27	374	$ 45
Total	2,306	27	2,538	45
Wholesale notes	3,547		4,645	
Sales-type leases	1,045		1,064	
Total	6,898	27	8,247	45
Less:				
Unearned finance income:				
Retail notes	178		242	
Wholesale notes	18		11	
Sales-type leases	82		83	
Total	278		336	
Financing receivables related to the company's				

sales of equipment	$ 6,620	$ 27	$ 7,911	$ 45

* 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 1, 2020 and November 3, 2019 were scheduled as follows in millions of dollars:

	2020		2019	
	Unrestricted/Securitized		Unrestricted/Securitized	
Due in months:				
0 – 12	$ 14,983	$ 1,971	$ 16,174	$ 2,067
13 – 24	6,180	1,354	5,639	1,214
25 – 36	4,556	889	4,133	777
37 – 48	3,145	460	2,759	369
49 – 60	1,794	129	1,555	67
Thereafter	624	11	498	2
Total	$ 31,282	$ 4,814	$ 30,758	$ 4,496

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 seven years. The average term for wholesale notes is less than twelve months.

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. The company ceases accruing finance income when these receivables are generally 90 days delinquent. Generally, when receivables are 120 days delinquent the estimated uncollectible amount, after charging the dealer's deposit 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.

Due to the significant, negative effects of COVID on dealers and retail customers, the company provided short-term payment relief to dealers and retail customers on financing receivables, which includes retail notes, wholesale notes, revolving charge accounts, and sales-type and direct financing leases. The relief was provided in regional programs and case-by-case situations with customers that were generally current in their payment obligations. This relief generally included payment deferrals or reduced financing rates of three months or less. The balance of financing receivables granted relief was approximately 4 percent of the total financing receivable balance at November 1, 2020. The delinquency status of receivables granted relief is based on the modified payment schedule.

An age analysis of past due financing receivables that are still accruing interest and non-performing financing receivables at November 1, 2020 and November 3, 2019 follows in millions of dollars:

	30-59 Days Past Due	60-89 Days Past Due	90 Days or Greater Past Due	Total Past Due
2020				
Retail Notes:				
Agriculture and turf	$ 122	$ 59		$ 181
Construction and forestry	89	48	$ 14	151
Other:				
Agriculture and turf	26	9	2	37
Construction and forestry	24	8		32
Total	$ 261	$ 124	$ 16	$ 401

	Total Past Due	Total Non-Performing	Current	Total Financing Receivables
Retail Notes:				
Agriculture and turf	$ 181	$ 242	$ 20,454	$ 20,877
Construction and forestry	151	86	3,945	4,182
Other:				
Agriculture and turf	37	74	7,940	8,051
Construction and forestry	32	21	1,474	1,527
Total	$ 401	$ 423	$ 33,813	34,637
Less allowance for credit losses				184
Total financing receivables - net				$ 34,453

	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

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
2020				
Allowance:				
Beginning of year balance	$ 89	$ 40	$ 21	$ 150
Provision	69	26	15	110
Write-offs	(57)	(53)	(8)	(118)
Recoveries	15	30	2	47
Translation adjustments	(7)		2	(5)
End of year balance*	$ 109	$ 43	$ 32	$ 184
Financing receivables:				
End of year balance	$ 25,059	$ 3,902	$ 5,676	$ 34,637
Balance individually evaluated	$ 137	$ 1	$ 117	$ 255
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

* Individual allowances were not significant.

The negative economic effects related to COVID and other macroeconomic issues have significantly affected certain retail borrowers, particularly of construction equipment.

Past-due amounts over 30 days represented 1.16 percent and 1.23 percent of the receivables financed at November 1, 2020 and November 3, 2019, respectively. The allowance for credit losses represented .53 percent and .44 percent of financing receivables outstanding at November 1, 2020 and November 3, 2019, respectively. In addition, at November 1, 2020 and November 3, 2019, the company's financial services operations had $136 million and $152 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 1, 2020 and November 3, 2019 follows in millions of dollars:

	Recorded Investment	Unpaid Principal Balance	Specific Allowance	Average Recorded Investment
2020*				
Receivables with specific allowance**	$ 136	$ 136	$ 22	$ 151
Receivables without a specific allowance***	36	34		40
Total	$ 172	$ 170	$ 22	$ 191
Agriculture and turf	$ 161	$ 160	$ 18	$ 177
Construction and forestry	$ 11	$ 10	$ 4	$ 14
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

* Finance income recognized was not material.
** Primarily financing leases, wholesale receivables, and retail notes.
*** 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 2020, 2019, and 2018, the company identified 574, 522, and 587 receivable contracts, primarily wholesale receivables in Argentina, as troubled debt restructurings with aggregate balances of $108 million, $36 million, and $34 million pre-modification and $95 million, $35 million, and $34 million post-modification, respectively. In 2020 and 2019, there were no significant troubled debt restructurings that subsequently defaulted and were written off. At November 1, 2020, the company had commitments to lend approximately $10 million to borrowers whose accounts were modified in troubled debt restructurings.

Other Receivables

Other receivables at November 1, 2020 and November 3, 2019 consisted of the following in millions of dollars:

	2020	**2019**
Taxes receivable	$ 931	$ 1,231
Other	289	256
Other receivables	$ 1,220	$ 1,487

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 does 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 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 $2,898 million and $2,895 million at November 1, 2020 and November 3, 2019, respectively. The liabilities (short-term securitization borrowings and accrued interest) of these SPEs totaled $2,856 million and $2,847 million at November 1, 2020 and November 3, 2019, 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 $576 million and $491 million at November 1, 2020 and November 3, 2019, respectively. The liabilities (short-term securitization borrowings and accrued interest) were $554 million and $465 million at November 1, 2020 and November 3, 2019, 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 $1,327 million and $1,079 million at November 1, 2020 and November 3, 2019, respectively. The liabilities (short-term securitization borrowings and accrued interest) related to these conduits were $1,275 million and $1,015 million at November 1, 2020 and November 3, 2019, 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 1, 2020 in millions of dollars:

	2020
Carrying value of liabilities	$1,275
Maximum exposure to loss	1,327

The total assets of unconsolidated VIEs related to securitizations were approximately $33 billion at November 1, 2020.

The components of consolidated restricted assets related to secured borrowings in securitization transactions at November 1, 2020 and November 3, 2019 were as follows in millions of dollars:

	2020	2019
Financing receivables securitized (retail notes)	$ 4,716	$ 4,395
Allowance for credit losses	(13)	(12)
Other assets	98	82
Total restricted securitized assets	$ 4,801	$ 4,465

The components of consolidated secured borrowings and other liabilities related to securitizations at November 1, 2020 and November 3, 2019 were as follows in millions of dollars:

	2020	2019
Short-term securitization borrowings	$ 4,682	$ 4,321
Accrued interest on borrowings	3	6
Total liabilities related to restricted securitized assets	$ 4,685	$ 4,327

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 1, 2020, the maximum remaining term of all securitized retail notes was approximately six years.

15. 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 1, 2020 and November 3, 2019 represented 52 percent and 55 percent, respectively, of worldwide gross inventories at FIFO value. The pretax favorable income effect from the liquidation of LIFO inventory during 2020 was $33 million. If all inventories had been valued on a FIFO basis, estimated inventories by major classification at November 1, 2020 and November 3, 2019 in millions of dollars would have been as follows:

	2020	2019
Raw materials and supplies	$ 1,995	$2,285
Work-in-process	648	747
Finished goods and parts	4,006	4,613
Total FIFO value	6,649	7,645
Less adjustment to LIFO value	1,650	1,670
Inventories	$ 4,999	$ 5,975

16. PROPERTY AND DEPRECIATION

A summary of property and equipment at November 1, 2020 and November 3, 2019 in millions of dollars follows:

	Useful Lives* (Years)	2020	2019
Equipment Operations			
Land		$ 282	$ 274
Buildings and building equipment	22	4,114	3,976
Machinery and equipment	11	5,936	5,710
Dies, patterns, tools, etc.	8	1,662	1,531
All other	4	1,115	1,065
Construction in progress		440	733
Total at cost		13,549	13,289
Less accumulated depreciation		7,771	7,360
Total		5,778	5,929
Financial Services			
Land		4	4
Buildings and building equipment	25	65	75
All other	6	34	34
Total at cost		103	113
Less accumulated depreciation		64	69
Total		39	44
Property and equipment - net		$ 5,817	$ 5,973

* Weighted-averages

Total property and equipment additions in 2020, 2019, and 2018 were $815 million, $1,107 million, and $985 million and depreciation was $800 million, $779 million, and $754 million, respectively. Capitalized interest was $6 million, $7 million, and $4 million in the same periods, respectively. The cost of leased property and equipment under finance leases of $99 million and $62 million and accumulated depreciation of $36 million and $27 million at November 1, 2020 and November 3, 2019, 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 1, 2020 and November 3, 2019 were $1,339 million and $1,305 million, less accumulated amortization of $1,070 million and $1,023 million, respectively. Capitalized interest on software was $3 million and $5 million at November 1, 2020 and November 3, 2019, respectively. Amortization of these software costs in 2020, 2019, and 2018 was $133 million, $150 million, and $145 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.

17. 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 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
Acquisition*	28		28
Translation adjustments and other	(1)	137	136
Goodwill at November 1, 2020	$ 601	$ 2,480	$ 3,081

* See Note 4.

There were no accumulated goodwill impairment losses in the reported periods.

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

	2020	2019
Amortized intangible assets:		
Customer lists and relationships	$ 535	$ 511
Technology, patents, trademarks, and other	1,056	1,028
Total at cost	1,591	1,539
Less accumulated amortization*	387	282
Total	1,204	1,257
Unamortized intangible assets:		
In-process research and development	123	123
Other intangible assets - net	$1,327	$1,380

* Accumulated amortization at 2020 and 2019 for customer lists and relationships was $113 million and $77 million and technology, patents, trademarks, and other was $274 million and $205 million, respectively.

Other intangible assets are stated at cost less accumulated amortization. The amortization of other intangible assets in 2020, 2019, and 2018 was $102 million, $109 million, and $100 million, respectively. The estimated amortization expense for the next five years is as follows in millions of dollars: 2021 - $105, 2022 - $105, 2023 - $103, 2024 - $99, and 2025 - $96.

18. TOTAL SHORT-TERM BORROWINGS

Total short-term borrowings at November 1, 2020 and November 3, 2019 consisted of the following in millions of dollars:

	2020	2019
Equipment Operations		
Notes payable to banks	$ 192	$ 345
Finance lease obligations due within one year	21	
Long-term borrowings due within one year	79	642
Total	292	987
Financial Services		
Commercial paper	1,238	2,698
Notes payable to banks	182	313
Long-term borrowings due within one year*	6,870	6,786
Total	8,290	9,797
Short-term borrowings	8,582	10,784
Short-term securitization borrowings		
Equipment Operations	26	44
Financial Services	4,656	4,277
Total	4,682	4,321
Total short-term borrowings	$ 13,264	$ 15,105

* 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 1, 2020 based on the expected liquidation of the retail notes in millions of dollars is as follows: 2021 - $2,367, 2022 - $1,366, 2023 - $681, 2024 - $217, 2025 - $50, and 2026 - $6.

The weighted-average interest rates on total short-term borrowings, excluding current maturities of finance lease obligations and long-term borrowings, at November 1, 2020 and November 3, 2019 were 1.6 percent and 2.9 percent, respectively.

Lines of credit available from U.S. and foreign banks were $8,413 million at November 1, 2020. At November 1, 2020, $6,801 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 1, 2020 was a 364-day credit facility agreement of $3,000 million, expiring in fiscal April 2021. In addition, total credit lines included long-term credit facility agreements of $2,500 million, expiring in fiscal April 2024, and $2,500 million, expiring in fiscal April 2025. 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 1, 2020 was $12,892 million. Alternatively under this provision, the equipment operations had the capacity to incur additional debt of $23,942 million at November 1, 2020. 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.

19. ACCOUNTS PAYABLE AND ACCRUED EXPENSES

Accounts payable and accrued expenses at November 1, 2020 and November 3, 2019 consisted of the following in millions of dollars:

	2020	2019
Equipment Operations		
Accounts payable:		
Trade payables	$ 1,926	$ 1,996
Dividends payable	244	244
Operating lease liabilities	297	
Other	251	284
Accrued expenses:		
Dealer sales discounts	1,682	1,990
Product warranties	1,105	1,218
Employee benefits	1,086	1,001
Accrued taxes	730	734
Unearned revenue	679	657
Other	1,114	1,108
Total	$ 9,114	$ 9,232

(continued)

	2020	2019
Financial Services		
Accounts payable:		
Deposits withheld from dealers and merchants	$ 141	$ 164
Collateral on derivatives	274	
Other	194	163
Accrued expenses:		
Unearned revenue	968	978
Accrued interest	181	211
Employee benefits	60	61
Other	309	259
Total	2,127	1,836
Eliminations*	1,129	1,412
Accounts payable and accrued expenses	$ 10,112	$ 9,656

* Primarily trade receivable valuation accounts related to sales incentive accruals of $1,073 million, which are reclassified as accrued expenses by the equipment operations as a result of their trade receivables being sold to financial services.

20. LONG-TERM BORROWINGS

Long-term borrowings at November 1, 2020 and November 3, 2019 consisted of the following in millions of dollars:

	2020	2019
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
2.75% notes due 2025	700	
6.55% debentures due 2028	200	200
5.375% notes due 2029	500	500
3.10% notes due 2030	700	
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	500
3.75% notes due 2050	850	
Euro notes:		
.5% notes due 2023 (€500 principal)	584	558
1.375% notes due 2024 (€800 principal)	934	
1.85% notes due 2028 (€600 principal)	700	
2.20% notes due 2032 (€600 principal)	700	
1.65% notes due 2039 (€650 principal)	759	725
Finance lease obligations and other notes	135	51
Less debt issuance costs	43	24
Total	10,124	5,415
Financial Services		
Notes and debentures:		
Medium-term notes due 2021 - 2030: (principal $20,996 - 2020, $23,265 - 2019) Average interest rates of 1.7% - 2020, 2.7% - 2019	21,661 *	23,528 *
Other notes	992	1,335
Less debt issuance costs	43	49
Total	22,610	24,814
Long-term borrowings**	$ 32,734	$ 30,229

* 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: 2021 - $79, 2022 - $1,212, 2023 - $587, 2024 - $935, and 2025 - $700. 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: 2021 - $6,867, 2022 - $6,945, 2023 - $5,228, 2024 - $3,011, and 2025 - $2,166.

21. 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 $638 million and $582 million at November 1, 2020 and November 3, 2019, respectively.

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

	Warranty Liability/ Unearned Premiums	
	2020	**2019**
Beginning of year balance	$ 1,800	$ 1,652
Payments	(942)	(985)
Amortization of premiums received	(222)	(214)
Accruals for warranties	851	1,066
Premiums received	276	292
Foreign exchange	(20)	(11)
End of year balance	$ 1,743	$ 1,800

At November 1, 2020, the company had approximately $380 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 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 1, 2020, the company had accrued losses of approximately $18 million under these agreements. The maximum remaining term of the receivables guaranteed at November 1, 2020 was approximately seven years.

At November 1, 2020, the company had commitments of approximately $159 million for the construction and acquisition of property and equipment. Also at November 1, 2020, the company had restricted assets of $71 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 $40 million at November 1, 2020. The accrued liability for these contingencies was not material at November 1, 2020.

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.

22. CAPITAL STOCK

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

	Number of Shares Issued	Amount
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
Stock options and other		253
Balance at November 1, 2020	536.4	$ 4,895

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. In December 2019, the Board of Directors approved a share repurchase plan authorizing the repurchase of up to an additional $8,000 million of shares of the company's common stock. At the end of the fiscal year, these repurchase programs had $8,339 million (36.9 million shares based on the fiscal year end closing common stock price of $225.91 per share) remaining to be repurchased. Repurchases of the company's common stock under these plans 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:

	2020	**2019**	**2018**
Net income attributable to Deere & Company	$ 2,751	$ 3,253	$ 2,368
Average shares outstanding	313.5	316.5	322.6
Basic per share	$ 8.77	$ 10.28	$ 7.34
Average shares outstanding	313.5	316.5	322.6
Effect of dilutive stock options	3.1	4.1	4.7
Total potential shares outstanding	316.6	320.6	327.3
Diluted per share	$ 8.69	$ 10.15	$ 7.24

All stock options outstanding were included in the computation except .6 million in 2020, .7 million in 2019, and .4 million in 2018 that had an antidilutive effect under the treasury stock method.

23. 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 and 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. The company recognizes the effect of award forfeitures as an adjustment to compensation expense in the period the forfeiture occurs. According to these plans at November 1, 2020, the company is authorized to grant an additional 18.5 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. The expected term of options granted is derived from the output of the option valuation model based on the underlying distribution of historical exercise behavior and represents the weighted-average 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:

	2020	**2019**	**2018**
Risk-free interest rate*	1.67%	2.85%	2.34%
Expected dividends	1.8%	2.0%	1.6%
Volatility*	26.0%	30.0%	22.8%
Expected term (in years)*	5.7	8.2	8.4

* Weighted-averages

Stock option activity at November 1, 2020 and changes during 2020 in millions of dollars and shares follow:

	Shares	Exercise Price*	Remaining Contractual Term (Years)	Aggregate Intrinsic Value
Outstanding at beginning of year	7.0	$ 92.85		
Granted	.5	169.70		
Exercised	(3.7)	88.36		
Expired or forfeited	(.1)	169.70		
Outstanding at end of year	3.7	107.30	5.51	$ 437.5
Exercisable at end of year	3.0	93.79	4.76	391.0

* Weighted-averages

The weighted-average grant-date fair values of options granted during 2020, 2019, and 2018 were $35.83, $46.96, and $39.11, respectively. The total intrinsic values of options exercised during 2020, 2019, and 2018 were $398 million, $186 million, and $229 million, respectively. During 2020, 2019, and 2018, cash received from stock option exercises was $331 million, $178 million, and $217 million, respectively, with tax benefits of $93 million, $44 million, and $54 million, respectively.

The company granted 364 thousand, 447 thousand, and 415 thousand restricted stock units to employees and nonemployee directors in 2020, 2019, and 2018, of which 297 thousand, 355 thousand, and 330 thousand are subject to service-only based conditions, and 67 thousand, 92 thousand, and 85 thousand are subject to performance/service based conditions, respectively. The service-only based 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 performance/service based units 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-only based units at the grant dates during 2020, 2019, and 2018 were $168.94, $149.54, and $151.67 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 2020, 2019, and 2018 were $160.81, $140.49, and $145.33 per unit, respectively, based on the market price of a share of underlying common stock excluding dividends.

The company's restricted shares at November 1, 2020 and changes during 2020 in millions of shares follow:

	Shares	Grant-Date Fair Value*
Service-only based		
Nonvested at beginning of year	1.1	$ 130.72
Granted	.3	168.94
Vested	(.4)	102.34
Forfeited	(.1)	162.62
Nonvested at end of year	.9	155.47
Performance/service based		
Nonvested at beginning of year	.3	$ 130.78
Granted	.1	160.81
Vested	(.2)	111.78
Nonvested at end of year	.2	147.55

* Weighted-averages

During 2020, 2019, and 2018, the total share-based compensation expense was $81 million, $82 million, and $84 million, respectively, with recognized income tax benefits of $19 million, $20 million, and $20 million, respectively. At November 1, 2020, there was $55 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 2020, 2019, and 2018 were $79 million, $66 million, and $63 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 37 million shares remaining to be repurchased under its publicly announced repurchase programs (see Note 22).

24. OTHER COMPREHENSIVE INCOME ITEMS

The after-tax changes in accumulated other comprehensive income at October 29, 2017, October 28, 2018, November 3, 2019, and November 1, 2020 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)
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)
Period Change	(3)	55	2	14	68
2020	$ (3,918)	$ (1,596)	$ (58)	$ 33	$ (5,539)

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
2020			
Cumulative translation adjustment:			
Unrealized translation gain (loss)	$ 18	$ 1	$ 19
Reclassification of realized (gain) loss to:			
Other operating expenses	13		13
Equity in (income) loss of unconsolidated affiliates	23		23
Net unrealized translation gain (loss)	54	1	55
Unrealized gain (loss) on derivatives:			
Unrealized hedging gain (loss)	(18)	2	(16)
Reclassification of realized (gain) loss to:			
Interest rate contracts – Interest expense	21	(3)	18
Net unrealized gain (loss) on derivatives	3	(1)	2
Unrealized gain (loss) on debt securities:			
Unrealized holding gain (loss)	17	(3)	14
Net unrealized gain (loss) on debt securities	17	(3)	14
Retirement benefits adjustment:			
Pensions			
Net actuarial gain (loss)	(438)	99	(339)
Reclassification primarily to other operating expenses through amortization of: *			
Actuarial (gain) loss	249	(61)	188
Prior service (credit) cost	11	(3)	8
Settlements	26	(7)	19
OPEB			
Net actuarial gain (loss)	136	(34)	102
Reclassification to other operating expenses through amortization of: *			
Actuarial (gain) loss	29	(7)	22
Prior service (credit) cost	(4)	1	(3)
Net unrealized gain (loss) on retirement benefits adjustment	9	(12)	(3)
Total other comprehensive income (loss)	$ 83	$ (15)	$ 68

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

	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.

The noncontrolling interests' comprehensive income was $2 million in 2020, $4 million in 2019, and $2 million in 2018, which consisted of net income of $2 million in 2020, $4 million in 2019, and $3 million in 2018 and cumulative translation adjustments of none in 2020 and 2019, and $(1) million in 2018.

25. LEASES

The company is both a lessee and a lessor. The company leases for its own use primarily warehouse facilities, office space, production equipment, information technology equipment, and vehicles. The expected use periods generally ranging from less than one year to 20 years. The company's financial services segment leases to users equipment produced or sold by the company, and a limited amount of other equipment. These leases are usually written for periods of less than one year to seven years. The company determines if an arrangement is or contains a lease at the contract inception.

Lessee

The company recognizes on the balance sheet a lease liability and a right of use asset for leases with a term greater than one year for both operating and finance leases.

The amounts of the lease liability and right of use asset are determined at lease commencement and are based on the present value of the lease payments over the lease term. The lease payments are discounted using the company's incremental borrowing rate since the rate implicit in the lease is generally not readily determinable. The company determines the incremental borrowing rate for each lease based primarily on the lease term and the economic environment of the country where the asset will be used, adjusted as if the borrowings were collateralized. Leases with contractual periods greater than one year and that do not meet the finance lease criteria are classified as operating leases.

Certain real estate leases contain one or more options to terminate or renew, with terms that can generally extend the lease term from one to ten years. Options that the company is reasonably certain to exercise are included in the lease term.

The company has elected to combine lease and nonlease components, such as maintenance and utilities costs included in a lease contract, for all asset classes. Leases with an initial term of one year or less are expensed on a straight-line basis over the lease term and recorded in short-term lease expense. Variable lease expense primarily includes warehouse facilities leases with payments based on utilization exceeding contractual minimum amounts and leases with payments indexed to inflation when the index changes after lease commencement.

The lease expense by type consisted of the following in millions of dollars:

	2020
Operating lease expense	$ 126
Short-term lease expense	23
Variable lease expense	41
Finance lease:	
Depreciation expense	20
Interest on lease liabilities	2
Total lease expense	$ 212

Operating and finance lease right of use assets and lease liabilities follow in millions of dollars:

	2020
Operating leases:	
Other assets	$ 324
Accounts payable and accrued expenses	305
Finance leases:	
Property and equipment — net	$ 63
Short-term borrowings	21
Long-term borrowings	39
Total finance lease liabilities	$ 60

The weighted-average remaining lease terms in years and discount rates follows:

	2020
Weighted-average remaining lease terms:	
Operating leases	5
Finance leases	3
Weighted-average discount rates:	
Operating leases	2.1%
Finance leases	2.2%

Lease payment amounts in each of the next five years at November 1, 2020 follow in millions of dollars:

Due in:	Operating Leases	Finance Leases
2021	$ 90	$ 22
2022	74	18
2023	52	12
2024	42	5
2025	24	3
Later years	41	2
Total lease payments	323	62
Less imputed interest	18	2
Total lease liabilities	$ 305	$ 60

Future minimum lease payments under the previous lease standard for operating and capital leases at November 3, 2019 follow in millions of dollars:

Due in:	Operating Leases	Capital Leases
2020	$ 111	$ 12
2021	77	10
2022	56	6
2023	39	2
2024	28	1
Later years	26	1
Total minimum lease payments	$ 337	$ 32

Cash paid for amounts included in the measurement of lease liabilities follows in millions of dollars:

	2020
Operating cash flows from operating leases	$ 124
Operating cash flows from finance leases	2
Financing cash flows from finance leases	17

Right of use assets obtained in exchange for lease liabilities follow in millions of dollars:

		2020
Operating leases	$	40
Finance leases		46

Lessor

The company leases equipment manufactured or sold by the company and a limited amount of non-Deere equipment to retail customers through sales-type, direct financing, and operating leases. Sales-type and direct financing leases are reported in "Financing receivables - net" on the consolidated balance sheet. Operating leases are reported in "Equipment on operating leases - net" on the consolidated balance sheet.

Leases offered by the company may include early termination and renewal options. At the end of a lease, the lessee generally has the option to purchase the underlying equipment for a fixed price or return it to the dealer. If the equipment is returned to the dealer, the dealer also has the option to purchase the equipment or return it to the company for remarketing.

The company estimates the residual values for operating leases at lease inception based on several factors, including lease term, expected hours of usage, historical wholesale sale prices, return experience, intended use of the equipment, market dynamics and trends, and dealer residual guarantees. The company reviews residual value estimates during the lease term and tests the carrying value of its operating lease assets for impairment when events or circumstances necessitate. The depreciation is adjusted on a straight-line basis over the remaining lease term if residual value estimates decline. Lease agreements include usage limits and specifications on machine condition, which allow the company to assess lessees for excess use or damages to the underlying equipment. In 2020 and 2019, the company recorded impairment losses on operating leases of $22 million and $59 million, respectively, due to higher expected equipment return rates and lower estimated values. Operating lease impairments are recorded in "Other operating expenses."

The company has elected to combine lease and nonlease components. The nonlease components primarily relate to preventative maintenance and extended warranty agreements financed by the retail customer. The company has also elected to report consideration related to sales and value added taxes net of the related tax expense. Property taxes on leased assets are recorded on a gross basis in "Finance and interest income" and "Other operating expenses" on the statement of consolidated income. Variable lease revenues primarily relate to property taxes on leased assets in certain markets and late fees.

Due to the significant, negative effects of COVID, the company provided short-term relief to lessees during 2020. The relief, which included payment deferrals of three months or less, was provided in regional programs and on a case-by-case basis and primarily related to construction accounts. The operating leases granted relief represented approximately 4 percent of the company's operating lease portfolio at November 1, 2020. See Note 13 for sales-type and direct financing leases provided payment relief.

Lease revenues earned by the company follow in millions of dollars:

		2020
Sales-type and direct finance lease revenues	$	135
Operating lease revenues		1,469
Variable lease revenues		23
Total lease revenues	$	1,627

At the time of accepting a lease that qualifies as a sales-type or direct financing lease, the company records the gross amount of lease payments receivable, estimated residual value of the leased equipment, and unearned finance income. The unearned finance income is recognized as revenue over the lease term using the interest method.

Sales-type and direct financing lease receivables by product category follow in millions of dollars:

		2020		2019
Agriculture and turf	$	985	$	897
Construction and forestry		1,030		1,033
Total		2,015		1,930
Guaranteed residual values		278		232
Unguaranteed residual values		71		101
Less unearned finance income		217		212
Financing lease receivables	$	2,147	$	2,051

Scheduled payments, including guaranteed residual values, on sales-type and direct financing lease receivables at November 1, 2020 follow in millions of dollars:

Due in:		2020
2021	$	1,055
2022		595
2023		361
2024		191
2025		74
Later years		17
Total	$	2,293

Scheduled payments on financing lease receivables under the previous lease standard at November 3, 2019 follow in millions of dollars:

Due in:		2019
2020	$	833
2021		557
2022		321
2023		153
2024		53
Later years		13
Total	$	1,930

Lease payments from operating leases are recorded as income on a straight-line method over the lease terms. Operating lease assets are recorded at cost and depreciated to their estimated residual value on a straight-line method over the terms of the leases.

The cost of equipment on operating leases by product category follow in millions of dollars:

	2020	2019
Agriculture and turf	$ 7,366	$ 7,257
Construction and forestry	1,921	2,165
Total	9,287	9,422
Less accumulated depreciation	1,989	1,855
Equipment on operating leases - net	$ 7,298	$ 7,567

The total operating lease residual values at November 1, 2020 and November 3, 2019 were $5,254 million and $5,259 million, respectively. Certain operating leases are subject to residual value guarantees. The total residual value guarantees were $757 million and $647 million at November 1, 2020 and November 3, 2019, respectively. The residual value guarantees at November 1, 2020 and November 3, 2019 include $5 million and $12 million, respectively, of dealer deposits available for potential losses on residual values.

The equipment is depreciated on a straight-line basis over the term of the lease. The corresponding depreciation expense was $1,083 million in 2020, $981 million in 2019, and $928 million in 2018.

Lease payments for equipment on operating leases at November 1, 2020 were scheduled as follows in millions of dollars:

Due in:	2020
2021	$ 1,073
2022	731
2023	404
2024	197
2025	42
Later years	4
Total	$ 2,451

Rental payments for equipment on operating leases under the previous lease standard at November 3, 2019 were scheduled as follows in millions of dollars:

Due in:	2019
2020	$ 1,086
2021	759
2022	419
2023	193
2024	41
Total	$ 2,498

Past due balances of operating leases represent the total balance held (net book value plus accrued lease payments) and still accruing financing income with any payment amounts 30 days or more past the contractual payment due date. These amounts were $87 million and $112 million at November 1, 2020 and November 3, 2019, respectively. The delinquency status of operating leases granted relief due to COVID is based on the modified payment schedule.

The company discusses with lessees and dealers options to purchase the equipment or extend the lease prior to lease maturity. Equipment returned to the company upon termination of leases is remarketed by the company and 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 balances at November 1, 2020 and November 3, 2019 were $70 million and $163 million, respectively. In 2020 and 2019, the company recorded impairment losses on matured operating lease inventory of $10 million and $18 million, respectively. Impairment losses on matured operating lease inventory are included in “Other operating expenses.”

26. 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 1, 2020 and November 3, 2019 in millions of dollars follow:

	2020		2019	
	Carrying Value	Fair Value*	Carrying Value	Fair Value*
Financing receivables – net:				
Equipment operations	$ 105	$ 103	$ 65	$ 61
Financial services	29,645	29,838	29,130	29,106
Total	$ 29,750	$ 29,941	$ 29,195	$ 29,167
Financing receivables securitized – net:				
Equipment operations	$ 26	$ 26	$ 44	$ 43
Financial services	4,677	4,773	4,339	4,362
Total	$ 4,703	$ 4,799	$ 4,383	$ 4,405
Short-term securitization borrowings:				
Equipment operations	$ 26	$ 26	$ 44	$ 45
Financial services	4,656	4,698	4,277	4,302
Total	$ 4,682	$ 4,724	$ 4,321	$ 4,347
Long-term borrowings due within one year:**				
Equipment operations	$ 79	$ 78	$ 642	$ 645
Financial services	6,870	6,936	6,786	6,788
Total	$ 6,949	$ 7,014	$ 7,428	$ 7,433
Long-term borrowings:**				
Equipment operations	$ 10,085	$ 11,837	$ 5,415	$ 6,138
Financial services	22,610	23,170	24,814	25,122
Total	$ 32,695	$ 35,007	$ 30,229	$ 31,260

* 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.
** Values exclude finance lease liabilities that are presented as borrowings beginning in 2020 (see Note 25).

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 1, 2020 and November 3, 2019 at fair value on a recurring basis in millions of dollars follow*:

	2020	2019
Level 1:		
Marketable securities		
U.S. equity fund	$ 62	$ 59
International equity securities	2	
U.S. government debt securities	55	50
Total Level 1 marketable securities	119	109
Level 2:		
Marketable securities		
U.S. government debt securities	113	81
Municipal debt securities	68	60
Corporate debt securities	188	165
International debt securities	2	5
Mortgage-backed securities**	147	160
Total Level 2 marketable securities	518	471
Other assets		
Derivatives:		
Interest rate contracts	669	363
Foreign exchange contracts	48	20
Cross-currency interest rate contracts	8	1
Total Level 2 other assets	725	384
Accounts payable and accrued expenses		
Derivatives:		
Interest rate contracts	88	65
Foreign exchange contracts	26	71
Cross-currency interest rate contracts	1	3
Total Level 2 accounts payable and accrued expenses	115	139
Level 3:		
Marketable securities		
International debt securities	4	1

* 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 1, 2020, November 3, 2019, and October 28, 2018 in millions of dollars follow:

	2020	2019	2018
Beginning of year balance	$ 1	$ 8	$ 17
Purchases	9		
Principal payments	(1)	(8)	(9)
Change in unrealized gain			1
Other	(5)	1	(1)
End of year balance	$ 4	$ 1	$ 8

Fair value, nonrecurring Level 3 measurements from impairments at November 1, 2020 and November 3, 2019 in millions of dollars follow:

	Fair Value		Losses		
	2020	**2019**	**2020**	**2019**	**2018**
Other receivables [1]	$ 1		$ 2		
Equipment on operating leases – net [2]	$ 371	$ 855	$ 22	$ 59	
Property and equipment – net [3]	$ 135		$ 102		
Investments in unconsolidated affiliates [4]	$ 19		$ 50		
Other intangible assets – net			$ 2		
Other assets [2]	$ 59	$ 142	$ 16	$ 18	

[1] Fair value as of August 2, 2020.
[2] Fair value as of May 3, 2020.
[3] Fair value of $70 million at May 3, 2020, $8 million at August 2, 2020, and $57 million at November 1, 2020.
[4] Fair value as of November 1, 2020.

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).

Other Receivables – The impairment was based on the expected realization of value-added tax receivables related to a closed factory operation (see Note 5).

Equipment on Operating Leases – Net – The impairments are based on an income approach (discounted cash flow), using the contractual payments, plus an estimate of return rates and equipment sale price at lease maturity. Inputs include realized sales values (see Note 5).

Property and Equipment – Net – The impairments are measured at the lower of the carrying amount, or fair value. The valuations were based on a cost approach. The inputs include replacement cost estimates adjusted for physical deterioration and economic obsolescence (see Note 5).

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 or the estimated realization amount (see Note 5).

Other Intangible Assets – Net – The impairment was measured at the remaining net book value of customer relationships related to a closed factory operation (see Note 5).

Other Assets – The impairments of the matured operating lease inventory were measured at the fair value of that inventory. The inputs include sales of comparable assets (see Note 5).

27. 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 1, 2020 and November 3, 2019 were $1,550 million and $3,150 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 1, 2020 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 $9 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 1, 2020 and November 3, 2019 were $7,239 million and $8,717 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 1, 2020 and 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
2020				
Long-term borrowings due within one year*	$ 155	$ 2	$ 3	$ 5
Long-term borrowings	7,725	543	122	665
2019				
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 1, 2020 and November 3, 2019 were $8,514 million and $9,166 million, the foreign exchange contracts were $4,903 million and $4,962 million, and the cross-currency interest rate contracts were $113 million and $92 million, respectively. 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 1, 2020 and November 3, 2019 in millions of dollars follow:

	2020	2019
Other Assets		
Designated as hedging instruments:		
Interest rate contracts	$ 586	$ 332
Total designated	586	332
Not designated as hedging instruments:		
Interest rate contracts	83	31
Foreign exchange contracts	48	20
Cross-currency interest rate contracts	8	1
Total not designated	139	52
Total derivative assets	$ 725	$ 384
Accounts Payable and Accrued Expenses		
Designated as hedging instruments:		
Interest rate contracts	$ 14	$ 28
Total designated	14	28
Not designated as hedging instruments:		
Interest rate contracts	74	37
Foreign exchange contracts	26	71
Cross-currency interest rate contracts	1	3
Total not designated	101	111
Total derivative liabilities	$ 115	$ 139

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:

	2020	2019	2018
Fair Value Hedges			
Interest rate contracts – Interest expense	$ 496	$ 589	$ (283)
Cash Flow Hedges			
Recognized in OCI			
Interest rate contracts – OCI (pretax)*	(18)	(92)	17
Foreign exchange contracts – OCI (pretax)*			2
Reclassified from OCI			
Interest rate contracts – Interest expense*	(21)	5	5
Foreign exchange contracts – Other expense*			1
Not Designated as Hedges			
Interest rate contracts – Net sales	$ (23)	$ (23)	$ 3
Interest rate contracts – Interest expense*	(2)	(32)	(4)
Foreign exchange contracts – Cost of sales	93	(18)	(24)
Foreign exchange contracts – Other expense*	122	97	195
Total not designated	$ 190	$ 24	$ 170

* 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 1, 2020 and November 3, 2019, was $89 million and $68 million, respectively. In accordance with the limits established in these agreements, the company posted no cash collateral at November 1, 2020 or November 3, 2019. In addition, the company paid $8 million of collateral either in cash or pledged securities that was outstanding at November 1, 2020 to participate in an international futures market to hedge currency exposure, not included in the table below.

Derivatives are recorded without offsetting for netting arrangements or collateral. The impact on the derivative assets and liabilities related to netting arrangements and collateral at November 1, 2020 and November 3, 2019 in millions of dollars follows:

	Gross Amounts Recognized	Netting Arrangements	Collateral	Net Amount
2020				
Assets	$ 725	$ (93)	$ (274)	$ 358
Liabilities	115	(93)		22
2019				
Assets	$ 384	$ (70)		$ 314
Liabilities	139	(70)		69

28. 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, golf course equipment, utility vehicles, and commercial mowing equipment, along with a broad line of associated implements; integrated agricultural solutions and precision technologies; 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, roadbuilding, 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; and precision technologies.

The products and services produced by the segments above are marketed primarily through independent retail dealer networks and major retail outlets, and, as it relates to roadbuilding products, primarily through company-owned sales and service subsidiaries.

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 1, 2020, November 3, 2019, and October 28, 2018. In addition to the following unaffiliated sales and revenues by segment, intersegment sales and revenues in 2020, 2019, and 2018 were as follows: agriculture and turf net sales of $24 million, $34 million, and $47 million, construction and forestry net sales of $1 million, $1 million, and none, and financial services revenues of $278 million, $348 million, and $308 million, respectively.

OPERATING SEGMENTS	**2020**	**2019**	**2018**
Net sales and revenues			
Unaffiliated customers:			
Agriculture and turf net sales	$ 22,325	$ 23,666	$ 23,191
Construction and forestry net sales	8,947	11,220	10,160
Total net sales	31,272	34,886	33,351
Financial services revenues	3,589	3,621	3,252
Other revenues*	679	751	755
Total	$ 35,540	$ 39,258	$ 37,358

* Other revenues are primarily the equipment operations' revenues for finance and interest income, and other income.

(continued)

OPERATING SEGMENTS	2020	2019	2018
Operating profit			
Agriculture and turf	$ 2,969	$ 2,506	$ 2,816
Construction and forestry	590	1,215	868
Financial services*	746	694	792
Total operating profit*	4,305	4,415	4,476
Interest income	62	85	80
Interest expense	(329)	(256)	(298)
Foreign exchange gains (losses) from equipment operations' financing activities	17	(22)	36
Pension and OPEB benefit (cost), excluding service cost component	31	67	(15)
Corporate expenses – net	(251)	(180)	(181)
Income taxes	(1,082)	(852)	(1,727)
Total	(1,552)	(1,158)	(2,105)
Net income	2,753	3,257	2,371
Less: Net income attributable to noncontrolling interests	2	4	3
Net income attributable to Deere & Company	$ 2,751	$ 3,253	$ 2,368

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

Interest income*			
Agriculture and turf	$ 38	$ 22	$ 14
Construction and forestry	12	11	33
Financial services	2,122	2,316	1,997
Corporate	62	85	80
Intercompany	(272)	(360)	(330)
Total	$ 1,962	$ 2,074	$ 1,794

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

Interest expense			
Agriculture and turf	$ 187	$ 245	$ 229
Construction and forestry	61	91	71
Financial services	942	1,234	936
Corporate	329	256	298
Intercompany	(272)	(360)	(330)
Total	$ 1,247	$ 1,466	$ 1,204

Depreciation* and amortization expense			
Agriculture and turf	$ 727	$ 723	$ 723
Construction and forestry	289	292	251
Financial services	1,227	1,135	1,077
Intercompany	(125)	(131)	(124)
Total	$ 2,118	$ 2,019	$ 1,927

* Includes depreciation for equipment on operating leases.

(continued)

OPERATING SEGMENTS	2020	2019	2018
Equity in income (loss) of unconsolidated affiliates			
Agriculture and turf	$ 2	$ 6	$ 6
Construction and forestry	(52)	14	19
Financial services	2	1	2
Total	$ (48)	$ 21	$ 27

Identifiable operating assets			
Agriculture and turf	$ 9,575	$ 10,379	$ 10,161
Construction and forestry	8,802	9,387	9,855
Financial services	48,719	48,483	45,720
Corporate*	7,995	4,762	4,372
Total	$ 75,091	$ 73,011	$ 70,108

* Corporate assets are primarily the equipment operations' retirement benefits, deferred income tax assets, marketable securities, and cash and cash equivalents.

Capital additions			
Agriculture and turf	$ 654	$ 859	$ 675
Construction and forestry	157	245	308
Financial services	4	3	2
Total	$ 815	$ 1,107	$ 985

Investments in unconsolidated affiliates			
Agriculture and turf	$ 30	$ 28	$ 26
Construction and forestry	144	171	166
Financial services	19	16	15
Total	$ 193	$ 215	$ 207

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	2020	2019	2018
Net sales and revenues			
Unaffiliated customers:			
U.S. and Canada:			
Equipment operations net sales and revenues*	$ 18,288	$ 20,647	$ 18,847
Financial services revenues*	3,098	3,099	2,785
Total	21,386	23,746	21,632
Outside U.S. and Canada:			
Equipment operations net sales and revenues	13,663	14,990	14,504
Financial services revenues	491	522	467
Total	14,154	15,512	14,971
Other revenues			755
Total	$ 35,540	$ 39,258	$ 37,358

* The 2018 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' percentage for 2018 was 88%. The financial services' U.S. only percentages was 79% for 2018. See Note 6 for additional 2020 and 2019 geographic net sales and revenues information.

(continued)

GEOGRAPHIC AREAS	2020	2019	2018
Operating profit			
U.S. and Canada:			
Equipment operations	$ 2,194	$ 2,335	$ 2,356
Financial services	581	506	604
Total	2,775	2,841	2,960
Outside U.S. and Canada:			
Equipment operations	1,365	1,386	1,328
Financial services	165	188	188
Total	1,530	1,574	1,516
Total	$ 4,305	$ 4,415	$ 4,476
Property and equipment			
U.S.	$ 3,150	$ 3,169	$ 3,031
Germany	1,113	1,137	1,164
Other countries	1,554	1,667	1,673
Total	$ 5,817	$ 5,973	$ 5,868

29. 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 1, 2020, there were 19,226 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 2020 contained 52 weeks and the fourth quarter contained 13 weeks compared to 53 weeks and 14 weeks in the respective periods in fiscal year 2019. 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
2020*				
Net sales and revenues	$ 7,631	$ 9,253	$ 8,925	$ 9,731
Net sales	6,530	8,224	7,859	8,659
Gross profit	1,452	1,930	2,024	2,189
Income before income taxes	569	929	1,270	1,115
Net income attributable to Deere & Company	517	666	811	757
Per share data:				
Basic	1.65	2.13	2.59	2.41
Diluted	1.63	2.11	2.57	2.39
Dividends declared	.76	.76	.76	.76
Dividends paid	.76	.76	.76	.76
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

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."

30. SUBSEQUENT EVENT

A quarterly dividend of $.76 per share was declared at the Board of Directors meeting on December 2, 2020, payable on February 8, 2021 to stockholders of record on December 31, 2020.

DEERE & COMPANY
SELECTED FINANCIAL DATA
(Dollars in millions except per share amounts)

	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Net sales and revenues	$ 35,540	$ 39,258	$ 37,358	$ 29,738	$ 26,644	$ 28,863	$ 36,067	$ 37,795	$ 36,157	$ 32,013
Net sales	31,272	34,886	33,351	25,885	23,387	25,775	32,961	34,998	33,501	29,466
Finance and interest income	3,450	3,493	3,107	2,732	2,511	2,381	2,282	2,115	1,981	1,923
Research and development expenses	1,644	1,783	1,658	1,373	1,394	1,410	1,437	1,445	1,409	1,192
Selling, administrative and general expenses	3,477	3,551	3,455	3,098	2,791	2,868	3,266	3,558	3,369	3,143
Interest expense	1,247	1,466	1,204	899	764	680	664	741	783	759
Net income*	2,751	3,253	2,368	2,159	1,524	1,940	3,162	3,537	3,065	2,800
Return on net sales	8.8%	9.3%	7.1%	8.3%	6.5%	7.5%	9.6%	10.1%	9.1%	9.5%
Return on beginning Deere & Company stockholders' equity	24.1%	28.8%	24.8%	33.1%	22.6%	21.4%	30.8%	51.7%	45.1%	44.5%
Comprehensive income*	2,819	2,081	3,222	3,221	627	994	2,072	5,416	2,171	2,502
Net income per share – basic*	$ 8.77	$ 10.28	$ 7.34	$ 6.76	$ 4.83	$ 5.81	$ 8.71	$ 9.18	$ 7.72	$ 6.71
– diluted*	8.69	10.15	7.24	6.68	4.81	5.77	8.63	9.09	7.63	6.63
Dividends declared per share	3.04	3.04	2.58	2.40	2.40	2.40	2.22	1.99	1.79	1.52
Dividends paid per share	3.04	2.97	2.49	2.40	2.40	2.40	2.13	1.94	1.74	1.41
Average number of common shares outstanding (in millions) – basic	313.5	316.5	322.6	319.5	315.2	333.6	363.0	385.3	397.1	417.4
– diluted	316.6	320.6	327.3	323.3	316.6	336.0	366.1	389.2	401.5	422.4
Total assets	$ 75,091	$ 73,011	$ 70,108	$ 65,786	$ 57,918	$ 57,883	$ 61,267	$ 59,454	$ 56,193	$ 48,146
Trade accounts and notes receivable – net	4,171	5,230	5,004	3,925	3,011	3,051	3,278	3,758	3,799	3,295
Financing receivables – net	29,750	29,195	27,054	25,104	23,702	24,809	27,422	25,633	22,159	19,924
Financing receivables securitized – net	4,703	4,383	4,022	4,159	5,127	4,835	4,602	4,153	3,618	2,905
Equipment on operating leases – net	7,298	7,567	7,165	6,594	5,902	4,970	4,016	3,152	2,528	2,150
Inventories	4,999	5,975	6,149	3,904	3,341	3,817	4,210	4,935	5,170	4,371
Property and equipment – net	5,817	5,973	5,868	5,068	5,171	5,181	5,578	5,467	5,012	4,352
Short-term borrowings:										
Equipment operations	292	987	1,434	375	249	464	434	1,080	425	529
Financial services	8,290	9,797	9,628	9,660	6,662	7,961	7,584	7,707	5,966	6,307
Total	8,582	10,784	11,062	10,035	6,911	8,425	8,018	8,787	6,391	6,836
Short-term securitization borrowings:										
Equipment operations	26	44	75							
Financial services	4,656	4,277	3,882	4,119	4,998	4,585	4,553	4,103	3,569	2,773
Total	4,682	4,321	3,957	4,119	4,998	4,585	4,553	4,103	3,569	2,773
Long-term borrowings:										
Equipment operations	10,124	5,415	4,714	5,491	4,565	4,439	4,619	4,845	5,418	3,155
Financial services	22,610	24,814	22,523	20,400	19,138	19,336	19,699	16,673	16,970	13,764
Total	32,734	30,229	27,237	25,891	23,703	23,775	24,318	21,518	22,388	16,919
Total Deere & Company stockholders' equity	12,937	11,413	11,288	9,557	6,520	6,743	9,063	10,266	6,842	6,800
Book value per share*	$ 41.25	$ 36.45	$ 35.45	$ 29.70	$ 20.71	$ 21.29	$ 26.23	$ 27.46	$ 17.64	$ 16.75
Capital expenditures	$ 762	$ 1,084	$ 969	$ 586	$ 668	$ 655	$ 1,004	$ 1,132	$ 1,360	$ 1,050
Number of employees (at year end)	69,634	73,489	74,413	60,476	56,767	57,180	59,623	67,044	66,859	61,278

* 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 1, 2020 and November 3, 2019, 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 1, 2020, 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 1, 2020, and November 3, 2019, and the results of its operations and its cash flows for each of the three years in the period ended November 1, 2020, 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 1, 2020, 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 17, 2020, 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 1, 2020 was $1,718 million, of which $1,109 million is recorded within trade accounts and notes receivable – net and $609 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 1, 2020 was $223 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 $3,902 million as of November 1, 2020 was $43 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 17, 2020

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 1, 2020, 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 1, 2020, 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 1, 2020, of the Company and our report dated December 17, 2020, 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 17, 2020

Index to Exhibits

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. (Exhibit 2.2 to Form 10-K of registrant for the year ended October 29, 2017, Securities and Exchange Commission File Number 1-4121*)
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** (Exhibit 2.3 to Form 10-K of registrant for the year ended October 29, 2017, Securities and Exchange Commission File Number 1-4121*)
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.** (Exhibit 2.4 to Form 10-K of registrant for the year ended October 29, 2017, Securities and Exchange Commission File Number 1-4121*)
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 3.1 to Form 8-K of registrant filed on December 3, 2020, 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	Indenture dated as of June 15, 2020 among John Deere Funding, as issuer, the registrant, as guarantor, and The Bank of New York Mellon, as Trustee (Exhibit 4.2 to the registration statement on Form S-3ASR no. 333-239165, filed June 15, 2020, Securities and Exchange Commission File Number 1-4121*)
4.4	Indenture dated as of June 15, 2020 among Deere Funding Canada Corporation, as issuer, the registrant, as guarantor, and The Bank of New York Mellon, as Trustee (Exhibit 4.3 to the registration statement on Form S-3ASR no. 333-239165, filed June 15, 2020, Securities and Exchange Commission File Number 1-4121*)
4.5	Terms and Conditions of the Euro Medium Term Notes, published on March 4, 2020, applicable to the U.S. $6,000,000,000 Euro Medium Term Note Programme of registrant, John Deere Capital Corporation, John Deere Bank S.A., and John Deere Cash Management
4.6	Description of Deere & Company's Common Stock (Exhibit 4.4 to Form 10-K of registrant for the year ended November 3, 2019, Securities and Exchange Commission File number 1-4121*)
4.7	Description of Deere & Company's 8½% Debentures Due 2022 (Exhibit 4.5 to Form 10-K of registrant for the year ended November 3, 2019, Securities and Exchange Commission File Number 1-4121*)
4.8	Description of Deere & Company's 6.55% Debentures Due 2028 (Exhibit 4.6 to Form 10-K of registrant for the year ended November 3, 2019, Securities and Exchange Commission File Number 1-4121*)

Table of Contents

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 (Exhibit 10.20 to Form 10-K of registrant for the year ended November 3, 2019, Securities and Exchange Commission File number 1-4121*)
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	John Deere 2020 Equity and Incentive Plan (Appendix C to Proxy Statement of registrant filed January 10, 2020, Securities and Exchange Commission File Number 1-4121*)
10.23	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*)
10.24	Second Amendment, dated as of February 21, 2020, to the Asset Purchase Agreement dated October 29, 2001, between registrant and Deere Capital, Inc. (including conformed copy of the Asset Purchase Agreement as Exhibit A thereto) (Exhibit 10.1 to Form 10-Q of registrant for the quarter ended February 2, 2020, Securities and Exchange Commission File Number 1-4121*)
10.25	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*)
10.26	Second Amendment, dated as of February 21, 2020, to the Asset Purchase Agreement dated October 29, 2001, between John Deere Construction & Forestry Company and Deere Capital, Inc. (including conformed copy of the Asset Purchase Agreement as Exhibit A thereto) (Exhibit 10.2 to Form 10-Q of registrant for the quarter ended February 2, 2020, Securities and Exchange Commission File Number 1-4121*)
10.27	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*)
10.28	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*)
10.29	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*)
10.30	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*)
10.31	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*)
10.32	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 March 30, 2020 (Exhibit 10.1 to Form 10-Q of registrant for the quarter ended May 3, 2020, Securities and Exchange Commission File Number 1-4121*)
10.33	2025 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 March 30, 2020 (Exhibit 10.2 to Form 10-Q of registrant for the quarter ended May 3, 2020, Securities and Exchange Commission File Number 1-4121*)

10.34	364-Day 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 March 30, 2020 (Exhibit 10.3 to Form 10-Q of registrant for the quarter ended May 3, 2020, Securities and Exchange Commission File Number 1-4121*)
21.	Subsidiaries
22.	List of Guarantors and Subsidiary Issuers of Guaranteed Securities
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.

Table of Contents

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
Chairman and Chief Executive Officer
(Principal Executive Officer)

Date: December 17, 2020

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/ Ryan D. Campbell Ryan D. Campbell	Senior Vice President and Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)	December 17, 2020
/s/ Tamra A. Erwin Tamra A. Erwin	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 John C. May	Chairman and Chief Executive Officer (Principal Executive Officer)	

/s/ Gregory R. Page Gregory R. Page	Director	))))
/s/ Sherry M. Smith Sherry M. Smith	Director	))))
/s/ Dmitri L. Stockton Dmitri L. Stockton	Director	))))
/s/ Sheila G. Talton Sheila G. Talton	Director	))

TERMS AND CONDITIONS OF THE NOTES

The following is the text of the terms and conditions which, as completed by the relevant Final Terms, will be endorsed on each Note in definitive form issued under the Programme. The terms and conditions applicable to any Note in global form will differ from those terms and conditions which would apply to the Note were it in definitive form to the extent described under "Summary of Provisions Relating to the Notes while in Global Form" below.

1. Introduction

(a) ***Programme***

Deere & Company ("**Deere**"), John Deere Capital Corporation ("**Deere Capital**"), John Deere Bank S.A. ("**Deere Luxembourg**") and John Deere Cash Management ("**Deere Cash Management**") (each an "**Issuer**", and, collectively the "**Issuers**") have established a Euro Medium Term Note Programme (the "**Programme**") for the issuance of up to U.S.$6,000,000,000 in aggregate principal amount of notes outstanding at any time (the "**Notes**"). Notes issued by Deere Cash Management are guaranteed by Deere (a "**Guarantor**") and Notes issued by Deere Luxembourg are guaranteed by Deere Capital (a "**Guarantor**" and together with Deere, the "**Guarantors**").

In these Conditions, references to "**Issuer**" are to Deere, Deere Capital, Deere Luxembourg or Deere Cash Management, as the case may be, as the Issuer of the Notes under the Programme and references to the "**relevant Issuer**" shall be construed accordingly. In these Conditions, references to "**Guarantor**" are to Deere or Deere Capital as Guarantor, in the case of Deere, of Notes to be issued by Deere Cash Management and, in the case of Deere Capital, of Notes to be issued by Deere Luxembourg and references to the "**relevant Guarantor**" shall be construed accordingly.

(b) ***Final Terms***

Notes issued under the Programme are issued in series (each a "**Series**") and each Series may comprise one or more tranches (each a "**Tranche**") of Notes. Each Tranche is the subject of a final terms (the "**Final Terms**") which completes these terms and conditions (the "**Conditions**"). The terms and conditions applicable to any particular Tranche of Notes are these Conditions as completed by the relevant Final Terms. The applicable Final Terms will specify whether the Issuer is Deere, Deere Capital, Deere Luxembourg or Deere Cash Management. In the event of any inconsistency between these Conditions and the relevant Final Terms, the relevant Final Terms shall prevail.

(c) ***Agency Agreement***

The Notes are the subject of an amended and restated issue and paying agency agreement dated 8 March 2018 (the "**Agency Agreement**") between the Issuers, the Guarantors, The Bank of New York Mellon, London Branch (the "**Fiscal Agent**", which expression includes any successor fiscal agent appointed from time to time in connection with the Notes), The Bank of New York Mellon SA/NV, Luxembourg Branch as registrar (the "**Registrar**") which expression includes any successor registrar appointed from time to time in connection with the Notes, the paying agents named therein (together with the Fiscal Agent, the "**Paying Agents**", which expression includes any successor or additional paying agents appointed from time to time in connection with the Notes) and the transfer agents named therein (together with the Registrar, the "**Transfer Agents**", which expression includes any successor or additional transfer agents appointed from time to time in connection with the Notes). In these Conditions references to "**Agents**" are to the Paying Agents and the Transfer Agents and any reference to "**Agent**" is to any one of them.

(d) ***Deeds of Guarantee***

Notes issued by Deere Cash Management are the subject of a deed of guarantee dated 8 March 2018 (the "**Deere Deed of Guarantee**") entered into by Deere. Notes issued by Deere Luxembourg are the subject of a deed of guarantee dated 8 March 2018 (the "**JDCC Deed of Guarantee**" together with the Deere Deed of Guarantee, the "**Deeds of Guarantee**" and each a "**Deed of Guarantee**") entered into by Deere Capital.

(e) ***Deed of Covenant***

The Notes may be issued in bearer form ("**Bearer Notes**"), or in registered form ("**Registered Notes**"). The Notes have the benefit of a Deed of Covenant dated 8 March 2018 ("the **Deed of Covenant**"). The Registered Notes are constituted by the Deed of Covenant entered into by the relevant Issuer.

(f) ***The Notes***

All subsequent references in these Conditions to "**Notes**" are to the Notes which are the subject of the relevant Final Terms. Copies of the relevant Final Terms are available for inspection by Noteholders during normal business hours at the Specified Office of the Fiscal Agent, the initial Specified Office of which is set out below.

(g) ***Summaries***

Certain provisions of these Conditions are summaries of the Agency Agreement, the Deeds of Guarantee and the Deed of Covenant and are subject to their detailed provisions. Noteholders and the holders of the related interest coupons, if any, (the "**Couponholders**" and the "**Coupons**", respectively) are bound by, and are deemed to have notice of, all the provisions of the Agency Agreement, the Deeds of Guarantee and the Deed of Covenant applicable to them. Copies of the Agency Agreement, the Deeds of Guarantee and the Deed of Covenant are available for inspection by Noteholders during normal business hours at the Specified Offices of each of the Agents, the initial Specified Offices of which are set out below.

2. **Interpretation**

(a) ***Definitions***

In these Conditions the following expressions have the following meanings:

"**Accrual Yield**" has the meaning given in the relevant Final Terms;

"**Additional Business Centre(s)**" means the city or cities specified as such in the relevant Final Terms;

"**Additional Financial Centre(s)**" means the city or cities specified as such in the relevant Final Terms;

"**Attributable Debt**" shall mean, as of any particular time, the present value, discounted at a rate per annum equal to the weighted average interest rate of all Notes denominated in euro outstanding at the time under the Programme, compounded semi-annually, of the obligation of a lessee for rental payments during the remaining term of any lease (including any period for which such lease has been extended or may, at the option of the lessor, be extended); the net amount of rent required to be paid for any such period shall be the total amount of the rent payable by the lessee with respect to such period, but may exclude amounts required to be paid on account of maintenance and repairs, insurance, taxes, assessments, water rates and similar charges; and, in the case of any lease which is terminable by the lessee upon the payment of a penalty, such net amount shall also include the amount of such penalty, but no rent shall be considered as required to be paid under such lease subsequent to the first date upon which it may be so terminated;

"**BBSW**" means, in respect of any specified currency and any specified period, the interest rate benchmark known as the Bank Bill Swap reference rate which is calculated and published by a designated distributor (currently Thomson Reuters) in accordance with the requirements from time to time of the Australian Financial Markets Association (or any other person which takes over the administration of that rate) based on estimated interbank borrowing rates for a number of designated currencies and maturities which are provided, in respect of each such currency, by a panel of contributor banks (details of historic BBSW rates can be obtained from the designated distributor);

"**Business Day**" means:

(i) in relation to any sum payable in euro, a TARGET Settlement Day and a day on which commercial banks and foreign exchange markets settle payments generally in each (if any) Additional Business Centre;

(ii) in relation to any sum payable in Renminbi, a day on which commercial banks and foreign exchange markets are open for business and settlement of Renminbi payments in Hong Kong and in each (if any) Additional Business Centre; and

(iii) in relation to any sum payable in a currency other than euro and Renminbi, a day on which commercial banks and foreign exchange markets settle payments generally in London, in the Principal Financial Centre of the relevant currency and in each (if any) Additional Business Centre;

"**Business Day Convention**", in relation to any particular date, has the meaning given in the relevant Final Terms and, if so specified in the relevant Final Terms, may have different meanings in relation to different dates and, in this context, the following expressions shall have the following meanings:

(i) "**Following Business Day Convention**" means that the relevant date shall be postponed to the first following day that is a Business Day;

(ii) "**Modified Following Business Day Convention**" or "**Modified Business Day Convention**" means that the relevant date shall be postponed to the first following day that is a Business Day unless that day falls in the next calendar month in which case that date will be the first preceding day that is a Business Day;

(iii) "**Preceding Business Day Convention**" means that the relevant date shall be brought forward to the first preceding day that is a Business Day;

(iv) "**FRN Convention**", "**Floating Rate Convention**" or "**Eurodollar Convention**" means that each relevant date shall be the date which numerically corresponds to the preceding such date in the calendar month which is the number of months specified in the relevant Final Terms as the Specified Period after the calendar month in which the preceding such date occurred **provided**, **however***,* **that***:*

(A) if there is no such numerically corresponding day in the calendar month in which any such date should occur, then such date will be the last day which is a Business Day in that calendar month;

(B) if any such date would otherwise fall on a day which is not a Business Day, then such date will be the first following day which is a Business Day unless that day falls in the next calendar month, in which case it will be the first preceding day which is a Business Day; and

(C) if the preceding such date occurred on the last day in a calendar month which was a Business Day, then all subsequent such dates will be the last day which is a Business Day in the calendar month which is the specified number of months after the calendar month in which the preceding such date occurred; and

(v) "**No Adjustment**" means that the relevant date shall not be adjusted in accordance with any Business Day Convention;

"**Calculation Agent**" means the Fiscal Agent or such other Person specified in the relevant Final Terms as the party responsible for calculating the Rate(s) of Interest and Interest Amount(s) and/or such other amount(s) as may be specified in the relevant Final Terms;

"**Calculation Amount**" has the meaning given in the relevant Final Terms;

"**Central Bank**" means the Central Bank of Ireland, competent authority for the purposes of the Prospectus Regulation;

"**CNY**" means Renminbi Yuan, the lawful currency of the PRC;

"**CNY Dealer**" means an independent foreign exchange dealer of international repute active in the Renminbi exchange market in Hong Kong;

"**Consolidated Net Worth**" shall mean the aggregate of capital and surplus of Deere and its consolidated Subsidiaries, less minority interests in Subsidiaries, determined in accordance with accounting principles generally accepted in the United States of America ("**GAAP**");

"**Coupon Sheet**" means, in respect of a Note, a coupon sheet relating to the Note;

"**Day Count Fraction**" means (subject as provided in Condition 6 (*Fixed Rate Note Provisions*)), in respect of the calculation of an amount for any period of time (whether or not constituting an Interest Period) (the "**Calculation Period**"), such day count fraction as may be specified in these Conditions or the relevant Final Terms and:

(i) if "**Actual/Actual (ICMA)**" is so specified, means:

(a) where the Calculation Period is equal to or shorter than the Regular Period during which it falls, the actual number of days in the Calculation Period divided by the product of (1) the actual number of days in such Regular Period and (2) the number of Regular Periods in any year; and

(b) where the Calculation Period is longer than one Regular Period, the sum of:

(A) the actual number of days in such Calculation Period falling in the Regular Period in which it begins divided by the product of (1) the actual number of days in such Regular Period and (2) the number of Regular Periods in any year; and

(B) the actual number of days in such Calculation Period falling in the next Regular Period divided by the product of (a) the actual number of days in such Regular Period and (2) the number of Regular Periods in any year;

(ii) if "**Actual/Actual**" or "**Actual/Actual (ISDA)**" is specified, means the actual number of days in the Calculation Period in respect of which payment is being made divided by 365 (or, if any portion of the Calculation Period falls in a leap year, the sum of (A) the actual number of days in that portion of the Calculation Period falling in a leap year divided by 366 and (B) the actual number of days in that portion of the Calculation Period falling in a non-leap year divided by 365);

(iii) if "**Actual/365 (Fixed)**" is specified, means the actual number of days in the Calculation Period in respect of which payment is being made divided by 365;

(iv) if "**Actual/360**" is specified, means the actual number of days in the Calculation Period in respect of which payment is being made divided by 360;

(v) if "**30/360**", "**360/360**" or "**Bond Basis**" is specified, means the number of days in the Calculation Period in respect of which payment is being made divided by 360, calculated on a formula basis as follows:

$$\text{Day Count Fraction} = \frac{[360\, X(Y_2 - Y_1)] + [30\, X(M_2 - M_1)] + (D_2 - D_1)}{360}$$

where:

"**Y1**" is the year, expressed as a number, in which the first day of the Calculation Period falls;

"**Y2**" is the year, expressed as a number, in which the day immediately following the last day included in the Calculation Period falls;

"**M1**" is the calendar month, expressed as a number, in which the first day of the Calculation Period falls;

"**M2**" is the calendar month, expressed as number, in which the day immediately following the last day included in the Calculation Period falls;

"**D1**" is the first calendar day, expressed as a number, of the Calculation Period, unless such number would be 31, in which case D1 will be 30; and

"**D2**" is the calendar day, expressed as a number, immediately following the last day included in the Calculation Period, unless such number would be 31 and D1 is greater than 29, in which case D2 will be 30;

(vi) if "**30E/360**" or "**Eurobond Basis**" is specified, means the number of days in the Calculation Period in respect of which payment is being made divided by 360, calculated on a formula basis as follows:

$$\text{Day Count Fraction} = \frac{[360 X (Y_2 - Y_1)] + [30 X (M_2 - M_1)] + (D_2 - D_1)}{360}$$

where:

"**Y1**" is the year, expressed as a number, in which the first day of the Calculation Period falls;

"**Y2**" is the year, expressed as a number, in which the day immediately following the last day included in the Calculation Period falls;

"**M1**" is the calendar month, expressed as a number, in which the first day of the Calculation Period falls;

"**M2**" is the calendar month, expressed as a number, in which the day immediately following the last day included in the Calculation Period falls;

"**D1**" is the first calendar day, expressed as a number, of the Calculation Period, unless such number would be 31, in which case D1 will be 30; and

"**D2**" is the calendar day, expressed as a number, immediately following the last day included in the Calculation Period, unless such number would be 31, in which case D2 will be 30;

(vii) if "**30E/360 (ISDA)**" is specified, means the number of days in the Calculation Period in respect of which payment is being made divided by 360, calculated on a formula basis as follows:

$$\text{Day Count Fraction} = \frac{[360 X (Y_2 - Y_1)] + [30 X (M_2 - M_1)] + (D_2 - D_1)}{360}$$

where:

"**Y1**" is the year, expressed as a number, in which the first day of the Calculation Period falls;

"**Y2**" is the year, expressed as a number, in which the day immediately following the last day included in the Calculation Period falls;

"**M1**" is the calendar month, expressed as a number, in which the first day of the Calculation Period falls;

"**M2**" is the calendar month, expressed as a number, in which the day immediately following the last day included in the Calculation Period falls;

"**D1**" is the first calendar day, expressed as a number, of the Calculation Period, unless (i) that day is the last day of February or (ii) such number would be 31, in which case D1 will be 30; and

"**D2**" is the calendar day, expressed as a number, immediately following the last day included in the Calculation Period, unless (i) that day is the last day of February but not the Termination Date or (ii) such number would be 31, in which case D2 will be 30.

provided, however, that in each such case the number of days in the Calculation Period is calculated from and including the first day of the Calculation Period to but excluding the last day of the Calculation Period;

"**Early Redemption Amount (Tax)**" means, in respect of any Note, its principal amount or such other amount as may be specified in, or determined in accordance with, the relevant Final Terms;

"**Early Termination Amount**" means, in respect of any Note, its principal amount or such other amount as may be specified in, or determined in accordance with, these Conditions or the relevant Final Terms;

"**Extraordinary Resolution**" has the meaning given in the Agency Agreement;

"**Excluded Sale and Lease-back Transaction**" means (A) a Sale and Lease-back Transaction which, if the Attributable Debt in respect of such Sale and Lease-back Transaction had been a Security Interest, would have been permitted by paragraph (i) of the definition of Permitted Security Interest and (B) other Sale and Lease-back Transactions where the net proceeds of such sale are at least equal to the fair value (as determined by the Board of Directors of Deere) of the property and (i) Deere, within 120 days of the effective date of any such arrangement, applies an amount equal to the fair value (as so determined) of such property to any Notes redeemed prior to their Maturity Date or the purchase and retirement of Notes or to the payment or other retirement of funded debt for money borrowed, incurred or assumed by Deere which ranks senior to or *pari passu* with the Notes or of funded debt for money borrowed, incurred or assumed by any Material Subsidiary (other than, in either case, funded debt owned by Deere or any Material Subsidiary), or (ii) Deere shall, at or prior to the time of entering into the Sale and Lease-back Transaction, enter into a *bona fide* commitment or commitments to expend for the acquisition or improvement of any Important Property an amount at least equal to the fair value (as so determined) of such property. For this purpose, funded debt means any Debt (as defined in Condition 5(a)) which by its terms matures at or is extendable or renewable at the sole option of the obligor without requiring the consent of the obligee to a date more than twelve months after the date of the creation of such Debt;

"**EURIBOR**" means, in respect of any specified currency and any specified period, the interest rate benchmark known as the Euro zone interbank offered rate which is calculated and published by a designated distributor (currently Thomson Reuters) in accordance with the requirements from time to time of the European Money Markets Institute (or any person which takes over administration of that rate);

"**FATCA**" means (a) sections 1471 to 1474 of the US Internal Revenue Code of 1986, as amended (the "**Code**") or any associated regulations or other official guidance; (b) any treaty, law, regulation or other official guidance enacted in any other jurisdiction that seeks to implement a similar financial account information reporting or withholding tax regime; (c) any intergovernmental agreement, treaty, regulation, guidance, standard or other agreement between or among Governmental Authorities entered into in order to comply with, facilitate, supplement or implement any matter described in clause (a) through (b) above; and (d) any agreement pursuant to the implementation of any matter described in clause (a) or (c) above with the US Internal Revenue Service, the US government or any governmental or taxation authority in any other jurisdiction;

"**Final Redemption Amount**" means, in respect of any Note, its principal amount or such other amount as may be specified in, or determined in accordance with, the relevant Final Terms;

"**Fixed Coupon Amount**" has the meaning given in the relevant Final Terms;

"**Governmental Authority**" means any *de facto* or *de jure* government (or any agency or instrumentality thereof), court, tribunal, administrative or other governmental authority or any other entity (private or public) charged with the regulation of the financial markets (including the central bank) of Hong Kong;

"**Guarantee**" means, in relation to any Indebtedness of any Person, any obligation of another Person to pay such Indebtedness;

"**Guarantee of the Notes**" means either the guarantee of the Notes given by Deere in the Deere Deed of Guarantee or the guarantee of the Notes given by Deere Capital in the JDCC Deed of Guarantee;

"**Holder**", in the case of Bearer Notes, has the meaning given in Condition 3(b) (*Form, Denomination, Title and Transfer – Title to Bearer Notes*) and, in the case of Registered Notes has the meaning given in Condition 3(d) (*Form, Denomination, Title and Transfer – Title to Registered Notes*);

"**Hong Kong**" means the Hong Kong Special Administrative Region of the PRC;

"**Illiquidity**" means where the general Renminbi exchange market in Hong Kong becomes illiquid and, as a result of which, the Issuer cannot obtain sufficient Renminbi in order to satisfy its obligation to pay interest and principal (in whole or in part) in respect of the Notes as determined by the Issuer in good faith and in a commercially reasonable manner following consultation (if practicable) with two other CNY Dealers;

"**Important Property**" means (a) any manufacturing plant, including land, all buildings and other improvements thereon, and all manufacturing machinery and equipment located therein, used by the Issuer or Deere or a Material Subsidiary primarily for the manufacture of products to be sold by the Issuer or Deere or such Material Subsidiary, (b) the executive office and administrative building of Deere in Moline, Illinois, and (c) research and development facilities, including land and buildings and other improvements thereon and research and development machinery and equipment located therein, in each case, used by the Issuer or Deere or a Material Subsidiary; except in any case property of which the aggregate fair value as determined by the Board of Directors of Deere does not at the time exceed 1 per cent. of Consolidated Net Worth of Deere, as shown on the audited consolidated balance sheet contained in the latest annual report to stockholders of Deere;

"**Inconvertibility**" means the occurrence of any event that makes it impossible for the Issuer to convert any amount due in respect of the Notes in the general Renminbi exchange market in Hong Kong, other than where such impossibility is due solely to the failure of the Issuer to comply with any law, rule or regulation enacted by any Governmental Authority (unless such law, rule or regulation is enacted after the Issue Date and it is impossible for the Issuer, due to an event beyond its control, to comply with such law, rule or regulation);

"**Indebtedness**" means any indebtedness of any Person for money borrowed or raised including (without limitation) any indebtedness for or in respect of:

(i) amounts raised by acceptance under any acceptance credit facility;

(ii) amounts raised under any note purchase facility;

(iii) the amount of any liability in respect of leases or hire purchase contracts which would, in accordance with applicable law and generally accepted accounting principles, be treated as finance or capital leases;

(iv) the amount of any liability in respect of any purchase price for assets or services the payment of which is deferred for a period in excess of 60 days; and

(v) amounts raised under any other transaction (including, without limitation, any forward sale or purchase agreement) having the commercial effect of a borrowing;

"**Interest Amount**" means, in relation to a Note and an Interest Period, the amount of interest payable in respect of that Note for that Interest Period;

"**Interest Commencement Date**" means the Issue Date of the Notes or such other date as may be specified as the Interest Commencement Date in the relevant Final Terms;

"**Interest Determination Date**" has the meaning given in the relevant Final Terms;

"**Interest Payment Date**" means the date or dates specified as such in, or determined in accordance with the provisions of, the relevant Final Terms and, if a Business Day Convention is specified in the relevant Final Terms:

(i) as the same may be adjusted in accordance with the relevant Business Day Convention; or

(ii) if the Business Day Convention is the FRN Convention, Floating Rate Convention or Eurodollar Convention and an interval of a number of calendar months is specified in the relevant Final Terms as being the Specified Period, each of such dates as may occur in accordance with the FRN Convention, Floating Rate Convention or Eurodollar Convention at such Specified Period of calendar months following the Interest Commencement Date (in the case of the first Interest Payment Date) or the previous Interest Payment Date (in any other case);

"**Interest Period**" means each period beginning on (and including) the Interest Commencement Date or any Interest Payment Date and ending on (but excluding) the next Interest Payment Date;

"**ISDA Benchmarks Supplement**" means the Benchmarks Supplement (as amended and updated as at the date of issue of the first Tranche of the Notes of the relevant Series (as specified in the relevant Final Terms)) published by the International Swaps and Derivatives Association, Inc. Investors should consult the Issuer should they require a copy of the ISDA Benchmarks Supplement;

"**ISDA Definitions**" means the 2006 ISDA Definitions (as further amended and updated as at the date of issue of the first Tranche of the Notes of the relevant Series (as specified in the relevant Final Terms) and, if specified in the relevant Final Terms, as supplemented by the ISDA Benchmarks Supplement) as published by the International Swaps and Derivatives Association, Inc.);

"**Issue Date**" has the meaning given in the relevant Final Terms;

"**LIBOR**" means, in respect of any specified currency and any specified period, the interest rate benchmark known as the London interbank offered rate which is calculated and published by a designated distributor (currently Thomson Reuters) in accordance with the requirements from time to time of ICE Benchmark Administration Limited (or any other person which takes over the administration of that rate);

"**Luxembourg**" means the Grand Duchy of Luxembourg;

"**Margin**" has the meaning given in the relevant Final Terms;

"**Material Subsidiary**" shall mean any Subsidiary of Deere which is engaged in, or whose principal assets consist of property used by Deere or any Material 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 Deere has, directly or indirectly, an investment under an arrangement providing for the liquidation of such investment;

"**Maturity Date**" has the meaning given in the relevant Final Terms;

"**Maximum Redemption Amount**" has the meaning given in the relevant Final Terms;

"**Minimum Redemption Amount**" has the meaning given in the relevant Final Terms;

"**Non-transferability**" means the occurrence of any event that makes it impossible for the Issuer to deliver Renminbi between accounts inside Hong Kong or from an account inside Hong Kong to an account outside Hong Kong, other than where such impossibility is due solely to the failure of the Issuer to comply with any law, rule or regulation enacted by any Governmental Authority (unless such law, rule or regulation is enacted after the Issue Date and it is impossible for the Issuer, due to an event beyond its control, to comply with such law, rule or regulation);

"**Noteholder**", in the case of Bearer Notes, has the meaning given in Condition 3(b) (*Form, Denomination, Title and Transfer – Title to Bearer Notes*) and, in the case of Registered Notes, has the meaning given in Condition 3(d) (*Form, Denomination, Title and Transfer – Title to Registered Notes*);

"**Optional Redemption Amount (Call)**" means, in respect of any Note, its principal amount or such other amount as may be specified in, or determined in accordance with, the relevant Final Terms;

"**Optional Redemption Amount (Put)**" means, in respect of any Note, its principal amount or such other amount as may be specified in, or determined in accordance with, the relevant Final Terms;

"**Optional Redemption Date (Call)**" has the meaning given in the relevant Final Terms;

"**Optional Redemption Date (Put)**" has the meaning given in the relevant Final Terms;

"**Participating Member State**" means a Member State of the European Union which adopts the euro as its lawful currency in accordance with the Treaty;

"**Payment Business Day**" means:

(i) if the currency of payment is euro, any day which is:

(A) a day on which banks in the relevant place of presentation outside the United States and its possessions are open for presentation and payment of bearer debt securities and for dealings in foreign currencies; and

(B) in the case of payment by transfer to an account, a TARGET Settlement Day and a day on which dealings in foreign currencies may be carried on in each (if any) Additional Financial Centre; or

(ii) if the currency of payment is not euro, any day which is:

(A) a day on which banks in the relevant place of presentation outside the United States and its possessions are open for presentation and payment of bearer debt securities and for dealings in foreign currencies; and

(B) in the case of payment by transfer to an account, a day on which dealings in foreign currencies (including, in the case of Renminbi Notes, settlement of Renminbi payments) may be carried on in the Principal Financial Centre of the currency of payment and in each (if any) Additional Financial Centre;

"**Permitted Lien**" means:

(i) any Security Interest created on or over any fixed assets or other physical properties hereafter acquired to secure all or part of the purchase price thereof or the acquiring hereafter of such assets or properties subject to any existing lien or charge securing indebtedness (whether or not assumed);

(ii) easements, liens, franchises or other minor encumbrances on or over any real property which do not materially detract from the value of such property or its use in the business of the Issuer, Deere Capital (as Guarantor) or a Subsidiary of Deere Capital;

(iii) any deposit or pledge of assets (i) with any surety company or clerk of any court, or in escrow, as collateral in connection with, or in lieu of, any bond on appeal from any judgment or decree against the Issuer, Deere Capital (as Guarantor) or a Subsidiary, or in connection with other proceedings or actions at law or in equity by or against the Issuer, Deere Capital (as Guarantor) or a Subsidiary, or (ii) as security for the performance of any contract or undertaking not directly or indirectly related to the borrowing of money or the security of indebtedness, if made in the ordinary course of business, or (iii) with any governmental agency, which deposit or pledge is required or permitted to qualify the Issuer, Deere Capital (as Guarantor) or a Subsidiary to conduct business, to maintain self-insurance, or to obtain the benefits of any law pertaining to workmen's compensation, unemployment insurance, old age pensions, social security, or similar matters, or (iv) made in the ordinary course of business to obtain the release of mechanics', workmen's, repairmen's, warehousemen's or similar liens, or the release of property in the possession of a common carrier;

(iv) any Security Interest by a Subsidiary as security for indebtedness owed to the Issuer or Deere Capital (as Guarantor) or to another Subsidiary;

(v) liens for taxes and governmental charges not yet due or contested by appropriate proceeding in good faith;

(vi) any Security Interest existing on property acquired by the Issuer or Deere Capital (as Guarantor) or a Subsidiary of Deere Capital through the exercise of rights arising out of defaults on receivables acquired in the ordinary course of business;

(vii) judgment liens, so long as the finality of such judgment is being contested in good faith and execution thereon is stayed;

(viii) any pledge or lien (other than directly or indirectly to secure borrowed money) if, after giving effect thereto, the aggregate principal sums secured by pledges or liens otherwise within the above restrictions do not exceed U.S.$500,000;

(ix) any Security Interest securing Securitisation Indebtedness; or

(x) any Security Interest in cash provided to any counterparty of Deere Capital or any of Deere Capital's Subsidiaries in connection with any derivative transaction;

"**Permitted Security Interest**" means:

(i) any Security Interest created on or over any property acquired, constructed or improved by the Issuer, Deere or any Material Subsidiary which is created or assumed contemporaneously with, or within 120 days after, such acquisition, construction or improvement to secure or provide for the payment of all or any part of the purchase price of such property or the cost of such construction or improvement incurred or (in addition to Security Interests contemplated by clauses (ii), (iii) and (iv) below) Security Interests on any property existing at the time of acquisition thereof **provided that** such Security Interest shall not apply to any Important Property theretofore owned by the Issuer, Deere or any Material Subsidiary other than, in the case of any such construction or improvement, any theretofore unimproved real property on which the property so constructed, or the improvement, is located;

(ii) any Security Interest created on or over any property, shares of stock, or indebtedness existing at the time of acquisition thereof from a corporation which is consolidated or amalgamated with or merged into, or substantially all of the assets of which are acquired by, the Issuer, Deere or a Material Subsidiary;

(iii) any Security Interest created on or over any property of a corporation which Security Interest was existing at the time such corporation becomes a Material Subsidiary;

(iv) any Security Interest created on or over any property to secure Debt (as defined in Condition 5(a)) of a Material Subsidiary to the Issuer, Deere or to another Material Subsidiary;

(v) any Security Interest created on or over any property in favour of the United States of America or any State thereof, or any department, agency or instrumentality or political subdivision of the United States of America or any State thereof, to secure partial, progress, advance or other payments pursuant to any contract or statute or to secure any indebtedness incurred for the purpose of financing all or any part of the purchase price or the cost of constructing or improving the property subject to such Security Interest and Security Interests given to secure indebtedness incurred in connection with the financing of construction of pollution control facilities, the interest on which indebtedness is exempt from income taxes under the Internal Revenue Code;

(vi) any deposit or pledge of assets (1) with any surety company or clerk of any court, or in escrow, as collateral in connection with, or in lieu of, any bond on appeal from any judgment or decree against the Issuer, Deere or a Subsidiary, or in connection with other proceedings or actions at law or in equity by or against the Issuer, Deere or a Material Subsidiary, or (2) as security for the performance of any contract or undertaking not directly related to the borrowing of money or the securing of indebtedness, if made in the ordinary course of business, or (3) with any governmental agency, which deposit or pledge is required or permitted to qualify the Issuer, Deere or a Material Subsidiary to conduct business, to maintain self-insurance, or to obtain the benefits of any law pertaining to worker's compensation, unemployment insurance, old age pensions, social security, or similar matters, or (4) made in the ordinary course of business to obtain the release of mechanics', workmen's, repairmen's, warehousemen's or similar liens, or the release of property in the possession of a common carrier;

(vii) any Security Interest created on or over any property acquired by the Issuer, Deere or a Material Subsidiary through the exercise of rights arising out of defaults on receivables acquired in the ordinary course of business;

(viii) judgment liens, so long as the finality of such judgment is being contested in good faith and execution thereon is stayed;

(ix) any Security Interest created on and over any property for the sole purpose of extending, renewing or replacing in whole or part, Debt secured by any Security Interest referred to in paragraphs (i) to (viii) above, inclusive or in this paragraph, **provided**, **however**, **that** the principal amount of Debt secured in such extension, renewal or replacement does not exceed the principal amount of Debt secured at the time of such extension, renewal or replacement and that such extension, renewal or replacement shall be limited to all or a part of the property subject to such Security Interest so extended, renewed or replaced (plus improvements on such property);

(x) liens for taxes or assessments or governmental charges or levies not yet due or delinquent, or which can thereafter be paid without penalty, or which are being contested in good faith by appropriate proceedings; landlord's liens on property held under lease; and any other liens of a nature similar to those hereinabove described in this paragraph (x) which do not, in the opinion of the Issuer and Deere, materially impair the use of such property in the operation of the business of the Issuer, Deere or a Material Subsidiary or the value of such property for the purposes of such business;

(xi) any transaction characterised as a sale of receivables (retail or otherwise) but reflected as secured indebtedness on a balance sheet in conformity with generally accepted accounting principles then in effect;

(xii) any Security Interest created on or over any Margin Stock (as defined in Regulation U of the Board of Governors of the Federal Reserve System of the United States of America) owned by the Issuer, Deere and its Material Subsidiaries to the extent such Margin Stock so secured exceeds 25 per cent. of the fair market value of the sum of the Important Property of the Issuer, Deere and the Material Subsidiaries plus the shares of stock (including Margin Stock) and indebtedness issued or incurred by the Material Subsidiaries; or

(xiii) any Security Interest created on or over any Important Property of, or any shares of stock or indebtedness issued or incurred by, any Material Subsidiary organised under the laws of Canada;

"**Person**" means any individual, company, corporation, firm, partnership, joint venture, association, organisation, state or agency of a state or other entity, whether or not having separate legal personality;

"**PRC**" means the People's Republic of China which, for the purpose of these Conditions, shall exclude Hong Kong, the Macao Special Administrative Region of the People's Republic of China and Taiwan;

"**Principal Financial Centre**" means, in relation to any currency, the principal financial centre for that currency **provided**, **however**, **that**:

(i) in relation to euro, it means the principal financial centre of such Member State of the European Union as is selected (in the case of a payment) by the payee or (in the case of a calculation) by the Calculation Agent;

(ii) in relation to New Zealand dollars, it means either Wellington or Auckland as is selected (in the case of a payment) by the payee or (in the case of a calculation) by the Calculation Agent; and

(iii) in relation to Renminbi, it means Hong Kong or the principal financial centre as is specified in the relevant Final Terms;

"**Prospectus Regulation**" means Regulation (EU) 2017/1129, as amended or superseded;

"**Put Option Notice**" means a notice which must be delivered to a Paying Agent by any Noteholder wanting to exercise a right to redeem a Note at the option of the Noteholder;

"**Put Option Receipt**" means a receipt issued by a Paying Agent to a depositing Noteholder upon deposit of a Note with such Paying Agent by any Noteholder wanting to exercise a right to redeem a Note at the option of the Noteholder;

"**Rate Calculation Business Day**" means a day (other than a Saturday, Sunday or public holiday) on which commercial banks are open for general business (including dealings in foreign exchange) in Hong Kong and in New York City;

"**Rate Calculation Date**" means the day which is two Rate Calculation Business Days before the due date for any payment of the relevant amount under these Conditions;

"**Rate of Interest**" means the rate or rates (expressed as a percentage per annum) of interest payable in respect of the Notes specified in the relevant Final Terms or calculated or determined in accordance with the provisions of these Conditions and the relevant Final Terms;

"**Redemption Amount**" means, as appropriate, the Final Redemption Amount, the Early Redemption Amount (Tax), the Optional Redemption Amount (Call), the Optional Redemption Amount (Put), the Early Termination Amount or such other amount in the nature of a redemption amount as may be specified in, or determined in accordance with the provisions of, the relevant Final Terms;

"**Reference Banks**" has the meaning given in the relevant Final Terms or, if none, four major banks selected by the Calculation Agent in the market that is most closely connected with the Reference Rate;

"**Reference Price**" has the meaning given in the relevant Final Terms;

"**Reference Rate**" means one of the following benchmark rates (as specified in the relevant Final Terms) in respect of the currency and period specified in the relevant Final Terms:

(i) LIBOR;

(ii) EURIBOR;

(iii) SHIBOR; and

(iv) BBSW;

"**Regular Period**" means:

(i) in the case of Notes where interest is scheduled to be paid only by means of regular payments, each period from and including the Interest Commencement Date to but excluding the first Interest Payment Date and each successive period from and including one Interest Payment Date to but excluding the next Interest Payment Date;

(ii) in the case of Notes where, apart from the first Interest Period, interest is scheduled to be paid only by means of regular payments, each period from and including a Regular Date falling in any year to but excluding the next Regular Date, where "**Regular Date**" means the day and month (but not the year) on which any Interest Payment Date falls; and

(iii) in the case of Notes where, apart from an Interest Period other than the first Interest Period, interest is scheduled to be paid only by means of regular payments, each period from and including a Regular Date falling in any year to but excluding the next Regular Date, where "**Regular Date**" means the day and month (but not the year) on which any Interest Payment Date falls other than the Interest Payment Date falling at the end of such irregular Interest Period;

"**Relevant Date**" means, in relation to any payment, whichever is the later of (a) the date on which the payment in question first becomes due and (b) if the full amount payable has not been received in the Principal Financial Centre of the currency of payment by the Fiscal Agent on or prior to such due date, the date on which (the full amount having been so received) notice to that effect has been given to the Noteholders;

"**Relevant Financial Centre**" has the meaning given in the relevant Final Terms **provided**, **however**, **that** in no event shall any location within the United States or its possessions be a Relevant Financial Centre for the purposes of any payments in respect of any Note;

"**Relevant Jurisdiction**" means the United States where the Issuer or the Guarantor, if applicable, is Deere or Deere Capital, or Luxembourg where the Issuer is Deere Luxembourg or Deere Cash Management;

"**Relevant Screen Page**" means the page, section or other part of a particular information service (including, without limitation, Reuters) specified as the Relevant Screen Page in the relevant Final Terms, or such other page, section or other part as may replace it on that information service or such other information service, in each case, as may be nominated by the Person providing or sponsoring the information appearing there for the purpose of displaying rates or prices comparable to the Reference Rate;

"**Relevant Time**" has the meaning given in the relevant Final Terms;

"**Renminbi**" or "**CNY**" means the official currency of the PRC;

"**Renminbi Notes**" means Notes issued in Renminbi;

"**Reserved Matter**" means any proposal to change any date fixed for payment of principal or interest in respect of the Notes, to reduce the amount of principal or interest payable on any date in respect of the Notes, to alter the method of calculating the amount of any payment in respect of the Notes or the date for any such payment, to change the currency of any payment under the Notes or to change the quorum requirements relating to meetings or the majority required to pass an Extraordinary Resolution;

"**Sale and Lease-back Transactions**" means any arrangement with any Person providing for the leasing to the Issuer, the Guarantor or any Material Subsidiary of any Important Property owned or hereafter acquired by the Issuer, the Guarantor or such Material Subsidiary (except for temporary leases for a term, including any renewal thereof, of not more than three years and except for leases between the Issuer, the Guarantor and Material Subsidiary or between Material Subsidiaries), which Important Property has been or is to be sold or transferred by the Issuer, the Guarantor or such Material Subsidiary to such Person;

"**Security Interest**" means any mortgage, charge, pledge, lien or other security interest including, without limitation, anything analogous to any of the foregoing under the laws of any jurisdiction;

"**Securitisation Indebtedness**" shall mean the aggregate outstanding indebtedness for borrowed money, owner trust certificates (however classified) or credit enhancements incurred in connection with transactions involving (i) the sale, transfer or other disposition of receivables or leases (retail or wholesale) by Deere Capital or any of its Subsidiaries and (ii) the issuance of commercial paper, medium term notes or any other form of financing by any structured bankruptcy-remote Subsidiary of Deere Capital or any related conduit lender (such transactions, "**Securitisations**"), **provided**, **that** the aggregate outstanding credit enhancements in the form of cash or letter(s) of credit provided by Deere Capital or any of its Subsidiaries (other than any structured bankruptcy-remote Subsidiary) in excess of 10 per cent. of the aggregate outstanding indebtedness for borrowed money and owner trust certificates (however classified) incurred in connection with such Securitisations shall not be deemed for the purposes of the Programme to be Securitisation Indebtedness;

"**SHIBOR**" means, in respect of a Renminbi-denominated issuance and any specified period, the interest rate benchmark known as the Shanghai Interbank Offered Rate which is calculated and published by a designated distributor (currently Thomson Reuters) in accordance with the requirements from time to time of the National Interbank Funding (or any other person which takes over the administration of that rate) based on estimated interbank Renminbi-denominated borrowing rates on various maturities which are provided by a panel of contributor banks (details of historic SHIBOR rates can be obtained from the designated distributor);

"**Specified Currency**" has the meaning given in the relevant Final Terms;

"**Specified Denomination(s)**" has the meaning given in the relevant Final Terms **provided that** Notes will be issued in denominations of at least EUR 100,000 or the equivalent in any other specified currency as may be specified in the relevant Final Terms, subject to compliance with all applicable legal and/or regulatory and/or central bank requirements;

"**Specified Office**" has the meaning given in the Agency Agreement;

"**Specified Period**" has the meaning given in the relevant Final Terms;

"**Spot Rate**", for a Rate Calculation Date, means the spot U.S. dollar/Renminbi exchange rate for the purchase of U.S. dollars with Renminbi in the over-the-counter Renminbi exchange market in Hong Kong for settlement in two business days, as determined by the Calculation Agent at or around 11.00 a.m. (Hong Kong time) on such date, on a deliverable basis by reference to Reuters Screen Page TRADCNY3, or if no such rate is available, on a non-deliverable basis by reference to Reuters Screen Page TRADNDF. If neither rate is available, the most recently available Renminbi/U.S. dollar official fixing rate for settlement in two business days reported by The State Administration of Foreign Exchange of the PRC, which is reported on the Reuters Screen Page CNY=SAEC. Reference to a page on the Reuters Screen means the display page so designated on the Reuter Monitor Money Rates Service (or any successor service) or such other page as may replace that page for the purpose of displaying a comparable currency exchange rate, and if a spot rate is not readily available, the Calculation Agent may consult with two CNY Dealers to determine the applicable rate, taking into consideration all available information which the CNY Dealers deem relevant, including price information obtained from the Renminbi non-deliverable exchange market in Hong Kong or elsewhere and the U.S. dollar/CNY exchange rate in the PRC's domestic foreign exchange market;

"**Subsidiary**" means any corporation a majority of the outstanding voting stock of which is owned, directly or indirectly, by the Issuer or by one or more other Subsidiaries of such Issuer. For the purposes of this definition, "**voting stock**" means stock having voting power for the election of directors, whether at all times or only so long as no senior class of stock has such voting power by reason of any contingency;

"**Talon**" means a talon for further Coupons;

"**TARGET2**" means the Trans-European Automated Real Time Gross Settlement Express Transfer payment system which utilises a single shared platform and which launched on 19 November 2007;

"**TARGET Settlement Day**" means any day on which TARGET2 is open;

"**Treaty**" means the Treaty on the Functioning of the European Union, as amended;

"**U.S. Dollar Equivalent**" means the Renminbi amount converted into U.S. dollars using the Spot Rate for the relevant Rate Calculation Date; and

"**Zero Coupon Note**" means a Note specified as such in the relevant Final Terms;

(b) ***Interpretation***

In these Conditions:

(i) if the Notes are Zero Coupon Notes, references to Coupons and Couponholders are not applicable;

(ii) if Talons are specified in the relevant Final Terms as being attached to the Notes at the time of issue, references to Coupons shall be deemed to include references to Talons;

(iii) if Talons are not specified in the relevant Final Terms as being attached to the Notes at the time of issue, references to Talons are not applicable;

(iv) any reference to principal shall be deemed to include the Redemption Amount, any additional amounts in respect of principal which may be payable under Condition 13 (*Taxation*), any premium payable in respect of a Note and any other amount in the nature of principal payable pursuant to these Conditions;

(v) any reference to interest shall be deemed to include any additional amounts in respect of interest which may be payable under Condition 13 (*Taxation*) and any other amount in the nature of interest payable pursuant to these Conditions;

(vi) references to Notes being "outstanding" shall be construed in accordance with the Agency Agreement;

(vii) if an expression is stated in Condition 2(a) to have the meaning given in the relevant Final Terms, but the relevant Final Terms gives no such meaning or specifies that such expression is "not applicable" then such expression is not applicable to the Notes; and

(viii) any reference to the Amended and Restated Agency Agreement or either of the Deere Deed of Guarantee or the JDCC Deed of Guarantee shall be construed as a reference to the Amended and Restated Agency Agreement or the Deere Deed of Guarantee or the JDCC Deed of Guarantee, as the case may be, as amended and/or supplemented up to and including the Issue Date of the Notes.

3. Form, Denomination, Title and Transfer

(a) ***Bearer Notes***: Notes in bearer form will not be issued under the Programme, unless and until there is a change in U.S. income tax law that permits the issuance of bearer debt without adverse tax consequences to the Issuer or the relevant Guarantor. Bearer Notes are in the Specified Denomination(s) with Coupons and, if specified in the relevant Final Terms, Talons attached at the time of issue. In the case of a Series of Bearer Notes with more than one Specified Denomination, Bearer Notes of one Specified Denomination will not be exchangeable for Bearer Notes of another Specified Denomination.

(b) ***Title to Bearer Notes***: Title to Bearer Notes and the Coupons will pass by delivery. In the case of Bearer Notes, "**Holder**" means the holder of such Bearer Note and "**Noteholder**" and "**Couponholder**" shall be construed accordingly.

(c) ***Registered Notes***: Registered Notes are in the Specified Denomination(s), which may include a minimum denomination specified in the relevant Final Terms and higher integral multiples of a smaller amount specified in the relevant Final Terms.

(d) ***Title to Registered Notes***: The Registrar will maintain the register (the "**Register**") in accordance with the provisions of the Agency Agreement. A certificate (each, a "**Note Certificate**") will be issued to each Holder of Registered Notes in respect of its registered holding. With respect to Notes issued by Deere Luxembourg or Deere Cash Management, each time the relevant Register is amended or updated, the Registrar shall send a copy of the relevant Register to the relevant Issuer who will keep an updated copy of the Register at its registered office (the "**Duplicate Register**"). In the event of inconsistency between the Register and the Duplicate Register, the Duplicate Register shall, for purposes of Luxembourg law, prevail. Each Note Certificate will be numbered serially with an identifying number which will be recorded in the Register. In the case of Registered Notes, "**Holder**" means the person in whose name such Registered Note is for the time being registered in the Register or the Duplicate Register if different from the Register (with respect to Registered Notes issued by Deere Luxembourg and Deere Cash Management) (or, in the case of a joint holding, the first named thereof) and "**Noteholder**" shall be construed accordingly.

(e) ***Ownership***: The Holder of any Note or Coupon shall (except as otherwise required by law) be treated as its absolute owner for all purposes (whether or not it is overdue and regardless of any notice of ownership, trust or any other interest therein, any writing thereon or, in the case of Registered Notes, on the Note Certificate relating thereto (other than the endorsed form of transfer) or any notice of any previous loss or theft thereof) and no Person shall be liable for so treating such Holder. No person shall have any right to enforce any term or condition of any Note under the Contracts (Rights of Third Parties) Act 1999.

(f) ***Transfers of Registered Notes***: Subject to paragraphs (i) (*Closed periods*) and (j) (*Regulations concerning transfers and registration*) below, a Registered Note may be transferred upon surrender of the relevant Note Certificate, with the endorsed form of transfer duly completed, at the Specified Office of the Registrar or any Transfer Agent, together with such evidence as the Registrar or (as the case may be) such Transfer Agent may reasonably require to prove the title of the transferor and the authority of the individuals who have executed the form of transfer; **provided**, **however**, **that** a Registered Note may not be transferred unless the principal amount of Registered Notes transferred and (where not all of the Registered Notes held by a Holder are being transferred) the principal amount of the balance of Registered Notes not transferred are Specified Denominations. Where not all the Registered Notes represented by the surrendered Note Certificate are the subject of the transfer, a new Note Certificate in respect of the balance of the Registered Notes will be issued to the transferor. With respect to Notes issued by Deere Luxembourg or Deere Cash Management, the transfer will not be deemed to be effective until its registration in the relevant Duplicate Register in accordance with paragraph (g) below.

(g) ***Registration and delivery of Note Certificates***: Within five business days of the surrender of a Note Certificate in accordance with paragraph (f) (*Transfers of Registered Notes*) above, the Registrar will register the transfer in question and procure each Duplicate Register held respectively by Deere Luxembourg or Deere Cash Management to be updated and deliver a new Note Certificate of a like principal amount to the Registered Notes transferred to each relevant Holder at its Specified Office or (as the case may be) the Specified Office of any Transfer Agent or (at the request and risk of any such relevant Holder) by uninsured first class mail (airmail if overseas) to the address specified for the purpose by such relevant Holder. In this paragraph, "**business day**" means a day on which commercial banks are open for general business (including dealings in foreign currencies) in the city where the Registrar or (as the case may be) the relevant Transfer Agent has its Specified Office.

(h) ***No charge***: The transfer of a Registered Note will be effected without charge by or on behalf of the Issuer or the Registrar or any Transfer Agent but against such indemnity as the Registrar or (as the case may be) such Transfer Agent may require in respect of any tax or other duty of whatsoever nature which may be levied or imposed in connection with such transfer.

(i) ***Closed periods***: Noteholders may not require transfers to be registered during the period of 15 days ending on the due date for any payment of principal or interest in respect of the Registered Notes.

(j) ***Regulations concerning transfers and registration***: All transfers of Registered Notes and entries on the Register and the Duplicate Registers respectively held by Deere Luxembourg and Deere Cash Management are subject to the detailed regulations concerning the transfer of Registered Notes scheduled to the Agency Agreement. The regulations may be changed by the Issuer with the prior written approval of the Registrar. A copy of the current regulations will be mailed (free of charge) by the Registrar to any Noteholder who requests in writing a copy of such regulations.

4. **Status of the Notes and the Guarantees**

(a) ***Status of the Senior Notes***

This Condition 4(a) is applicable in relation to Notes specified in the relevant Final Terms as being unsubordinated or not specified as being subordinated ("**Senior Notes**"). The Senior Notes constitute direct, general, unconditional and unsubordinated obligations of the Issuer which will at all times rank *pari passu* and without any preference among themselves and at least *pari passu* with all other present and future unsecured and unsubordinated obligations of the Issuer, save for such obligations as may be preferred by provisions of law that are both mandatory and of general application.

(b) ***Status of the Subordinated Notes***

This Condition 4(b) is applicable only in relation to Notes which are specified in the relevant Final Terms as being subordinated ("**Subordinated Notes**") and are issued by Deere or Deere Capital. Subordinated Notes issued by Deere or Deere Capital constitute direct, unsecured and subordinated obligations of Deere or Deere Capital, as the case may be, which will at all times rank *pari passu* without prejudice among themselves and at least *pari passu* and rateably with all other present and future unsecured and subordinated obligations of Deere or Deere Capital from time to time outstanding save for such obligations as may be preferred by provisions of law that are both mandatory and of general application. The rights and claims of holders of the Subordinated Notes issued by Deere or Deere Capital, as the case may be, will, in the event that Deere or Deere Capital, as the case may be, is wound-up, dissolved, liquidated or ceases to exist as a body corporate, excluding where such event results in there being a successor to Deere or Deere Capital, as the case may be, and the obligations under the Notes are assumed by that successor, be subordinated in right of payment to unsubordinated and unsecured creditors of Deere or Deere Capital, as the case may be.

(c) ***Guarantee by Deere of Notes issued by Deere Cash Management***

Deere has in the Deere Deed of Guarantee unconditionally and irrevocably guaranteed the due and punctual payment of all sums from time to time payable by Deere Cash Management, in respect of Senior Notes issued by it. This Guarantee of the Senior Notes constitutes direct, general, unconditional and unsubordinated obligations of Deere which will at all times rank at least *pari passu* with all other present and future unsubordinated and unsecured obligations of Deere, save for such obligations as may be preferred by provisions of law that are both mandatory and of general application.

(d) ***Guarantee by Deere Capital of Notes issued by Deere Luxembourg***

Deere Capital has in the JDCC Deed of Guarantee unconditionally and irrevocably guaranteed the due and punctual payment of all sums from time to time payable by Deere Luxembourg in respect of Senior Notes issued by them. This Guarantee of the Senior Notes constitutes direct, general, unconditional and unsubordinated obligations of Deere Capital which will at all times rank at least *pari passu* with all other present and future unsubordinated and unsecured obligations of Deere Capital, save for such obligations as may be preferred by provisions of law that are both mandatory and of general application.

5. **Negative Pledge with respect to Senior Notes**

(a) This Condition 5(a) is applicable only in relation to Senior Notes issued by Deere and Deere Cash Management. So long as any Senior Note remains outstanding, the relevant Issuer shall not and Deere (as Guarantor) shall not permit any Material Subsidiary to, issue, incur, assume or guarantee any debt ("**Debt**") secured by any Security Interest (other than a Permitted Security Interest) upon any present or future Important Property, or upon any present or future shares of stock or indebtedness issued by any Material Subsidiary without (a) at the same time or prior thereto securing the Senior Notes equally and rateably therewith or (b) providing such other security for the Senior Notes as may be approved by an Extraordinary Resolution of Noteholders.

Notwithstanding the foregoing, the relevant Issuer or Deere (as Guarantor) or any Material Subsidiary may, without (a) equally and rateably securing the Senior Notes or (b) providing such other security for the Senior Notes as may be approved by an Extraordinary Resolution of Noteholders, issue, incur, assume or guarantee Debt secured by a Security Interest which does not constitute a Permitted Security Interest, up to an aggregate amount which, together with the sum of (A) all other Debt issued or incurred by the relevant Issuer, Deere (as Guarantor) and its Material Subsidiaries secured by Security Interests (other than a Permitted Security Interest) which would otherwise be subject to the foregoing restrictions and (B) the Attributable Debt in respect of Sale and Lease-back Transactions in existence at such time does not at such time (other than Excluded Sale and Leaseback Transactions) exceed 5 per cent. of the Consolidated Net Worth of Deere, as shown on the audited consolidated balance sheet contained in the latest annual report of Deere.

(b) This Condition 5(b) is applicable only in relation to Senior Notes issued by Deere Capital and Deere Luxembourg. So long as any Senior Notes remain outstanding, the relevant Issuer shall not and Deere Capital (as Guarantor) shall not permit any of its Subsidiaries to issue, incur, assume or guarantee any Debt secured by any Security Interest (other than a Permitted Lien) on any of its property or assets, or any of the property or assets of any of its Subsidiaries, without (a) at the same time or prior thereto securing the Senior Notes equally and rateably therewith or (b) providing such other security for the Senior Notes as may be approved by an Extraordinary Resolution of Noteholders.

6. **Fixed Rate Note Provisions**

(a) ***Application***

This Condition 6 (*Fixed Rate Note Provisions*) is applicable to the Notes only if the Fixed Rate Note Provisions are specified in the relevant Final Terms as being applicable.

(b) ***Accrual of Interest***

The Notes bear interest from, and including, the Interest Commencement Date at the Rate of Interest payable in arrear on each Interest Payment Date, subject as provided in Conditions 11 (*Payments – Bearer Notes*) and 12 (*Payments – Registered Notes*). Each Note will cease to bear interest from the due date for final redemption unless, upon due presentation, payment of the Redemption Amount is improperly withheld or refused, in which case it will continue to bear interest in accordance with this Condition 6 (as well after as before judgment) until whichever is the earlier of (i) the day on which all sums due in respect of such Note up to that day are received by or on behalf of the relevant Noteholder and (ii) the day which is seven days after the Fiscal Agent has notified the Noteholders that it has received all sums due in respect of the Notes up to such seventh day (except to the extent that there is any subsequent default in payment).

(c) ***Fixed Coupon Amount***

The amount of interest payable in respect of each Note for any Interest Period shall be the relevant Fixed Coupon Amount and, if the Notes are in more than one Specified Denomination, shall be the relevant Fixed Coupon Amount in respect of the relevant Specified Denomination.

(d) ***Calculation of Interest Amount***

The amount of interest payable in respect of each Note for any period for which a Fixed Coupon Amount is not specified shall be calculated by applying the Rate of Interest to the Calculation

Amount, multiplying the product by the relevant Day Count Fraction, rounding the resulting figure to the nearest sub-unit of the Specified Currency (half a sub-unit being rounded upwards) and multiplying such rounded figure by a fraction equal to the Specified Denomination of such Note divided by the Calculation Amount. For this purpose a "**sub-unit**" means, in the case of any currency other than euro, the lowest amount of such currency that is available as legal tender in the country of such currency and, in the case of euro, means one cent.

(e) ***Renminbi Notes***

This Condition 6(e) shall apply to Renminbi Notes which are Fixed Rate Notes only where the Final Terms for such Notes specify that the Interest Payment Dates are subject to adjustment. The relevant Fixed Coupon Amount for such Notes shall be calculated by the Calculation Agent by multiplying the product of the Rate of Interest and the Calculation Amount by the relevant Day Count Fraction and rounding the resultant figure to the nearest CNY0.01, with CNY0.005 being rounded upwards. The Calculation Agent shall cause the relevant Fixed Coupon Amount and the relevant Interest Payment Date to be notified to the Issuer, the Paying Agents, the Registrar (in the case of Registered Notes) and the Holders in accordance with Condition 20 (*Notices*) and, if the Notes are listed on a stock exchange and the rules of such exchange so requires, such exchange as soon as possible after their determination or calculation but in no event later than the fourth Business day thereafter or, if earlier in the case of notification to the stock exchange, the time required by the rules of the relevant stock exchange.

7. **Floating Rate Note Provisions**

(a) ***Application***

This Condition 7 (*Floating Rate Note Provisions*) is applicable to the Notes only if the Floating Rate Note Provisions are specified in the relevant Final Terms as being applicable.

(b) ***Accrual of interest***

The Notes bear interest from the Interest Commencement Date at the Rate of Interest payable in arrear on each Interest Payment Date, subject as provided in Conditions 11 (*Payments – Bearer Notes*) and 12 (*Payments – Registered Notes*). Each Note will cease to bear interest from the due date for final redemption unless, upon due presentation, payment of the Redemption Amount is improperly withheld or refused, in which case it will continue to bear interest in accordance with this Condition (both before and after judgment) until whichever is the earlier of (i) the day on which all sums due in respect of such Note up to that day are received by or on behalf of the relevant Noteholder and (ii) the day which is seven days after the Fiscal Agent has notified the Noteholders that it has received all sums due in respect of the Notes up to such seventh day (except to the extent that there is any subsequent default in payment).

(c) ***Screen Rate Determination***

Subject to Condition 7(j) (*Benchmarks Discontinuation*), if Screen Rate Determination is specified in the relevant Final Terms as the manner in which the Rate(s) of Interest is/are to be determined, the Rate of Interest applicable to the Notes for each Interest Period will be determined by the Calculation Agent on the following basis:

(i) if the Reference Rate is a composite quotation or customarily supplied by one entity, the Calculation Agent will determine the Reference Rate which appears on the Relevant Screen Page as of the Relevant Time on the relevant Interest Determination Date;

(ii) if Linear Interpolation is specified as applicable in respect of an Interest Period in the applicable Final Terms, the rate for such Interest Period shall be calculated by the Calculation Agent by straight-line linear interpolation by reference to two rates which appear on the Relevant Screen Page as of the Relevant Time on the relevant Interest Determination Date, where:

   (A) one rate shall be determined as if the relevant Interest Period were the period of time for which rates are available next shorter than the length of the relevant Interest Period; and

(B) the other rate shall be determined as if the relevant Interest Period were the period of time for which rates are available next longer than the length of the relevant Interest Period,

provided, however, that if no rate is available for a period of time next shorter or, as the case may be, next longer than the length of the relevant Interest Period, then the Calculation Agent shall determine such rate at such time and by reference to such sources as it determines appropriate;

(iii) in any other case, the Calculation Agent will determine the arithmetic mean of the Reference Rates which appear on the Relevant Screen Page as of the Relevant Time on the relevant Interest Determination Date;

(iv) if, in the case of (i) above, such rate does not appear on that page or, in the case of (iii) above, fewer than two such rates appear on that page or if, in either case, the Relevant Screen Page is unavailable, the Calculation Agent will:

(A) request the principal Relevant Financial Centre office of each the Reference Banks to provide a quotation of the Reference Rate at approximately the Relevant Time on the Interest Determination Date to prime banks in the Relevant Financial Centre interbank market in an amount that is representative for a single transaction in that market at that time; and

(B) determine the arithmetic mean of such quotations; and

(v) if fewer than two such quotations are provided as requested, the Calculation Agent will determine the arithmetic mean of the rates (being the nearest to the Reference Rate, as determined by the Calculation Agent) quoted by major banks in the Principal Financial Centre of the Specified Currency, selected by the Calculation Agent, at approximately 11.00 a.m. (local time in the Principal Financial Centre of the Specified Currency) on the first day of the relevant Interest Period for loans in the Specified Currency to leading European banks for a period equal to the relevant Interest Period and in an amount that is representative for a single transaction in that market at that time,

and the Rate of Interest for such Interest Period shall be the sum of the Margin and the rate or (as the case may be) the arithmetic mean so determined; **provided**, **however**, **that** if the Calculation Agent is unable to determine a rate or (as the case may be) an arithmetic mean in accordance with the above provisions in relation to any Interest Period, the Rate of Interest applicable to the Notes during such Interest Period will be the sum of the Margin and the rate or (as the case may be) the arithmetic mean last determined in relation to the Notes in respect of a preceding Interest Period.

(d) ***ISDA Determination***

If ISDA Determination is specified in the relevant Final Terms as the manner in which the Rate(s) of Interest is/are to be determined, the Rate of Interest applicable to the Notes for each Interest Period will be the sum of the Margin and the relevant ISDA Rate where "**ISDA Rate**" in relation to any Interest Period means a rate equal to the Floating Rate (as defined in the ISDA Definitions) that would be determined by the Calculation Agent under an interest rate swap transaction if the Calculation Agent were acting as Calculation Agent for that interest rate swap transaction under the terms of an agreement incorporating the ISDA Definitions and under which:

(i) the Floating Rate Option (as defined in the ISDA Definitions) is as specified in the relevant Final Terms;

(ii) the Designated Maturity (as defined in the ISDA Definitions) is a period specified in the relevant Final Terms;

(iii) the relevant Reset Date (as defined in the ISDA Definitions) is either (A) if the relevant Floating Rate Option is based on LIBOR for a currency, the first day of that Interest Period or (B) in any other case, as specified in the relevant Final Terms; and

(iv) if Linear Interpolation is specified as applicable in respect of an Interest Period in the applicable Final Terms, the rate for such Interest Period shall be calculated by the Calculation Agent by straight-line linear interpolation by reference to two rates based on the relevant Floating Rate Option, where:

(A) one rate shall be determined as if the Designated Maturity were the period of time for which rates are available next shorter than the length of the relevant Interest Period; and

(B) the other rate shall be determined as if the Designated Maturity were the period of time for which rates are available next longer than the length of the relevant Interest Period,

provided, however, that if there is no rate available for a period of time next shorter than the length of the relevant Interest Period or, as the case may be, next longer than the length of the relevant Interest Period, then the Calculation Agent shall determine such rate at such time and by reference to such sources as it determines appropriate.

(e) ***Maximum or Minimum Rate of Interest***

If any Maximum Rate of Interest or Minimum Rate of Interest is specified in the relevant Final Terms, then the Rate of Interest shall in no event be greater than the maximum or be less than the minimum so specified. If no Minimum Rate of Interest is specified in the relevant Final Terms, then the Minimum Rate of Interest in respect of each relevant Interest Period shall be deemed to be zero, and in no event shall the Rate of Interest calculated in accordance with this Condition 7 be less than zero.

(f) ***Calculation of Interest Amount***

The Calculation Agent will, as soon as practicable after the time at which the Rate of Interest is to be determined in relation to each Interest Period, calculate the Interest Amount payable in respect of each Note for such Interest Period. The Interest Amount will be calculated by applying the Rate of Interest for such Interest Period to the Calculation Amount multiplying the product by the relevant Day Count Fraction, rounding the resulting figure to the nearest sub-unit of the Specified Currency (half a sub-unit being rounded upwards) and multiplying such rounded figure by a fraction equal to the Specified Denomination of the relevant Note divided by the Calculation Amount. For this purpose a "**sub-unit**" means, in the case of any currency other than euro, the lowest amount of such currency that is available as legal tender in the country of such currency and, in the case of euro, means one cent.

(g) ***Calculation of other amounts***

If the relevant Final Terms specifies that any other amount is to be calculated by the Calculation Agent, the Calculation Agent will, as soon as practicable after the time or times at which any such amount is to be determined, calculate the relevant amount. The relevant amount will be calculated by the Calculation Agent in the manner specified in the relevant Final Terms.

(h) ***Publication***

The Calculation Agent will cause each Rate of Interest and Interest Amount determined by it, together with the relevant Interest Payment Date, and any other amount(s) required to be determined by it together with any relevant payment date(s) to be notified to the Paying Agents and each competent authority, stock exchange and/or quotation system (if any) by which the Notes have then been admitted to listing, trading and/or quotation as soon as practicable after such determination but (in the case of each Rate of Interest, Interest Amount and Interest Payment Date) in any event not later than the first day of the relevant Interest Period. Notice thereof shall also promptly be given to the Noteholders. The Calculation Agent will be entitled to recalculate any Interest Amount (on the basis of the foregoing provisions) without notice in the event of an extension or shortening of the relevant Interest Period. If the Calculation Amount is less than the minimum Specified Denomination the Calculation Agent shall not be obliged to publish each Interest Amount but instead may publish only the Calculation Amount and the Interest Amount in respect of a Note having the minimum Specified Denomination.

(i) ***Notifications etc***

All notifications, opinions, determinations, certificates, calculations, quotations and decisions given, expressed, made or obtained for the purposes of this Condition by the Calculation Agent will (in the absence of manifest error) be binding on the Issuer, the Guarantor, the Paying Agents, the Noteholders and the Couponholders and (subject as aforesaid) no liability to any such Person will attach to the Calculation Agent in connection with the exercise or non-exercise by it of its powers, duties and discretions for such purposes.

(j) ***Benchmark discontinuation***

(i) *Independent Adviser*

Notwithstanding Condition 7(c), if a Benchmark Event occurs in relation to an Original Reference Rate at any time when these Conditions provide for any remaining Rate of Interest (or any component part thereof) to be determined by reference to such Original Reference Rate, then the Issuer shall use its reasonable endeavours to appoint an Independent Adviser, as soon as reasonably practicable, to determine a Successor Rate, failing which an Alternative Rate (in accordance with Condition 7(j)(ii)) and, in either case, an Adjustment Spread if any (in accordance with Condition 7(j)(iii)) and any Benchmark Amendments (in accordance with Condition 7(j)(iv)).

An Independent Adviser appointed pursuant to this Condition 7(j) shall act in good faith and in a commercially reasonable manner and in consultation with the Issuer. In the absence of bad faith or fraud, the Independent Adviser shall have no liability whatsoever to the Issuer, the Guarantor, the Agents, any other party specified in the applicable Final Terms as being responsible for calculating the Rate of Interest, the Noteholders or Couponholders for any determination made by it or for any advice given to the Issuer in connection with the operation of this Condition 7(j).

(ii) *Successor Rate or Alternative Rate*

If the Independent Adviser determines that:

(A) there is a Successor Rate, then such Successor Rate shall (subject to adjustment as provided in Condition 7(j)(iii)) subsequently be used in place of the Original Reference Rate to determine the relevant Rate of Interest (or the relevant component part thereof) for all relevant future payments of interest on the Notes (subject to the further operation of this Condition 7(j)); or

(B) there is no Successor Rate but that there is an Alternative Rate, then such Alternative Rate shall (subject to adjustment as provided in Condition 7(j)(iii)) subsequently be used in place of the Original Reference Rate to determine the relevant Rate of Interest (or the relevant component part thereof) for all relevant future payments of interest on the Notes (subject to the further operation of this Condition 7(j)).

If, following the occurrence of a Benchmark Event and in relation to the determination of the Rate of Interest on the relevant Interest Determination Date, no Successor Rate or Alternative Rate (as applicable) is determined pursuant to this Condition 7(j) by such Interest Determination Date, the Rate of Interest applicable to the next succeeding Interest Period shall be determined in accordance with Condition 7(j)(vii).

(iii) *Adjustment Spread*

If the Independent Adviser determines (i) that an Adjustment Spread should be applied to the Successor Rate or the Alternative Rate (as the case may be) and (ii) the quantum of, or a formula or methodology for determining, such Adjustment Spread, then such Adjustment Spread shall be applied to the Successor Rate or the Alternative Rate (as the case may be for each subsequent determination of a relevant Rate of Interest (or a relevant component part thereof) by reference to such Successor Rate or Alternative Rate (as applicable)).

(iv) *Benchmark Amendments*

If any Successor Rate, Alternative Rate or Adjustment Spread is determined in accordance with this Condition 7(j) and the Independent Adviser determines (i) that amendments to these Conditions (including, without limitation, amendments to the definitions of Day Count Fraction, Business Day, Interest Payment Date, Interest Determination Date, Relevant Time or Relevant Screen Page and related provisions) and/or the Agency Agreement to ensure the proper operation of such Successor Rate, Alternative Rate and/or Adjustment Spread (such amendments, the "**Benchmark Amendments**") and (ii) the terms of the Benchmark Amendments, then the Calculation Agent shall, at the direction and expense of the Issuer and subject to the Issuer giving notice thereof in accordance with Condition 7(j)(v), without any requirement for the consent or approval of Noteholders, vary these Conditions and/or the Agency Agreement to give effect to such Benchmark Amendments with effect from the date specified in such notice; provided that, the Calculation Agent shall not be obliged to effect any Benchmark Amendment if in the sole opinion of the Calculation Agent doing so would impose more onerous obligations upon it or expose it to any additional duties, responsibilities or liabilities or reduce or amend the protective provisions afforded to it in these Conditions or the Agency Agreement in any way.

In connection with any such variation in accordance with this Condition 7(j)(iv), the Issuer shall comply with the rules of any stock exchange or other relevant authority on which the Notes are for the time being listed or on which they have been admitted to trading.

(v) *Notices, etc.*

The Issuer will notify the Fiscal Agent, the Paying Agent, any other party specified in the applicable Final Terms as being responsible for calculating the Rate of Interest and, in accordance with Condition 20, the Noteholders promptly of any Successor Rate, Alternative Rate, Adjustment Spread and the specific terms of any Benchmark Amendments and the effective date of such Benchmark Amendments, if any, determined under this Condition 7(j).

The Successor Rate or Alternative Rate and the Adjustment Spread (if any) and the Benchmark Amendments (if any) specified in such notice will (in the absence of manifest error or bad faith in the determination of the Successor Rate or Alternative Rate and the Adjustment Spread (if any) and the Benchmark Amendments (if any)) be binding on the Issuer, the Fiscal Agent, the Calculation Agent, the Paying Agent and the Noteholders.

(vi) *Survival of Original Reference Rate*

Without prejudice to the obligations of the Issuer under the provisions of this Condition 7(j), the Original Reference Rate and the fallback provisions provided for in Condition 7(c) will continue to apply unless and until a Benchmark Event has occurred.

(vii) *Fallbacks*

If, following the occurrence of a Benchmark Event and in relation to the determination of the Rate of Interest on the relevant Interest Determination Date, no Successor Rate or Alternative Rate (as applicable) is determined pursuant to this Condition 7(j) by such Interest Determination Date, the Rate of Interest applicable to the next succeeding Interest Period shall be equal to the Rate of Interest last determined in relation to the Notes in respect of the immediately preceding Interest Period (though substituting, where a different Margin or Maximum or Minimum Rate of Interest is to be applied to the relevant Interest Period from that which applied to the last preceding Interest Period, the Margin or Maximum or Minimum Rate of Interest relating to the relevant Interest Period, in place of the Margin or Maximum or Minimum Rate of Interest relating to that last preceding Interest Period).

For the avoidance of doubt, this Condition 7(j)(vii) shall apply to the determination of the Rate of Interest on the relevant Interest Determination Date only, and the Rate of Interest applicable to any subsequent Interest Period(s) is subject to the subsequent operation of, and to adjustment as provided in, this Condition 7(j).

(viii) *Definitions*

In this Condition 7(j):

"**Adjustment Spread**" means either a spread (which may be positive or negative), or the formula or methodology for calculating a spread, in either case, which the Independent Adviser determines is required to be applied to the relevant Successor Rate or the relevant Alternative Rate (as the case may be) and is the spread, formula or methodology which:

(A) in the case of a Successor Rate, is formally recommended, or formally provided as an option for parties to adopt, in relation to the replacement of the Original Reference Rate with the Successor Rate by any Relevant Nominating Body; or

(B) (if no such recommendation has been made, or in the case of an Alternative Rate), the Independent Adviser determines is customarily applied to the relevant Successor Rate or Alternative Rate (as the case may be) in international debt capital markets transactions to produce an industry-accepted replacement rate for the Reference Rate; or

(C) (if no such recommendation has been made, or in the case of an Alternative Rate), the Independent Adviser determines is recognised or acknowledged as being the industry standard for over-the-counter derivative transactions which reference the Reference Rate, where such rate has been replaced by the Successor Rate or the Alternative Rate (as the case may be); or

(D) (if the Independent Adviser determines that no such industry standard is so recognised or acknowledged) the Independent Adviser determines to be appropriate to reduce or eliminate, to the extent reasonably practicable in the circumstances, any economic prejudice or benefit (as the case may be) to Noteholders as a result of the replacement of the Reference Rate with the Successor Rate or the Alternative Rate (as the case may be);

"**Alternative Rate**" means an alternative benchmark or screen rate which the Independent Adviser determines in accordance with Condition 7(j)(ii) is customary in market usage in the international debt capital markets for the purposes of determining rates of interest (or the relevant component part thereof) in the same Specified Currency as the Notes;

"**Benchmark Amendments**" has the meaning given to it in Condition 7(j)(iv);

"**Benchmark Event**" means:

(A) the Original Reference Rate ceasing to be published on the Relevant Screen Page as a result of such benchmark ceasing to be calculated or administered;

(B) the later of (i) the making of a public statement by the administrator of the Original Reference Rate that it will, on or before a specified date, cease publishing the Original Reference Rate permanently or indefinitely (in circumstances where no successor administrator has been appointed that will continue publication of the Original Reference Rate) and (ii) the date falling six months prior to the specified date referred to in (B)(i) above;

(C) the making of a public statement by the supervisor of the administrator of the Original Reference Rate that the Original Reference Rate has been permanently or indefinitely discontinued;

(D) the later of (i) the making of a public statement by the supervisor of the administrator of the Original Reference Rate that the Original Reference Rate will, on or before a specified date, be permanently or indefinitely discontinued and (ii) the date falling six months prior to the specified date referred to in (D)(i) above;

(E) the later of (i) the making of a public statement by the supervisor of the administrator of the Original Reference Rate that means the Original Reference Rate will be prohibited from being used or that its use will be subject to restrictions or adverse consequences, in each case on or before a specified date and (ii) the date falling six months prior to the specified date referred to in (E)(i) above;

(F) a public statement by the supervisor of the administrator of the relevant Reference Rate (as applicable) that, in the view of such supervisor, such Reference Rate is no longer representative of an underlying market; or

(G) it has or will become unlawful for the Calculation Agent or any Paying Agent to calculate any payments due to be made to any Noteholder using the Original Reference Rate;

"**Independent Adviser**" means an independent financial institution of international repute or an independent financial adviser with appropriate expertise appointed by the Issuer under Condition 7(j)(i) at its own expense;

"**Original Reference Rate**" means the originally-specified benchmark or screen rate (as applicable) used to determine the relevant Rate of Interest (or any component part thereof) on the Notes;

"**Relevant Nominating Body**" means, in respect of a benchmark or screen rate (as applicable):

(A) the central bank, reserve bank, monetary authority or any similar institution for the currency to which the benchmark or screen rate (as applicable) relates, or any central bank or other supervisory authority which is responsible for supervising the administrator of the benchmark or screen rate (as applicable); or

(B) any working group or committee sponsored by, chaired or co-chaired by or constituted at the request of (a) the central bank, reserve bank, monetary authority or any similar institution for the currency to which the benchmark or screen rate (as applicable) relates, (b) any central bank or other supervisory authority which is responsible for supervising the administrator of the benchmark or screen rate (as applicable), (c) a group of the aforementioned central banks or other supervisory authorities, or (d) the Financial Stability Board or any part thereof; and

"**Successor Rate**" means a successor to or replacement of the Original Reference Rate which is formally recommended by any Relevant Nominating Body.

8. **Zero Coupon Note Provisions**

(a) ***Application***

This Condition 8 (*Zero Coupon Note Provisions*) is applicable to the Notes only if the Zero Coupon Note Provisions are specified in the relevant Final Terms as being applicable.

(b) ***Late payment on Zero Coupon Notes***

If the Redemption Amount payable in respect of any Zero Coupon Note is improperly withheld or refused, the Redemption Amount shall thereafter be an amount equal to the sum of:

(i) the Reference Price; and

(ii) the product of the Accrual Yield (compounded annually) being applied to the Reference Price from (and including) the Issue Date to (but excluding) whichever is the earlier of (i) the day on which all sums due in respect of such Note up to that day are received by or on behalf of the relevant Noteholder and (ii) the day which is seven days after the Fiscal Agent has notified the Noteholders that it has received all sums due in respect of the Notes up to such seventh day (except to the extent that there is any subsequent default in payment).

9. **Interest to be non-contingent**

Interest on the Notes will not be determined by reference to the receipts, sales, income, profits or cashflow of the Issuer or a related person, or by reference to the change in the value of any property held by the Issuer or a related person.

10. **Redemption and Purchase**

(a) ***Scheduled redemption***

Unless previously redeemed, or purchased and cancelled, the Notes will be redeemed at their Final Redemption Amount on the Maturity Date, subject as provided in Conditions 11 (*Payments – Bearer Notes*) and 12 (*Payments – Registered Notes*).

(b) ***Redemption for tax reasons***

The Notes may be redeemed at the option of the Issuer in whole, but not in part:

(i) at any time (if the Floating Rate Note Provisions are not specified in the relevant Final Terms as being applicable); or

(ii) on any Interest Payment Date (if the Floating Rate Note Provisions are specified in the relevant Final Terms as being applicable),

on giving not less than 30 nor more than 60 days' notice to the Noteholders (which notice shall be irrevocable), at their Early Redemption Amount (Tax), together with interest accrued (if any) to the date fixed for redemption, if:

(A) (1) the Issuer has or will become obliged to pay additional amounts as provided or referred to in Condition 13 (*Taxation*) as a result of any change in, or amendment to, the laws or regulations of the applicable Relevant Jurisdiction or any political subdivision or any authority thereof or therein having power to tax, or any change in the application or official interpretation of such laws or regulations (including a holding by a court of competent jurisdiction), which change or amendment becomes effective on or after the date of issue of the first Tranche of the Notes and (2) such obligation cannot be avoided by the Issuer taking reasonable measures available to it; or

(B) (1) the Guarantor has or (if a demand was made under the Guarantee of the Notes) would become obliged to pay additional amounts as provided or referred to in the Guarantee of the Notes or the Guarantor has or will become obliged to make any such withholding or deduction as is referred to in the Guarantee of the Notes from any amount paid by it to the Issuer in order to enable the Issuer to make a payment of principal or interest in respect of the Notes, in either case as a result of any change in, or amendment to, the laws or regulations of the United States or any political subdivision or any authority thereof or therein having power to tax, or any change in the application or official interpretation of such laws or regulations (including a holding by a court of competent jurisdiction), which change or amendment becomes effective on or after the date of issue of the first Tranche of the Notes, and (2) such obligation cannot be avoided by the Guarantor taking reasonable measures available to it,

provided, **however**, **that** no such notice of redemption shall be given earlier than:

(1) where the Notes may be redeemed at any time, 90 days prior to the earliest date on which the Issuer or the Guarantor would be obliged to

pay such additional amounts or the Guarantor would be obliged to make such withholding or deduction if a payment in respect of the Notes were then due or (as the case may be) a demand under the Guarantee of the Notes were then made; or

(2) where the Notes may be redeemed only on an Interest Payment Date, 60 days prior to the Interest Payment Date occurring immediately before the earliest date on which the Issuer or the Guarantor would be obliged to pay such additional amounts or the Guarantor would be obliged to make such withholding or deduction if a payment in respect of the Notes were then due or (as the case may be) a demand under the Guarantee of the Notes were then made.

Prior to the publication of any notice of redemption pursuant to this paragraph, the Issuer shall deliver or procure that there is delivered to the Fiscal Agent (1) a certificate signed by two directors of the Issuer stating that the Issuer is entitled to effect such redemption and setting forth a statement of facts showing that the conditions precedent to the right of the Issuer so to redeem have occurred and (2) an opinion of independent legal advisers of recognised standing to the effect that the Issuer or (as the case may be) the Guarantor has or will become obliged to pay such additional amounts or (as the case may be) the Guarantor has or will become obliged to make such withholding or deduction as a result of such change or amendment. Upon the expiry of any such notice as is referred to in this Condition 10(b), the Issuer shall be bound to redeem the Notes in accordance with this Condition 10(b).

(c) ***Redemption at the option of the Issuer***

If the Call Option is specified in the relevant Final Terms as being applicable, the Notes may be redeemed at the option of the Issuer in whole or, if so specified in the relevant Final Terms, in part on any Optional Redemption Date (Call) at the relevant Optional Redemption Amount (Call) on the Issuer's giving not less than 30 nor more than 60 days' notice to the Noteholders (which notice shall be irrevocable and shall oblige the Issuer to redeem the Notes or, as the case may be, the Notes specified in such notice on the relevant Optional Redemption Date (Call) at the Optional Redemption Amount (Call) plus accrued interest (if any) to such date).

(d) ***Partial redemption***

If the Notes are to be redeemed in part only on any date in accordance with Condition 10(c) (*Redemption at the option of the Issuer*), the Notes to be redeemed shall be selected by the drawing of lots in such place as the Fiscal Agent approves and in such manner as the Fiscal Agent considers appropriate, subject to compliance with applicable law, the rules of each competent authority, stock exchange and/or quotation system (if any) by which the Notes have then been admitted to listing, trading and/or quotation and the notice to Noteholders referred to in Condition 10(c) (*Redemption at the option of the Issuer*) shall specify the serial numbers of the Notes so to be redeemed. If any Maximum Redemption Amount or Minimum Redemption Amount is specified in the relevant Final Terms, then the Optional Redemption Amount (Call) shall in no event be greater than the maximum or be less than the minimum so specified.

(e) ***Redemption at the option of Noteholders***

If the Put Option is specified in the relevant Final Terms as being applicable, the Issuer shall at the option of the holder of any Note redeem such Note on the Optional Redemption Date (Put) specified in the relevant Put Option Notice at the relevant Optional Redemption Amount (Put) together with interest (if any) accrued to such date. In order to exercise the option contained in this Condition 10(e), the holder of a Note must, not less than 30 nor more than 60 days before the relevant Optional Redemption Date (Put), deposit with any Paying Agent (in the case of Bearer Notes) such Note together with all unmatured Coupons relating thereto or (in the case of Registered Notes) the certificate representing such Notes with the Registrar or any Transfer Agent, together with a duly completed Put Option Notice in the form obtainable from any Paying Agent. The Paying Agent with which a Note is so deposited shall deliver a duly completed Put Option Receipt to the depositing Noteholder. No Note, once deposited with a duly completed Put Option Notice in accordance with this Condition 10(e), may be withdrawn; **provided**, **however**, **that** if, prior to the relevant Optional Redemption Date (Put), any such Note becomes immediately due and payable or, upon due presentation of any such Note on the relevant Optional Redemption Date (Put), payment of the redemption moneys is improperly withheld or refused, the relevant Paying Agent shall mail notification thereof to the depositing Noteholder at such address as may have been given by such Noteholder in the relevant Put Option Notice and shall hold such Note at its Specified Office for collection by the depositing Noteholder against surrender of the relevant Put Option Receipt. For so long as any outstanding Note is held by a Paying Agent in accordance with this Condition 10(e), the depositor of such Note and not such Paying Agent shall be deemed to be the holder of such Note for all purposes.

(f) ***No other redemption***

The Issuer shall not be entitled to redeem the Notes otherwise than as provided in paragraphs (a) to (e) above.

(g) ***Early redemption of Zero Coupon Notes***

Unless otherwise specified in the relevant Final Terms, the Redemption Amount payable on redemption of a Zero Coupon Note at any time before the Maturity Date shall be an amount equal to the sum of:

(i) the Reference Price; and

(ii) the product of the Accrual Yield (compounded annually) being applied to the Reference Price from (and including) the Issue Date to (but excluding) the date fixed for redemption or (as the case may be) the date upon which the Note becomes due and payable.

Where such calculation is to be made for a period which is not a whole number of years, the calculation in respect of the period of less than a full year shall be made on the basis of such Day Count Fraction as may be specified in the relevant Final Terms for the purposes of this Condition 10(g) or, if none is so specified, a Day Count Fraction of 30E/360.

(h) ***Purchase***

The Issuer, the Guarantor or any of their respective Subsidiaries may at any time after 183 days following the Issue Date purchase Notes in the open market or otherwise and at any price, **provided that** all unmatured Coupons are purchased therewith.

(i) ***Cancellation***

All Notes so redeemed or purchased by the Issuer, the Guarantor or any of their respective Subsidiaries and any unmatured Coupons attached to or surrendered with them shall be cancelled and may not be reissued or resold.

11. **Payments – Bearer Notes**

This Condition 11 is only applicable to Bearer Notes.

(a) ***Principal***: Payments of principal shall be made only against presentation and (**provided that** payment is made in full) surrender of Bearer Notes at the Specified Office of any Paying Agent outside the United States by cheque drawn in the currency in which the payment is due on, or by transfer to an account denominated in that currency (or, if that currency is euro, any other account to which euro may be credited or transferred) and maintained by the payee with, a bank in the Principal Financial Centre of that currency.

(b) ***Interest***: Payments of interest shall, subject to paragraph (h) below, be made only against presentation and (**provided that** payment is made in full) surrender of the appropriate Coupons at the Specified Office of any Paying Agent outside the United States in the manner described in paragraph (a) above.

(c) ***Payments in New York City***: Payments of principal or interest may be made at the Specified Office of a Paying Agent in New York City if (i) the Issuer has appointed Paying Agents outside the United States with the reasonable expectation that such Paying Agents will be able to make payment of the full amount of the interest on the Notes in the currency in which the payment is due when due, (ii) payment of the full amount of such interest at the offices of all such Paying Agents is illegal or effectively precluded by exchange controls or other similar restrictions and (iii) payment is permitted by applicable United States law (including applicable United States tax law).

(d) ***Payments subject to fiscal laws***: All payments in respect of the Bearer Notes are subject in all cases to (i) any fiscal or other laws and regulations applicable thereto in the place of payment, but without prejudice to the provisions of Condition 13 (*Taxation*) and (ii) any withholding or deduction required pursuant to FATCA. No commissions or expenses shall be charged to the Noteholders or Couponholders in respect of such payments.

(e) ***Deductions for unmatured Coupons***: If the relevant Final Terms specifies that the Fixed Rate Note Provisions are applicable and a Bearer Note is presented without all unmatured Coupons relating thereto:

(i) if the aggregate amount of the missing Coupons is less than or equal to the amount of principal due for payment, a sum equal to the aggregate amount of the missing Coupons will be deducted from the amount of principal due for payment; **provided**, **however**, **that** if the gross amount available for payment is less than the amount of principal due for payment, the sum deducted will be that proportion of the aggregate amount of such missing Coupons which the gross amount actually available for payment bears to the amount of principal due for payment;

(ii) if the aggregate amount of the missing Coupons is greater than the amount of principal due for payment:

(A) so many of such missing Coupons shall become void (in inverse order of maturity) as will result in the aggregate amount of the remainder of such missing Coupons (the "**Relevant Coupons**") being equal to the amount of principal due for payment; **provided**, **however**, **that** where this sub-paragraph would otherwise require a fraction of a missing Coupon to become void, such missing Coupon shall become void in its entirety; and

(B) a sum equal to the aggregate amount of the Relevant Coupons (or, if less, the amount of principal due for payment) will be deducted from the amount of principal due for payment; **provided**, **however**, **that**, if the gross amount available for payment is less than the amount of principal due for payment, the sum deducted will be that proportion of the aggregate amount of the Relevant Coupons (or, as the case may be, the amount of principal due for payment) which the gross amount actually available for payment bears to the amount of principal due for payment.

Each sum of principal so deducted shall be paid in the manner provided in paragraph (a) above against presentation and (**provided that** payment is made in full) surrender of the relevant missing Coupons.

(f) ***Unmatured Coupons void***: If the relevant Final Terms specifies that this Condition 11(f) is applicable or that the Floating Rate Note Provisions are applicable, on the due date for final redemption of any Note or early redemption in whole of such Note pursuant to Condition 10(b) (*Redemption for tax reasons*), Condition 10(e) (*Redemption at the option of Noteholders*), Condition 10(c) (*Redemption at the option of the Issuer*) or Condition 14 (*Events of Default*), all unmatured Coupons relating thereto (whether or not still attached) shall become void and no payment will be made in respect thereof.

(g) ***Payments on business days***: If the due date for payment of any amount in respect of any Bearer Note or Coupon is not a Payment Business Day in the place of presentation, the Holder shall not be entitled to payment in such place of the amount due until the next succeeding Payment Business

Day in such place and shall not be entitled to any further interest or other payment in respect of any such delay.

(h) ***Payments other than in respect of matured Coupons***: Payments of interest other than in respect of matured Coupons shall be made only against presentation of the relevant Bearer Notes at the Specified Office of any Paying Agent outside the United States (or in New York City if permitted by paragraph (c) above).

(i) ***Partial payments***: If a Paying Agent makes a partial payment in respect of any Bearer Note or Coupon presented to it for payment, such Paying Agent will endorse thereon a statement indicating the amount and date of such payment.

(j) ***Exchange of Talons***: On or after the maturity date of the final Coupon which is (or was at the time of issue) part of a Coupon Sheet relating to the Bearer Notes, the Talon forming part of such Coupon Sheet may be exchanged at the Specified Office of the Fiscal Agent for a further Coupon Sheet (including, if appropriate, a further Talon but excluding any Coupons in respect of which claims have already become void pursuant to Condition 15 (*Prescription*). Upon the due date for redemption of any Bearer Note, any unexchanged Talon relating to such Note shall become void and no Coupon will be delivered in respect of such Talon.

(k) ***Payment of U.S. Dollar Equivalent***: Notwithstanding the foregoing, if by reason of Inconvertibility, Non-transferability or Illiquidity, the Issuer is not able to satisfy payments of principal or interest (in whole or in part) in respect of the Notes when due in Renminbi in Hong Kong, the Issuer shall, on giving not less than 5 or more than 30 days' irrevocable notice to the Holders prior to the due date for payment, settle any such payment (in whole or in part) in U.S. dollars on the due date at the U.S. Dollar Equivalent of any such Renminbi denominated amount.

All notifications, opinions, determinations, certificates, calculations, quotations and decisions given, expressed, made or obtained for the purposes of the provisions of this Condition 11(k) (*Payment of U.S. Dollar Equivalent*) by the Calculation Agent, will (in the absence of wilful default, bad faith or manifest error) be binding on the Issuer, the Agents and all Holders.

12. Payments – Registered Notes

This Condition 12 is only applicable to Registered Notes.

(a) ***Principal***: Payments of principal shall be made by cheque drawn in the currency in which the payment is due drawn on, or, upon application by a Holder of a Registered Note to the Specified Office of the Fiscal Agent not later than the fifteenth day before the due date for any such payment, by transfer to an account denominated in that currency (or, if that currency is euro, any other account to which euro may be credited or transferred) and maintained by the payee with, a bank in the Principal Financial Centre of that currency (in the case of a sterling cheque, a town clearing branch of a bank in the City of London) and (in the case of redemption) upon surrender (or, in the case of part payment only, endorsement) of the relevant Note Certificates at the Specified Office of any Paying Agent.

(b) ***Interest***: Payments of interest shall be made by cheque drawn in the currency in which the payment is due drawn on, or, upon application by a Holder of a Registered Note to the Specified Office of the Fiscal Agent not later than the fifteenth day before the due date for any such payment, by transfer to an account denominated in that currency (or, if that currency is euro, any other account to which euro may be credited or transferred) and maintained by the payee with, a bank in the Principal Financial Centre of that currency (in the case of a sterling cheque, a town clearing branch of a bank in the City of London) and (in the case of interest payable on redemption) upon surrender (or, in the case of part payment only, endorsement) of the relevant Note Certificates at the Specified Office of any Paying Agent.

(c) ***Payments subject to fiscal laws***: All payments in respect of the Registered Notes are subject in all cases to (i) any fiscal or other laws and regulations applicable thereto in the place of payment, but without prejudice to the provisions of Condition 13 (*Taxation*) and (ii) any withholding or deduction required pursuant to FATCA. No commissions or expenses shall be charged to the Noteholders in respect of such payments.

(d) ***Payments on business days***: Where payment is to be made by transfer to an account, payment instructions (for value the due date, or, if the due date is not Payment Business Day, for value the next succeeding Payment Business Day) will be initiated and, where payment is to be made by cheque, the cheque will be mailed (i) (in the case of payments of principal and interest payable on redemption) on the later of the due date for payment and the day on which the relevant Note Certificate is surrendered (or, in the case of part payment only, endorsed) at the Specified Office of a Paying Agent and (ii) (in the case of payments of interest payable other than on redemption) on the due date for payment. A Holder of a Registered Note shall not be entitled to any interest or other payment in respect of any delay in payment resulting from (A) the due date for a payment not being a Payment Business Day or (B) a cheque mailed in accordance with this Condition 12 arriving after the due date for payment or being lost in the mail.

(e) ***Partial payments***: If a Paying Agent makes a partial payment in respect of any Registered Note in relation to a partial redemption or otherwise, the Issuer shall procure that the amount and date of such payment are noted on the Register and the relevant Duplicate Register and, in the case of partial payment upon presentation of a Note Certificate, that a statement indicating the amount and the date of such payment is endorsed on the relevant Note Certificate.

(f) ***Payment of U.S. Dollar Equivalent***: Notwithstanding the foregoing, if by reason of Inconvertibility, Non-transferability or Illiquidity, the Issuer is not able to satisfy payments of principal or interest (in whole or in part) in respect of the Notes when due in Renminbi in Hong Kong, the Issuer shall, on giving not less than 5 or more than 30 days' irrevocable notice to the Holders prior to the due date for payment, settle any such payment (in whole or in part) in U.S. dollars on the due date at the U.S. Dollar Equivalent of any such Renminbi denominated amount.

In such event, payments of the U.S. Dollar Equivalent of the relevant principal or interest in respect of Registered Notes represented by Note Certificates shall be made by a U.S. dollar denominated cheque drawn on a bank in New York City and mailed to the holder of such Note Certificates at its address appearing in the Register, or, upon application by the holder to the specified office of the Registrar or any Transfer Agent before the Record Date, by transfer to a U.S. dollar denominated account with a bank in New York City.

All notifications, opinions, determinations, certificates, calculations, quotations and decisions given, expressed, made or obtained for the purposes of the provisions of this Condition 12(f) (*Payment of U.S. Dollar Equivalent*) by the Calculation Agent, will (in the absence of wilful default, bad faith or manifest error) be binding on the Issuer, the Agents and all Holders.

13. **Taxation**

(a) ***Gross up***

All payments of principal and interest in respect of the Notes and the Coupons by or on behalf of the Issuer or the Guarantor shall be made free and clear of, and without withholding or deduction for or on account of, any present or future taxes, duties, assessments or governmental charges of whatsoever nature imposed, levied, collected, withheld or assessed by the applicable Relevant Jurisdiction (in the case of payments by the Issuer) or the United States of America (in the case of payments by the Guarantor) or any political subdivision therein or any authority therein or thereof having power to tax, unless the withholding or deduction of such taxes, duties, assessments or governmental charges is required by law. In that event, the Issuer or (as the case may be) the Guarantor shall pay such additional amounts as will result in receipt by the Noteholders and the Couponholders after such withholding or deduction of such amounts as would have been received by them had no such withholding or deduction had been required, except that no such additional amounts shall be payable in respect of any Note or Coupon:

(i) held by, or on behalf of, a Holder which is liable to such taxes, duties, assessments or governmental charges in respect of such Note or Coupon by reason of its having some connection with the jurisdiction by which such taxes, duties, assessments or charges have been imposed, levied, collected, withheld or assessed other than the mere holding of such Note or Coupon; or

(ii) presented for payment in the applicable Relevant Jurisdiction; or

(iii) held by, or by a third party on behalf of, a Holder which is liable to such taxes, duties, assessments or governmental charges in respect of such Note or Coupon by reason of its (or a fiduciary, settlor, member or shareholder, beneficiary of, or possessor of a power over, such holder, if such holder is an estate, trust, partnership or corporation) having some present or former connection with the applicable Relevant Jurisdiction (including being or having been a citizen or resident of such Relevant Jurisdiction or being or having been engaged in trade or business or present therein having or having had a permanent establishment therein) other than the mere holding of such Note or Coupon; or

(iv) held by a Holder which is or was a personal holding company, foreign personal holding company or passive foreign investment company with respect to the United States or a corporation that accumulates earnings to avoid United States federal income tax; or

(v) if such tax is an estate, inheritance, gift, sales, transfer or personal property tax or any similar tax, assessment, or governmental charge; or

(vi) if such amount is payable otherwise than by withholding from a payment on such Note or Coupon or such amount is required to be withheld by a paying agent, if such payment can be made without such withholding by any other paying agent under the Agency Agreement; or

(vii) if such tax, duty assessment or governmental charge (A) would not have been imposed but for the failure to comply with applicable certification, information, documentation or other reporting requirements concerning the nationality, residence, identity or connection with the Relevant Jurisdiction of the Holder or beneficial owner of such Note if such compliance is required as a precondition to relief or exemption from withholding or deduction of all or part of such tax, duty, assessment or governmental charge, or (B) is withheld, deducted or otherwise imposed pursuant to FATCA; or

(viii) held by a Holder which is or has been a "10 per cent. shareholder" of the obligor of the Note as defined in Section 871(h)(3) of the Code or any successor provisions, a Holder which is a bank that is a Non-United States person with respect to which the purchase or acquisition of the Note, Coupon or Note Certificate is described in Section 881(c)(3)(A) of the Code, or a Holder which is controlled foreign corporation with respect to the obligor as described in Section 881(c)(3)(C) of the Code; or

(ix) where the relevant Note or Coupon or Note Certificate is presented or surrendered for payment more than 30 days after the Relevant Date except to the extent that the relevant Holder would have been entitled to such additional amounts on presenting or surrendering such Note, Coupon or Note Certificate for payment on the last day of such period of 30 days; or

(x) where such withholding or deduction is imposed on savings income received from a paying agent established in Luxembourg as regards to Luxembourg resident individuals according to the law of 23 December 2005, as 20 per cent. withholding tax; or

(xi) (except in the case of Registered Notes) held by or on behalf of a Holder who would have been able to avoid such withholding or deduction by presenting the relevant Note or Coupon to another Paying Agent in a Member State of the European Union; or

(xii) in the case of any combination of items (i) through (xi),

nor shall additional amounts be paid to a holder that is a fiduciary or partnership or other than the sole beneficial owner of such payment to the extent that a beneficiary or settlor of such fiduciary or partnership or beneficial owner would not have been entitled to such additional amounts had such beneficiary, settlor or beneficial owner been the holder of the Note.

(b) ***Taxing jurisdiction***

If the Issuer or the Guarantor becomes subject at any time to any taxing jurisdiction other than the Relevant Jurisdiction or the United States respectively, references in these Conditions to the

Relevant Jurisdiction or the United States shall be construed as references to the Relevant Jurisdiction or (as the case may be) the United States and/or such other jurisdiction.

14. Events of Default

If any of the following events occurs and is continuing:

(a) ***Non-payment of interest***: default in the payment of any interest upon any Note of that Series or any related Coupon, when such interest or Coupon becomes due and payable, and continuance of such default for a period of 30 days; or

(b) ***Non-payment of principal***: default in the payment of the principal of (or premium, if any, on) any Note of that Series when it becomes due and payable; or

(c) ***Breach of other obligations***: default in the performance, or breach, of any covenant or agreement of the Issuer (or, if applicable, the Guarantor) in respect of the Notes of the relevant Series, the Agency Agreement or the Deed of Guarantee (other than a covenant or warranty in respect of the Notes of such Series, a default in the performance of which or the breach of which is elsewhere in this Condition specifically dealt with or which has expressly been included in such Notes solely for the benefit of Series of Notes other than that Series) and continuance of such default or breach for a period of 60 days after there has been given, by registered or certified mail, to the Issuer or, if applicable, the Guarantor or the Specified Office of the Fiscal Agent by Noteholders of at least 25 per cent. in principal amount of Notes outstanding of that Series a written notice specifying such default or breach and requiring it to be remedied stating that such notice is a "Notice of Default"; or

(d) ***Insolvency etc***: in the case of Notes issued by Deere Luxembourg, Deere Cash Management (i) such Issuer or its Subsidiaries becomes insolvent or is unable to pay its debts as they fall due, (ii) an administrator or liquidator of the Issuer, or the whole or a substantial part of the undertaking, assets and revenues of the Issuer, is appointed (or application for any such appointment is made), (iii) the Issuer takes any action for a readjustment or deferment of any of its obligations or makes a general assignment or an arrangement or composition with or for the benefit of its creditors or declares a moratorium in respect of any of its Indebtedness or any Guarantee of any Indebtedness given by it or (iv) the Issuer is ordered by a court of competent jurisdiction to cease to carry on all or any substantial part of its business (otherwise than, in the case of the Issuer, for the purposes of or pursuant to an amalgamation, reorganisation or restructuring whilst solvent and in the case of a Subsidiary of the Issuer, for the purposes of or pursuant to any amalgamation, reorganisation or restructuring); or

(e) ***Bankruptcy, etc of Deere or Deere Capital***: in the case of Notes issued by or guaranteed by Deere or Deere Capital (i) Deere or Deere Capital (as the case may be) pursuant to or within the meaning of any Bankruptcy Law commences a voluntary case, or consents to the entry of an order for relief against it in an involuntary case, or consents to the appointment of a Custodian of it or for all or substantially all of its property or makes a general assignment for the benefit of its creditors; or (ii) a court of competent jurisdiction enters an order or decree under any Bankruptcy Law that is for relief against Deere or Deere Capital (as the case may be) in an involuntary case, or appoints a Custodian of it or for all or substantially all of its property, or orders the liquidation of it and the order or decree remains unstayed and in effect for 90 days. In this Condition, the term "**Bankruptcy Law**" means title 11, U.S. Code or any similar Federal or State law for the relief of debtors. The term "**Custodian**" means any receiver, trustee, assignee, liquidator or other similar official under any Bankruptcy law,

then any Senior Note of any Issuer or any Subordinated Note issued by Deere or Deere Capital may, by written notice addressed by the holder thereof to the Issuer and the Guarantor and delivered to the Issuer and the Guarantor or to the Specified Office of the Fiscal Agent, be declared immediately due and payable, whereupon it shall become immediately due and payable at its Early Termination Amount together with accrued interest (if any) without further action or formality.

15. **Prescription**

Claims for principal in respect of Bearer Notes shall become void unless the relevant Bearer Notes are presented for payment within ten years of the appropriate Relevant Date. Claims for interest in respect of Bearer Notes shall become void unless the relevant Coupons are presented for payment within five years of the appropriate Relevant Date. Claims for principal and interest in respect of Registered Notes shall become void unless the relevant Note Certificates are surrendered for payment within ten years of the appropriate Relevant Date.

16. **Replacement of Notes and Coupons**

If any Note, Note Certificate or Coupon is lost, stolen, mutilated, defaced or destroyed, it may be replaced at the Specified Office of the Fiscal Agent, in the case of Bearer Notes, or the Registrar, in the case of Registered Notes (and, if the Notes are then admitted to listing, trading and/or quotation by any competent authority, stock exchange and/or quotation system which requires the appointment of a Paying Agent or Transfer Agent in any particular place, the Paying Agent or Transfer Agent having its Specified Office in the place required by such competent authority, stock exchange and/or quotation system), subject to all applicable laws and competent authority, stock exchange and/or quotation system requirements, upon payment by the claimant of the expenses incurred in connection with such replacement and on such terms as to evidence, security, indemnity and otherwise as the Issuer may reasonably require. Mutilated or defaced Notes, Note Certificates or Coupons must be surrendered before replacements will be issued.

17. **Agents**

In acting under the Agency Agreement and in connection with the Notes and the Coupons, the Paying Agents act solely as agents of the Issuer and the Guarantor and do not assume any obligations towards or relationship of agency or trust for or with any of the Noteholders or Couponholders.

The initial Paying Agents and their initial Specified Offices are listed on the last page of this Base Prospectus.

The initial Calculation Agent (if any) is specified in the relevant Final Terms. The Issuer and the Guarantor reserve the right at any time to vary or terminate the appointment of any Paying Agent and to appoint a successor fiscal agent or Calculation Agent and additional or successor paying agents; **provided**, **however**, **that**:

(i) the Issuer and the Guarantor shall at all times maintain a fiscal agent and a registrar; and

(ii) if a Calculation Agent is specified in the relevant Final Terms, the Issuer and the Guarantor shall at all times, whilst any such Note remains outstanding, maintain a Calculation Agent; and

(iii) if and for so long as the Notes are admitted to listing, trading and/or quotation by any competent authority, stock exchange and/or quotation system which requires the appointment of a Paying Agent and/or a Transfer Agent in any particular place, the Issuer and the Guarantor shall maintain a Paying Agent and/or a Transfer Agent having its Specified Office in the place required by such competent authority, stock exchange and/or quotation system.

Notice of any change in any of the Agents or in their Specified Offices shall promptly be given to the Noteholders.

18. **Meetings of Noteholders; Modification and Waiver**

(a) ***Meetings of Noteholders***

The Agency Agreement contains provisions for convening meetings of Noteholders to consider matters relating to the Notes, including the modification of any provision of these Conditions. Any such modification may be made if sanctioned by an Extraordinary Resolution. Such a meeting may be convened by the Issuer and the Guarantor (acting together) and shall be convened by them upon the request in writing of Noteholders holding not less than one-tenth of the aggregate principal amount of the outstanding Notes. The quorum at any meeting convened to vote on an Extraordinary Resolution will be two or more Persons holding or representing one more than half of the aggregate principal amount of the outstanding Notes or, at any adjourned meeting, two or more Persons being or representing Noteholders whatever the principal amount of the Notes held or represented; **provided, however, that** Reserved Matters may only be sanctioned by an Extraordinary Resolution passed at a meeting of Noteholders at which two or more Persons holding or representing not less than three-quarters or, at any adjourned meeting, one quarter of the aggregate principal amount of the outstanding Notes form a quorum. Any Extraordinary Resolution duly passed at any such meeting shall be binding on all the Noteholders and Couponholders, whether present or not.

In addition, a resolution in writing signed by or on behalf of all Noteholders who for the time being are entitled to receive notice of a meeting of Noteholders will take effect as if it were an Extraordinary Resolution. Such a resolution in writing may be contained in one document or several documents in the same form, each signed by or on behalf of one or more Noteholders.

For the avoidance of doubt, Articles 470-3 to 470-19 of the Luxembourg law on Commercial Companies dated 10 August 1915, as amended, are hereby excluded in respect of the Notes, Coupons and Talons.

(b) ***Modification***

The Notes, these Conditions, the Deeds of Guarantee and the Deed of Covenant may be amended without the consent of the Noteholders or the Couponholders to correct a manifest error. In addition, the parties to the Agency Agreement may agree to modify any provision thereof, but the Issuer and the Guarantor shall not agree, without the consent of the Noteholders, to any such modification unless it is of a formal, minor or technical nature, it is made to correct a manifest error or it is, in the opinion of such parties, not materially prejudicial to the interests of the Noteholders.

In addition, the parties to the Agency Agreement may agree such modifications to the Agency Agreement, the Notes, these Conditions, the Deeds of Guarantee and the Deed of Covenant as may be required in order to give effect to Condition 7(j) in connection with effecting any Alternative Reference Rate, Successor Rate, Adjustment Spread or Benchmark Amendments referred to in Condition 7(j) without the requirement for the consent or sanction of the Noteholders or Couponholders.

19. Further Issues

The Issuer may from time to time, without the consent of the Noteholders or the Couponholders, create and issue further notes having the same terms and conditions as the Notes in all respects (or in all respects except for the first payment of interest) so as to form a single series with the Notes.

20. Notices

(a) ***Bearer Notes***: Notices to the Holders of Bearer Notes admitted to the Official List of the Irish Stock Exchange plc, trading as Euronext Dublin ("**Euronext Dublin**") and/or admitted to trading on the regulated market of Euronext Dublin will be deemed to be validly given if published on the website of Euronext Dublin or published in a leading English language daily newspaper of general circulation in Ireland and approved by Euronext Dublin. It is expected that such publication will be made in The Irish Times. Any such notice shall be deemed to have been given on the date of first publication (or if required to be published in more than one newspaper, on the first date on which publication shall have been made in all the required newspapers). Couponholders shall be deemed for all purposes to have notice of the contents of any notice given to the Holders of Bearer Notes.

(b) ***Registered Notes***: Notices to the Holders of Registered Notes shall be sent to them by first class mail (or its equivalent) or (if posted to an overseas address) by airmail at their respective addresses on the Register and the Duplicate Register if different from the Register (with respect to Registered Notes issued by Deere Luxembourg or Deere Cash Management) or, if such publication is not practicable, in a leading English language daily newspaper having general circulation in Europe. Any such notice shall be deemed to have been given on the fourth day after the date of mailing.

21. **Currency Indemnity**

If any sum due from the Issuer in respect of the Notes or the Coupons or any order or judgment given or made in relation thereto has to be converted from the currency (the "**first currency**") in which the same is payable under these Conditions or such order or judgment into another currency (the "**second currency**") for the purpose of (a) making or filing a claim or proof against the Issuer, (b) obtaining an order or judgment in any court or other tribunal or (c) enforcing any order or judgment given or made in relation to the Notes, the Issuer shall indemnify each Noteholder, on the written demand of such Noteholder addressed to the Issuer and delivered to the Issuer or to the Specified Office of the Fiscal Agent, against any loss suffered as a result of any discrepancy between (i) the rate of exchange used for such purpose to convert the sum in question from the first currency into the second currency and (ii) the rate or rates of exchange at which such Noteholder may in the ordinary course of business purchase the first currency with the second currency upon receipt of a sum paid to it in satisfaction, in whole or in part, of any such order, judgment, claim or proof.

This indemnity constitutes a separate and independent obligation of the Issuer and shall give rise to a separate and independent cause of action.

22. **Rounding**

For the purposes of any calculations referred to in these Conditions (unless otherwise specified in these Conditions or the relevant Final Terms), (a) all percentages resulting from such calculations will be rounded, if necessary, to the nearest one hundred-thousandth of a percentage point (with 0.000005 per cent. being rounded up to 0.00001 per cent.), (b) all United States dollar amounts used in or resulting from such calculations will be rounded to the nearest cent (with one half cent being rounded up), (c) all Japanese yen amounts used in or resulting from such calculations will be rounded downwards to the next lower whole Japanese yen amount, and (d) all amounts denominated in any other currency used in or resulting from such calculations will be rounded to the nearest two decimal places in such currency, with 0.005 being rounded upwards.

23. **Governing Law and Jurisdiction**

(a) ***Governing law***: The Notes, each Deed of Guarantee, the Agency Agreement and the Deed of Covenant and all non-contractual obligations arising out of or in connection with them are governed by, English law except that in the case of Subordinated Notes issued by Deere or Deere Capital, the provisions of Condition 4(b) and all matters arising from or in connection with them shall be governed by and construed in accordance with the federal laws of the United States of America. For the avoidance of doubt, the provisions of articles 470-3 to 470-19 of the Luxembourg law on Commercial Companies dated 10 August 1915, as amended, are excluded in respect of the Notes, Coupons and Talons.

(b) ***English courts***: The courts of England have exclusive jurisdiction to settle any dispute (a "**Dispute**") arising from or in connection with the Notes.

(c) ***Appropriate forum***: Each Issuer and Guarantor agrees that the courts of England are the most appropriate and convenient courts to settle any dispute and, accordingly, that it will not argue to the contrary.

(d) ***Rights of the Noteholders to take proceedings outside England***: Condition 23(b) (*English Courts*) is for the benefit of the Noteholders only. As a result, nothing in this Condition 23 (*Governing Law and Jurisdiction*) prevents any Noteholder from taking proceedings in relation to a Dispute ("**Proceedings**") in any other courts with jurisdiction. To the extent allowed by law, Noteholders may take concurrent Proceedings in any number of jurisdictions.

(e) ***Service of process***: Each Issuer and Guarantor agrees that the documents which start any Proceedings and any other documents required to be served in relation to those Proceedings may be served on it by being delivered to Clifford Chance Secretaries Limited at its registered office from time to time, being at the date of these Conditions at 10 Upper Bank Street, London E14 5JJ, or, if different, its registered office for the time being or at any address of the Issuers or the Guarantors in Great Britain at which process may be served on it in accordance with the Companies Act 2006. If such person is not or ceases to be effectively appointed to accept service of process on behalf of the Issuers or the Guarantors, the Issuers and Guarantors (acting together) shall, on the written demand of any of the Noteholders addressed to the Issuers and the Guarantors and delivered to the Issuers and the Guarantors or to the Specified Office of the Fiscal Agent, appoint a further person in England to accept service of process on its behalf and, failing such appointment within 15 days, any Noteholder shall be entitled to appoint such a person by written notice addressed to the Issuers and the Guarantors and delivered to the Issuers and the Guarantors or to the Specified Office of the Fiscal Agent. Nothing in this paragraph shall affect the right of any Noteholder to serve process in any other manner permitted by law. This Condition applies to Proceedings in England and to Proceedings elsewhere.

24. **Rights of Third Parties**

No person shall have any right to enforce any term or condition of the Notes under the Contract (Rights of Third Parties) Act 1999 but this shall not affect any right or remedy of a third party which exists or is available apart from such Act.

25. **Acknowledgement of Bail-in and Loss Absorption Powers in respect of Notes and Coupons issued by Deere Luxembourg**

This Condition applies to the Notes and Coupons issued by Deere Luxembourg only.

Notwithstanding, and to the exclusion of, any other term of the Notes or any other agreements, arrangements or understanding between Deere Luxembourg, any Noteholder or Couponholder and, by its acquisition of any Note or Coupon, each Noteholder and Couponholder (which, for the purposes of this Condition 25, includes each holder of a beneficial interest in the Notes and/or the Coupons) acknowledges and accepts that any liability arising under the Notes or Coupons may be subject to the exercise of Bail-in and Loss Absorption Powers by the Relevant Resolution Authority and acknowledges, accepts, consents to and agrees to be bound by:

(a) the effect of the exercise of any Bail-in and Loss Absorption Powers by the Relevant Resolution Authority, which exercise (without limitation) may include and result in any of the following, or a combination thereof:

(i) the reduction of all, or a portion, of the Liability in respect of the Notes and/or Coupons;

(ii) the conversion of all, or a portion, of the Liability in respect of the Notes and/or Coupons into shares, other securities or other obligations of the Issuer or another person, and the issue to or conferral on the Noteholder or Couponholder of such shares, securities or obligations, including by means of an amendment, modification or variation of the terms of the Notes and/or Coupons;

(iii) the cancellation of the Notes and/or Coupons or the Liability in respect thereof;

(iv) the amendment or alteration of the Maturity Date of the Notes or amendment of the amount of interest payable on the Notes and/or Coupons, or the date on which interest becomes payable, including by suspending payment for a temporary period; and

(b) the variation of the terms of the Notes and/or Coupons, as deemed necessary by the Relevant Resolution Authority, to give effect to the exercise of any Bail-in and Loss Absorption Powers by the Relevant Resolution Authority.

"**Bail-in and Loss Absorption Powers**" means any loss absorption, write-down, conversion, transfer, modification, suspension or similar or resolution related power existing from time to time under, and exercised in compliance with, any laws, regulations, rules or requirements in effect in Luxembourg, relating to: (i) the transposition of Directive 2014/59/EU (the "**BRRD**"), including without limitation, the law of 18 December 2015 on the default of credit institutions and certain investment firms (as amended) (the "**Luxembourg Resolution Law**"), and Regulation (EU) No. 806/2014 of the European Parliament and of the Council of 15 July 2014 establishing uniform rules and a uniform procedure for the resolution of credit institutions and certain investment firms in the framework of a Single Resolution Mechanism and a Single Resolution Fund and amending Regulation (EU) No. 1093/2010 (as amended from time to time, the "**Single Resolution Mechanism Regulation**"), or otherwise arising under Luxembourg law; and (ii) in each case the instruments, rules and standards created thereunder, pursuant to which any obligation of Deere Luxembourg (or any affiliate of Deere Luxembourg) can be reduced (in part or in whole), cancelled, modified, or converted into shares, other securities or other obligations of Deere Luxembourg or any other person (or suspended for a temporary period), whether in connection with the implementation of a bail-in tool following placement in resolution or otherwise;

"**Liability**" means any contractual or non-contractual liability (*engagement*) of Deere Luxembourg under or in relation to the Notes and/or Coupons (other than an Excluded Liability), including without limitation the Relevant Amounts in respect of the Notes and/or Coupons, in accordance with laws, regulations, rules or requirements implementing the BRRD into Luxembourg law, including, but not limited to, the Luxembourg Resolution Law;

"**Excluded Liability**" means a liability (*engagement*) excluded from the Bail-in or Loss Absorption Powers pursuant to the laws, regulations, rules or requirements in effect in Luxembourg, in particular, without limitation, pursuant to Article 45 (2) of the Luxembourg Resolution Law;

"**Relevant Amounts**" means the outstanding principal amount of the Notes, together with any accrued but unpaid interest and additional amounts due on the Notes and/or Coupons. References to such amounts will include amounts that have become due and payable, but which have not been paid, prior to the exercise of any Bail-in and Loss Absorption Powers by the Relevant Resolution Authority; and

"**Relevant Resolution Authority**" means the resolution authority with the ability to exercise any Bail-in and Loss Absorption Powers in relation to Deere Luxembourg, including in respect of Luxembourg, the *Commission de Surveillance du Secteur Financier*, acting in its capacity as resolution authority within the meaning of Article 3(1) of BRRD, the Single Resolution Board established pursuant to the Single Resolution Mechanism Regulation, and/or any other authority entitled to exercise or participate in the exercise of any Bail-in or Loss Absorption Power from time to time (including the Council of the European Union and the European Commission when acting pursuant to Article 18 of the Single Resolution Mechanism Regulation).

EXHIBIT 21

DEERE & COMPANY
AND CONSOLIDATED SUBSIDIARIES

SUBSIDIARIES OF THE REGISTRANT

As of November 1, 2020

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 Funding Canada Corporation	Canada
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 sixty-nine 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 22

LIST OF SUBSIDIARY ISSUERS OF GUARANTEED SECURITIES

From time to time, the following 100%-owned subsidiaries of Deere & Company, a Delaware corporation (the “Company”), may issue debt securities that are fully and unconditionally guaranteed by the Company, under a registration statement on Form S-3 filed with the Securities and Exchange Commission.

Name of Subsidiary Issuer	Jurisdiction
Deere Funding Canada Corporation	Ontario
John Deere Funding	Luxembourg

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, 333-202299 and 333-236655 on Form S-8 and in Registration Statement No. 333-239165 on Form S-3 of our report dated December 17, 2020, 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 1, 2020.

/s/ DELOITTE & TOUCHE LLP
Chicago, Illinois

December 17, 2020

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 17, 2020

By: */s/ John C. May*
John C. May
Chairman and Chief Executive Officer
(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 17, 2020

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 1, 2020, 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 17, 2020	*/s/ John C. May* John C. May	Chairman and Chief Executive Officer (Principal Executive Officer)
December 17, 2020	*/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.