



JOHN DEERE

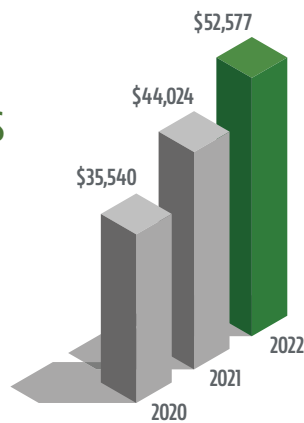
2022 Annual Report

John Deere extended its record of strong performance in 2022. The company achieved outstanding financial results while overcoming major supplier challenges and responding to healthy customer demand. Net sales and revenues, net income, and SVA* were the highest in company history. Deere shareholders fared well, too, realizing a total return on their investment of 17 percent at fiscal year end.

Deere also enhanced its competitive position, adding customers throughout the world. Demand for our precision technologies continued to move ahead. To give our smart-industrial operating model more strength and definition, a series of exacting metrics, known as Leap Ambitions, was introduced. They set aggressive goals for unlocking value for our customers as well as producing strong financial and sustainability outcomes for John Deere.

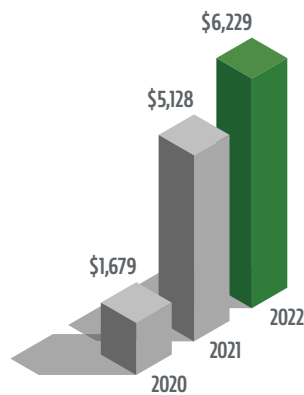
NET SALES & REVENUES

\$52.58
BILLION



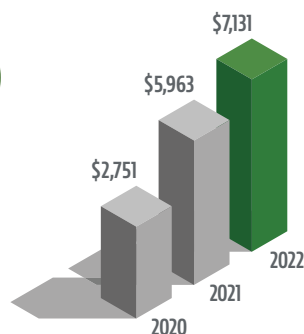
SHAREHOLDER VALUE ADDED*

\$6.23
BILLION



NET INCOME (attributable to Deere & Company)

\$7.13
BILLION



The amounts shown in the charts above represent millions of dollars.

* Shareholder Value Added (SVA), referred to throughout this report, is a non-GAAP financial measure. See page 15, and related footnotes, for further details.

Unless indicated otherwise, all capitalized names of products and services are trademarks of Deere & Company.

Chairman & CEO ▶

**JOHN
MAY**

On the cover:

In 2022 John Deere unveiled its first fully autonomous tractor for large-scale production. The autonomous 8R tractor offers advanced technologies, including six pairs of stereo cameras that provide 360-degree vision to see objects in the field and determine distance.

Chairman & CEO Letter

STRONG MARKETS, SOUND STRATEGY PACE RECORD YEAR

John Deere extended its record of strong performance in 2022, achieving outstanding financial results while overcoming major supplier challenges and responding to vigorous demand for our products.

Our achievements were many: We brought out important new products with the latest technology and advanced features, improved our competitive position in much of the world, and made further progress ensuring the success of our strategic plan and business model. We made investments that help our customers be more profitable, productive, and sustainable. We also launched a set of challenging metrics to inspire superior customer, financial, and sustainable outcomes.

From a financial standpoint, 2022 was a memorable year. Net income totaled \$7.13 billion versus \$5.96 billion in the previous year. Net sales and revenues increased 19 percent to \$52.58 billion. Profitability in relation to sales (operating profit/net sales) was the best in modern times.

The investment community took note of our success. Deere shareholders realized a total return on their investment of 17 percent, compared with a decline in the overall market. The quarterly dividend rate on Deere stock was increased by 8 percent during the fiscal year and roughly 10 million shares, representing an expenditure of \$3.6 billion, were repurchased. (The dividend was increased by an additional 6 percent in December.)

OPERATIONS MOVE AHEAD

Precision & Production Agriculture — our largest business, accounting for almost half of our sales — benefited from the success of new products such as large tractors, sprayers, and combines. Customers continued to adopt the latest in high-value precision technologies, many of which include autonomous capabilities. Results for Small Agriculture & Turf reflected positive consumer sentiment and the impact of new products.

Construction & Forestry (C&F) operations set new highs in sales and profit, aided by solid markets for earthmoving, forestry, and roadbuilding equipment. Helping the division were higher sales of backhoes, utility and production loaders, large dump trucks, and compact equipment.

Deere's financial-services unit made a substantial contribution to company earnings while financing roughly half of the new equipment sold by our dealers. Credit quality remained impressive, and the loan and lease portfolio grew to more than \$50 billion for the first time.

NAVIGATING CHALLENGES

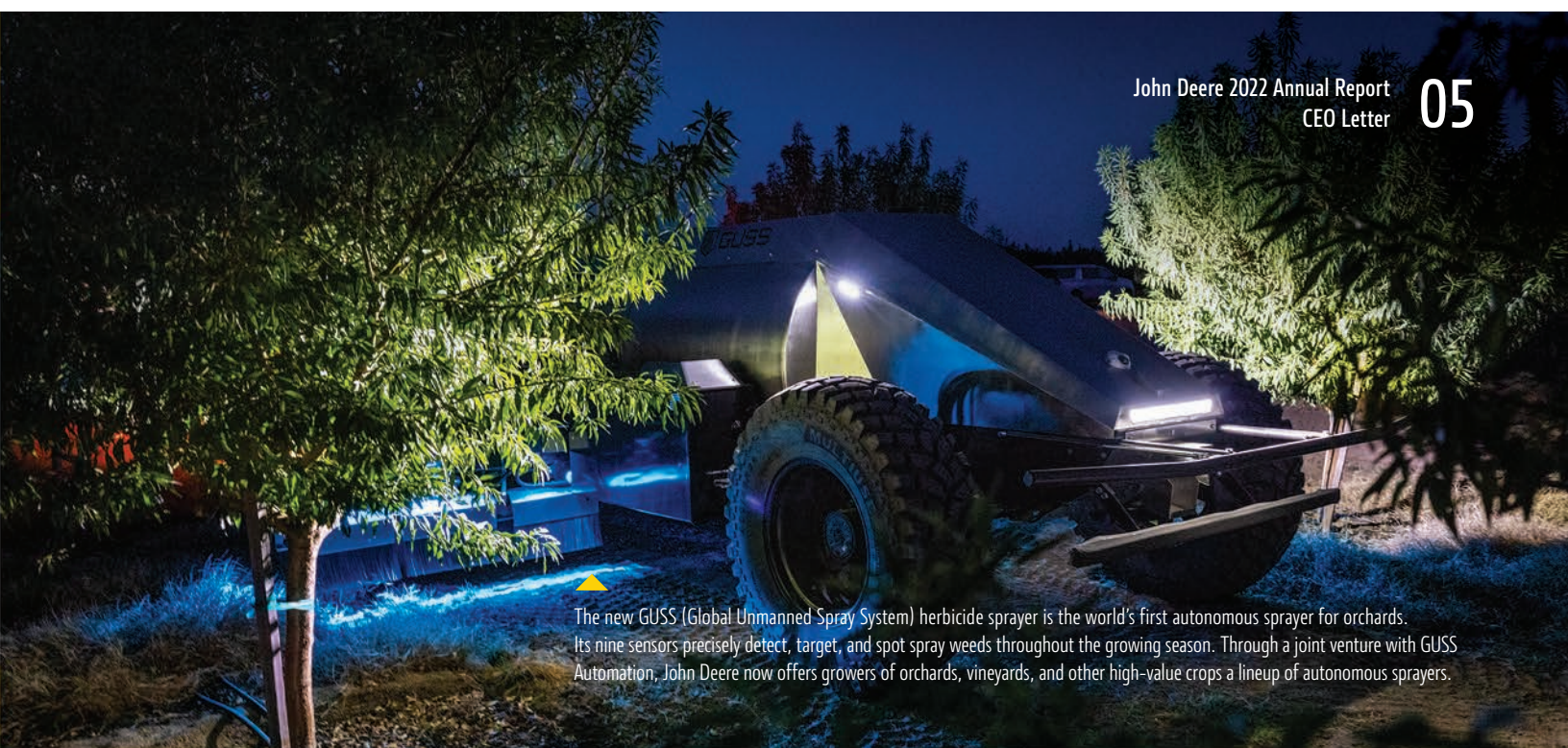
Our results were achieved in the face of persistent supply-chain pressures and higher material costs. Over the course of the year, many Deere factories experienced slowdowns or disruptions due to parts or component shortages. We are proud of the tireless efforts of our employees to help manage the situation, ramp up production, and get much-needed products to our customers' farms and jobsites. As well, Deere faced stiff headwinds related to higher costs for raw materials and freight.

The XUV 835R Signature Series Gator is our most comfortable and advanced three-passenger crossover utility vehicle. The premium cab features automotive-like controls, leather seats, touch-screen infotainment with Apple CarPlay and Android Auto, and sliding back window. These machines are available with a gas or diesel engine.

India-built 5115M tractor is part of the updated 5M series of utility tractors. These tractors offer tremendous versatility — from baling to tillage to loader work — with connectivity included.



Z370R residential zero-turn mower is the first electric lithium-ion battery product from John Deere. It offers reduced maintenance, less noise, and zero-emissions while mowing — and performance similar to gas-powered models. (It is available for order February 7, 2023.)



The new GUSS (Global Unmanned Spray System) herbicide sprayer is the world's first autonomous sprayer for orchards. Its nine sensors precisely detect, target, and spot spray weeds throughout the growing season. Through a joint venture with GUSS Automation, John Deere now offers growers of orchards, vineyards, and other high-value crops a lineup of autonomous sprayers.

Deere's dealer channel continued to serve customers while strengthening its technical capabilities and making wide use of digital tools. Remote diagnostic sessions between customers and dealers increased more than 60 percent and have more than doubled in the last two years. Dealer support, which helps keep customers up and running and realize even more value from their equipment, has taken on even more importance as our products become more technologically advanced.

OPERATING MODEL MAKING IMPACT

Again in 2022, Deere's smart-industrial operating model produced strong results. Deere added customers, brought more focus to its business portfolio, and made further technological advances. Based in large part on changes driven by the strategy, the company has generated higher levels of profit and profitability.

The operating model is organized by production systems ("the way our customers work"), establishing a centralized technology group, and putting more emphasis on delivering value to customers across the lifecycle of the product. The strategy also stresses increasing speed and accountability.

Deere continued to make investments in support of its strategy. They included acquiring a majority stake in an Austrian-

based leader in battery-electric technology and entering a joint venture with a company that makes semi-autonomous orchard and vineyard sprayers. Deere also invested in a handful of other firms to strengthen its technology stack.

We invested in our people, too. To ensure that Deere remains a premier employer, the company made enhancements in compensation, benefits, and work arrangements. Office locations were opened in Austin and Chicago as part of an effort to attract a wider range of employee talent. On the production side, collective-bargaining agreements approved by the autoworkers (UAW) and machinists (IAM) unions set a new standard for wage roles in our industries.

AMBITIONS SHOWCASE GROWTH, SUSTAINABILITY

During the year, a series of exacting metrics was introduced to demonstrate what the smart-industrial operating model can deliver. The Leap Ambitions, as they are known, are focused on creating value for our customers. Perhaps most important, they show Deere has ample room for growth, identifying incremental value creation of at least \$150 billion.

The ambitions set aggressive goals for financial performance and sustainability. These include a 20 percent return on mid-cycle sales and 10 percent recurring revenue

by 2030 as well as a significant reduction in emissions from our operations and products. Our focus on recurring revenue is intended to enhance the value we deliver to customers, support the adoption of technology, and optimize equipment value over its lifecycle. The ambitions also call for increasing the number of connected machines and engaged acres, enabling customers to make data-driven decisions to improve their profitability and sustainability.

In response to the ambitions' focus on sustainability, Deere has accelerated efforts to improve the efficiency and limit the environmental impact of its products. To reduce emissions in line with our goals, the company is exploring ways to supplement its traditional diesel-powered engines with alternative propulsion systems such as battery-electric and alternative fuels.

Our plans include having at least 20 battery-electric or hybrid-electric construction and forestry machines on the market by 2026 and offering a range of electric options in turf-care and compact-tractor products. Last year, our Wirtgen roadbuilding unit introduced electric tandem rollers and mini pavers. Deere also unveiled concept models of battery-electric mowers, utility vehicles, and small tractors, and has plans to offer a battery-electric residential zero-turn mower in 2023.

SETTING PACE IN INNOVATION

Product innovation, a traditional Deere strength, made further strides and earned additional recognition. A noted group of U.S. agricultural and biological engineers honored eight company products for innovative design, including new planters, sprayers, four-wheel-drive tractors, and an integrated liquid-fertilizer system that allows for simultaneous planting and nitrogen application. In addition, the company's autonomous 8R tractor was recognized for innovation by the Consumer Technology Association.

Precision agriculture moved ahead as more customers embraced its productivity-enhancing benefits. Sales grew for popular features that guide machines, plant seeds, and apply chemicals, all with exceptional accuracy. Sprayers debuted that use camera technology and artificial intelligence to distinguish weeds from healthy plants, helping reduce costly inputs and benefiting yields. The products build on the success of earlier models that identify and spray weeds on fallow ground. The John Deere Operations Center gained further popularity with customers, ending the year with about 330 million engaged acres worldwide.

C&F expanded its lineup of tiered products — models whose size, power, and features are matched with the demands of the job — with the introduction of P-Tier wheel loaders and excavators, as well as G-Tier compact wheel loaders. Wirtgen added new milling machines and crushers.

Wirtgen's new W 100 Fi, W 120 Fi, and W 130 Fi compact milling machines deliver impressive performance in a wide range of milling applications. They are the first milling machines to feature a John Deere engine.



New CP770 cotton picker is our most productive cotton harvester ever. It can help farmers harvest every pound of cotton possible while preserving cotton quality. The CP770 is up to 20 percent more fuel efficient compared with its predecessor.



BUILDING ON RECORD OF SOCIAL RESPONSIBILITY

Deere is dedicated to sharing with others and being a socially responsible company. To this end, charitable contributions from the company and foundation reached \$55.5 million, a 30 percent increase over the previous year. Significant donations were made to combat global food insecurity, promote agricultural education, and strengthen support for underserved farmers. Deere and its foundation remain committed to making charitable contributions of at least one percent of net income over time.

Highlighting our commitment to a more equitable society, Deere continued its support of the LEAP coalition, a group that primarily helps Black farmers secure clear title to their land. The company also helped create a fellowship program for Native American youth studying agriculture. In another action, Deere announced plans to invest in an equity fund managed by Advantage Capital that helps minority-owned businesses gain access to capital.

The 953MH tracked harvester delivers a powerful forestry solution, integrating intelligent boom control (IBC) as part of its core technology. With IBC, operators no longer need to control each boom function separately.



The company earned further accolades in 2022 for its record of responsible citizenship. Among them, Deere was recognized as one of the nation's most community-minded companies as part of Points of Light's Civic 50. For a fifth year, the company was honored for social innovation by the American Innovation Index Awards, which focus on corporate activities and products benefiting society. Deere also appeared in prominent listings of most-valuable brands and companies committed to business integrity.

EMBRACING PROMISING FUTURE

Based on our forecasts, the year ahead holds a great deal of promise. Agricultural fundamentals are favorable, customer confidence is sound, and infrastructure spending is set to rise. At the same time, machine inventories are lean, customer fleets

are being actively replenished, and demand is expected to continue testing the industry's capacity. Supply-chain issues, though likely to remain a concern, have started showing signs of improvement.

All in all, I firmly believe John Deere's best days lie ahead. We're part of a great company that does great things. Market conditions are solid, and our portfolio of solutions has never been stronger. In addition, Deere is unleashing technological breakthroughs, transforming the industries we serve and bringing value to our customers that would have been scarcely imaginable not long ago. Finally, we have a winning formula in the smart-industrial operating model. It is driving our performance to new levels and its promise is only beginning to be felt.

See & Spray Ultimate is an advanced, factory-installed spraying system available for model year 2023 for Deere 410R, 412R, and 612R sprayers. It enables targeted spraying of weeds in corn, soybean, and cotton plants, reducing non-residual herbicide use by more than two-thirds.



Monosem ValoTerra Ultimate planter allows precise planting without compromising consistency, depth, fertilization capacity, and emergence quality. It can plant at speeds up to 11 miles per hour. ValoTerra Ultimate earned a Gold Medal at the 2022 SIMA agricultural trade show's Innovation Awards.

Deere's higher purpose, "We Run So Life Can Leap Forward," underscores our obligation to offer advanced products and solutions that improve the living standards of people everywhere. I'm proud to say we are managing our businesses and serving our customers in ways that bring honor to our purpose and the legacy that has inspired us for close to two centuries.

Our achievements in 2022 give us further confidence we can continue moving in this direction for many years to come.

On behalf of the John Deere team,

John C. May
John C. May
Chairman & Chief Executive Officer
December 15, 2022

JOHN DEERE IS UNIQUELY POSITIONED TO DELIVER BOTH ECONOMIC AND SUSTAINABLE VALUE FOR OUR CUSTOMERS THROUGH ADVANCED TECHNOLOGY AND SOLUTIONS.



OUR NEXT LEAP

In 2020, we announced a new vision and operating model to accelerate success through the integration of smart technology innovation with John Deere's legacy of manufacturing excellence.

The Deere smart-industrial operating model focuses on delivering intelligent, connected machines and applications that will revolutionize production systems in agriculture and construction, unlocking customer economic value across the lifecycle in ways that are more sustainable for all.

The core elements of our strategy's operating model — Production Systems, Technology Stack, and Lifecycle Solutions — paired with a new approach to capital allocation and the best team in the industry, are enabling us to innovate with agility and speed.

Our customers face increasing challenges that make their businesses more competitive and dynamic. We'll build on our track record by creating and delivering customer

value through technological innovation, engineering and manufacturing excellence, and a world-class dealer channel, all of which uniquely position Deere to anticipate, address, and outpace these challenges better than anyone.

In 2022, in support of our strategy, we launched our Leap Ambitions — the measures of our strategy. Our ambitions align across our customers' production systems to optimize their complete operations — ensuring that every hour, every drop, every seed, every pound, and every pass counts — delivering better outcomes with fewer resources.

Our Leap Ambitions are focused goals designed to boost economic value and sustainability for our customers. We've committed to achieving these goals within four-year (2026) and eight-year (2030) periods. These Leap Ambitions mean great things for our customers, employees, investors, dealers, suppliers, and others who have a stake in John Deere.

INCREMENTAL ADDRESSABLE MARKET OPPORTUNITY

>\$150 BILLION

EXECUTING OUR STRATEGY



PRODUCTION & PRECISION AG

By 2026

- Reach 500 million engaged acres* with 50% highly engaged**

By 2030

- Ensure 75% of engaged acres are sustainably engaged acres***



SMALL AG & TURF

By 2026

- Ensure 100% of new Small Ag equipment is connectivity enabled
- Offer an electric option in each Turf and Compact Utility Tractor product family
- Deliver a fully autonomous, battery-powered electric ag tractor to the market



CONSTRUCTION & FORESTRY

By 2026

- Deliver 20+ electric and hybrid-electric product models
- Earthmoving: Increase SmartGrade™ grade control adoption to 50%
- Forestry: Boost Intelligent Boom Control adoption to 100%
- Roadbuilding: Increase Precision Roadbuilding Solutions adoption to 85%

**DELIVER ONGOING
VALUE TO CUSTOMERS
IN ALL THREE
BUSINESS SEGMENTS**

Connect **1.5 million** machines by 2026

Demonstrate viable low/no carbon alternative power solutions by 2026

Grow enterprise **recurring revenue to 10%** by 2030

FINANCIAL AND SUSTAINABLE OUTCOMES

Equipment Operations OROS at 20% by 2030



Enhance Ag Customer Outcomes by 2030

- Improve nitrogen use efficiency 20%†
- Increase crop protection efficiency 20%†
- Reduce 15% of customer CO₂e emissions†



Product Circularity by 2030

- Achieve 95% recyclable product content
- Ensure 65% of product content is sustainable material
- Grow 50% in remanufacturing revenue



Safety by 2026

- Improve Total Recordable Incident Rate 20%



Reduce Environmental Footprint by 2030

- 50% of operational CO₂e emissions (Scope 1 & 2)
- 30% of upstream and downstream CO₂e emissions (Scope 3)
- 15% of waste intensity
- 10% freshwater consumption intensity at water-stressed manufacturing locations

* Engaged acres is one of the foundational measures of customers' use of the John Deere Operations Center (our online farm management system). It reflects the number of unique acres with at least one operation pass documented in the Operations Center in the past 12 months.

** Highly Engaged Acres include documentation of multiple production steps and the use of digital tools to complete multiple, value creating activities over a 12 month period.

*** Sustainably engaged acres include incorporation of two or more sustainable John Deere technology solutions or sustainable practices over a 12-month period.

†Per unit of output

HELPING LIFE LEAP FORWARD BY ADDRESSING FOOD INSECURITY



Wherever we operate, John Deere is committed to being a responsible corporate citizen. We believe in sharing our success with others. Since 2016, John Deere established a goal of investing at least one percent of the company's net income from the previous three fiscal years in corporate social responsibility initiatives.

We use the commitment to fuel what has become an industry-leading corporate social responsibility strategy dedicated to creating long-lasting economic, social, and environmental value for those we serve. A key part of our strategy focuses on addressing global food insecurity.

Solving the global hunger crisis that affects more than 828 million people begins by dispelling a misconception: People don't experience hunger because the world's growers aren't producing enough food; they experience hunger because they don't have equitable access to it.

It's gaining this access (and increasing food supply and production) that has the John Deere Foundation focused on the necessary steps to reduce, and ultimately eliminate, hunger.

According to the World Food Programme, waste affects about one-third of all food grown globally — roughly 1.3 billion tons worth about \$1 trillion annually. That waste means we are feeding landfills instead of each other. It also means that the food is rotting and increasing greenhouse gas emissions.

Getting food to those who need it most is what allows non-profit organizations like the Global Food Banking Network (GFN) and One Acre Fund to make an impact. It's also where, in 2021, the John Deere Foundation's bold commitment of pledging to invest \$200 million over 10 years is making a difference.

The foundation, which marks its 75th anniversary in 2023, has targeted its investments toward three groups of people:

marginalized families and youth in our home communities, smallholder and resource-constrained farmers across the globe, and the company's workforce. Within these groups, the foundation aligned its work to the United Nations Sustainable Development Goals, which includes "zero hunger" by 2030.

Through its grants in 2022, the foundation invested more than \$3 million in food banks and emergency hunger assistance, representing the equivalent of more than 13 million meals. To strengthen these grants, the foundation made the vast majority of them either wholly unrestricted or for critical capacity building.

"Our work certainly starts with our support of organizations working with the world's farmers, and it continues with those organizations ensuring that all the food grown is put to its best use," Nate Clark, global director of corporate social responsibility, said. "Through unrestricted grants, we allow these organizations the autonomy to make a greater impact on the lives of others by investing in themselves."

One Acre Fund supports smallholder farmers across nine African countries and developed a powerful model that places "farmers first" through financing, farm input distribution, agricultural training, and post-harvest support. Currently, One Acre Fund is working with 1.4 million farmers directly — more than 60 percent of whom are women — and another 1.9 million through partnership projects.

As populations grow and farmland faces the pressures of urbanization, the effectiveness of precision agriculture will be key in keeping up with food demands. It's here that John Deere is developing and deploying groundbreaking innovations and technologies by creating advanced solutions. Through our products and services, customers can make their businesses more efficient, profitable, and sustainable.

Finally, the impact of the John Deere Foundation's investments is magnified by the involvement of the company's workforce. In 2022, employees earned over \$6 million for the nonprofit organizations they support via the foundation's employee-giving programs, which match volunteerism and personal philanthropy.

This shared commitment has not gone unnoticed as Points of Light, a nonprofit dedicated to accelerating people-powered change, named John Deere a 2022 honoree of The Civic 50, which recognizes the 50 most community-minded companies in the United States.

Learn more about our efforts to support sustainability and social responsibility at: www.deere.com/sustainabilityreport



BUSINESS HIGHLIGHTS

2022 AWARDS AND RECOGNITIONS

50 MOST COMMUNITY-MINDED COMPANIES

John Deere was named a 2022 honoree of The Civic 50, a recognition of the 50 most community-minded companies in the nation. The Civic 50 is an initiative of Points of Light, the world's largest nonprofit dedicated to accelerating people-powered change. The Civic 50 honorees are selected based on their corporate citizenship and social impact.

CONSUMER ELECTRONIC SHOW (CES) INNOVATION AWARDS

Deere's See & Spray spraying technology earned a CES 2022 Innovation Awards Best of Innovation recognition in the Robotics and Vehicle Intelligence & Transportation categories from the Consumer Technology Association (CTA), which recognizes outstanding design and engineering in consumer technology products. See & Spray uses computer vision and machine learning to detect the difference between plants and weeds and targets application of herbicide on the weeds.

WORLD'S MOST ETHICAL COMPANIES

Ethisphere Institute recognized Deere as one of the World's Most Ethical Companies in 2022 – one of seven honorees in the Industrial Manufacturing category. John Deere has been named one of the World's Most Ethical Companies 15 times. The honor is for companies with a commitment to advancing business integrity.

HELPING TO ACHIEVE ZERO HUNGER

Deere made a \$1 million donation to World Food Program USA to combat global food insecurity and address the rise of hunger made worse by the crisis in Ukraine. The grant will support work of the United Nations World Food Programme (WFP) and the organization's Innovation Accelerator, which supports innovations to reduce hunger.

AE50 AWARDS FOR INNOVATION

American Society of Agricultural and Biological Engineers (ASABE) recognized Deere for innovation in engineering and technology with eight awards for products, ranging from 9 Series tractors to a new 24-row planter.

INVESTING IN UNDERREPRESENTED ENTREPRENEURS AND BUSINESS OWNERS

Deere became a limited investor in Advantage Capital's Empower the Change (EPC) growth fund. It provides entrepreneurs of color access to capital in order to grow their businesses and create community wealth. The investment is part of the company's broader objective of allocating \$500 million within the next three years to identify and grow relationships with underrepresented and disadvantaged business enterprises.



JOINT VENTURE WITH GUSS AUTOMATION

Deere formed a joint venture with GUSS Automation, a pioneer in semi-autonomous orchard and vineyard sprayers. High-value crops such as orchards and vineyards generate significantly higher value per acre than grains or oilseeds.

INVESTING IN BATTERY TECHNOLOGY

Deere acquired majority ownership in Kreisel Electric, a leading pioneer in the development of immersion-cooled battery technology. The Austrian company manufactures high-density, high-durability electric-battery modules and packs for high-performance and off-highway applications, and has created a related charging platform.

MEETING A COMMITMENT TO REDUCE GREENHOUSE GAS EMISSIONS

The Science Based Targets initiative (SBTi) validated that Deere met emissions reduction targets in 2022. Through an independent assessment, SBTi found Deere's targets consistent with what is required to prevent the most damaging effects of climate change.

HELPING AFRICAN SMALLHOLDER FARMERS SHARE EQUIPMENT

The company made a minority investment in Hello Tractor, an ag-tech company based in Nairobi, Kenya. Hello Tractor connects tractor owners with smallholder farmers in Africa and Asia through a farm-equipment-sharing app, which helps farmers track and manage their fleet, book customers, and access financing options.

SEE & SPRAY ULTIMATE EARNS HONORS

See & Spray Ultimate spraying technology received the Best Innovation in Digital Farming Technology award at the 2022 Crop Science Awards in London. It also earned the annual Product of the Year award from the readers of CropLife IRON magazine.



SENIOR LEADERSHIP

Deere leadership team shown at the John Deere Pavilion in Moline, Illinois.

From left: Ryan D. Campbell, Markwart von Pentz, Mary K.W. Jones, Cory J. Reed, Jahmy J. Hindman, Felecia J. Pryor, Rajesh Kalathur, John C. May, Marc A. Howze, Justin R. Rose, and Joshua A. Jepsen.

John C. May (25)
Chairman & Chief Executive Officer

Ryan D. Campbell (15)
President, Worldwide Construction & Forestry
and Power Systems

Jahmy J. Hindman (26)
Chief Technology Officer

Marc A. Howze (21)
Senior Advisor, Office of the Chairman

Joshua A. Jepsen (23)
Senior Vice President and Chief Financial Officer

Mary K.W. Jones (25)
Senior Vice President, General Counsel and Worldwide
Public Affairs

Rajesh Kalathur (26)
President, John Deere Financial, and Chief
Information Officer

Felecia J. Pryor (Effective Aug. 15, 2022)
Senior Vice President and Chief People Officer

Cory J. Reed (24)
President, Worldwide Agriculture & Turf Division,
Production & Precision Ag, Sales & Marketing Regions
of the Americas and Australia

Justin R. Rose (Effective Oct. 31, 2022)
President, Lifecycle Solutions, Customer Support
and Supply Management

Markwart von Pentz (32)
President, Worldwide Agriculture & Turf Division,
Small Ag & Turf, Sales & Marketing Regions of Europe,
CIS, Asia, and Africa

*Titles and years of service (in parentheses)
as of January 1, 2023*

BOARD OF DIRECTORS

John C. May (3)

Chairman & Chief Executive Officer, Deere & Company

Leanne G. Caret (1)

Retired Executive Vice President and Senior Advisor, The Boeing Company and Former President and Chief Executive Officer, Boeing Defense, Space & Security
Aircraft, defense, intelligence and satellite systems and services, and related financing

Tamara A. Erwin (2)

Retired Senior Advisor, Verizon Communications, Inc. and Former Executive Vice President and Group Chief Executive Officer, Verizon Business Group
Communications, information and entertainment products and services

Alan C. Heuberger (6)

Senior Investment Manager, Cascade Asset Management Company (formerly BMGI)
Private investment management

Charles O. Holliday, Jr. (14)

Retired Chairman and Chief Executive Officer, DuPont and Former Chairman, Royal Dutch Shell plc
Oil and natural gas exploration, refining, and product sales

Michael O. Johanns (7)

Retired U.S. Senator from Nebraska and former U.S. Secretary of Agriculture

Clayton M. Jones (15)

Retired Chairman and Chief Executive Officer, Rockwell Collins, Inc.
Aviation electronics and communications

Gregory R. Page (9)

Chairman, Corteva, Inc.
Agricultural seeds, crop protection products, and digital solutions

Sherry M. Smith (11)

Former Executive Vice President and Chief Financial Officer, Supervalu Inc.
Retail and wholesale grocery and retail general merchandise products

Dmitri L. Stockton (7)

Retired Special Advisor to Chairman and Retired Senior Vice President, General Electric Company
Power and water, aviation, oil and gas, healthcare, appliances and lighting, energy management, transportation
Former Chairman, President, and Chief Executive Officer, GE Asset Management Inc.
Global investments

Sheila G. Talton (7)

President and Chief Executive Officer, Gray Matter Analytics
Healthcare analytics for healthcare providers, payers, and pharma companies

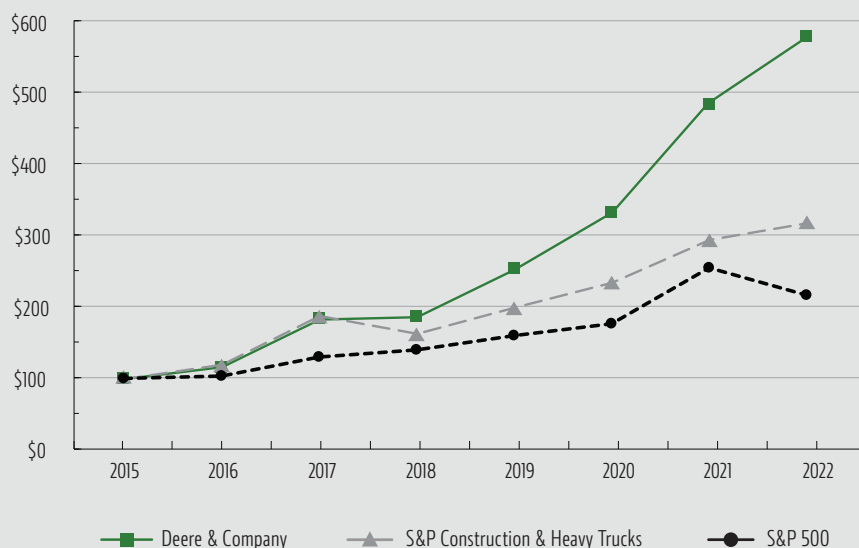
Figures in parentheses represent complete years of board service through January 1, 2023

From left: Tamara A. Erwin, Charles O. Holliday, Jr., Dmitri L. Stockton, Gregory R. Page, Leanne G. Caret, Alan C. Heuberger, Sherry M. Smith, Clayton M. Jones, John C. May, Michael O. Johanns, and Sheila G. Talton.



7-YEAR CUMULATIVE TOTAL RETURN

Deere Compared To S&P 500 Index And S&P 500 Construction & Heavy Trucks Index



The graph compares the cumulative total returns of Deere & Company, the S&P 500 Construction & Farm Machinery Index, and the S&P 500 Stock Index over a seven-year period. It assumes \$100 was invested on October 30, 2015, and that dividends were reinvested. Deere & Company stock price at October 30, 2022, was \$396.85. The Standard & Poor's 500 Construction & Farm Machinery Index is made up of Caterpillar (CAT), Cummins (CMI), Paccar (PCAR), and Wabtec (WAB). The stock performance shown in the graph is not intended to forecast and does not necessarily indicate future price performance.

	2015	2016	2017	2018	2019	2020	2021	2022
Deere & Company	\$100.00	\$115.11	\$179.70	\$182.48	\$246.30	\$321.72	\$492.80	\$578.59
S&P Con & Heavy Trucks	\$100.00	\$118.80	\$183.55	\$159.92	\$195.00	\$228.36	\$285.42	\$308.03
S&P 500	\$100.00	\$104.51	\$129.21	\$138.70	\$158.57	\$173.97	\$248.62	\$212.30

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SHAREHOLDER INFORMATION

ANNUAL MEETING

The 2023 Annual Meeting of Shareholders (the "Annual Meeting") will be held exclusively online on **Wednesday, February 22, 2023, at 10 a.m. Central Standard Time**. To attend the Annual Meeting at www.virtualshareholdermeeting.com/DE2023, you must enter the 16-digit control number on your proxy card, voting instruction form, or Notice of Internet Availability.

TRANSFER AGENT & REGISTRAR

Send all correspondence, including address changes and certificates for transfer, as well as inquiries concerning lost, stolen, or destroyed stock certificates or dividend checks, to:

Deere & Company
c/o Broadridge Corporate Issuer Solutions, Inc.
P.O. Box 1342
Brentwood, NY 11717

Phone toll-free: 800-268-7369 (inside U.S., U.S. territories, and Canada).
From outside the U.S., U.S. territories, and Canada, call: 720-399-2074
Hearing impaired: 855-627-5080
Email: shareholder@broadridge.com
www.shareholder.broadridge.com/DE

DIVIDEND REINVESTMENT & DIRECT PURCHASE PLAN

Investors may purchase initial Deere & Company shares and automatically reinvest dividends through the Broadridge Direct Stock Purchase Plan. Optional monthly cash investments may be made automatically through electronic debits.

For inquiries about existing reinvestment accounts, call 800-268-7369 or write to:

Deere & Company
Broadridge Corporate Issuer Solutions, Inc.
P.O. Box 1342
Brentwood, NY 11717

SHAREHOLDER RELATIONS

Deere & Company welcomes your comments:

Deere & Company
Shareholder Relations Department
One John Deere Place
Moline, IL 61265-8098
Phone: (309) 765-4491 Fax: (309) 765-4663
www.JohnDeere.com/Investors

INVESTOR RELATIONS

Securities analysts, portfolio managers, and representatives of financial institutions may contact:

Deere Investor Relations
Deere & Company
One John Deere Place
Moline, IL 61265-8098
Phone: 309-765-4491
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www.JohnDeere.com/Investors

STOCK EXCHANGES

Deere & Company common stock is listed on the New York Stock Exchange under the ticker symbol DE.

FORM 10-K

The annual report on Form 10-K filed with the Securities and Exchange Commission is available online or upon written request to Deere & Company Shareholder Relations.

AUDITORS

Deloitte & Touche LLP
Chicago, Illinois

SVA: FOCUSING ON GROWTH AND SUSTAINABLE PERFORMANCE

Shareholder Value Added (SVA) — essentially, the difference between operating profit and the pretax cost of capital — is a metric used by John Deere to evaluate business results and measure sustainable performance. To arrive at SVA, each equipment segment is assessed a pretax cost of assets — generally 12% of average identifiable operating assets with inventory at standard cost (believed to more closely approximate the current cost of inventory and the company's related investment). The financial services segment is assessed a cost of average equity — approximately 13% pretax. The amount of SVA is determined by deducting the asset or equity charge from operating profit.

Additional information on these metrics and their relationship to amounts presented in accordance with U.S. GAAP can be found at our website, www.JohnDeere.com/Investors. Note: Some totals may vary due to rounding.

To create and grow SVA, Deere equipment operations are targeting an operating return on average operating assets (OROA) of 30% at mid-cycle sales volumes and equally ambitious returns at other points in the cycle, with higher returns goals for incentive compensation targets. (For purposes of this calculation, operating assets are average identifiable assets during the year with inventories valued at standard cost.)

EQUIPMENT OPERATIONS

Dollars in Millions	2022	2021
Net Sales	\$47,917	\$39,737
Average Identifiable Assets		
With Inventories at LIFO	\$19,420	\$16,680
With Inventories at Standard Cost	\$20,983	\$18,045
Operating Profit	\$8,349	\$6,868
Percent of Net Sales	17.4%	17.3%
Operating Return on Assets		
With Inventories at LIFO	43.0%	41.2%
With Inventories at Standard Cost	39.8%	38.1%
SVA Cost of Assets	\$(2,519)	\$(2,165)
SVA	\$5,830	\$4,703

PRODUCTION & PRECISION AGRICULTURE

Dollars in Millions	2022	2021
Net Sales	\$22,002	\$16,509
Average Identifiable Assets		
With Inventories at LIFO	\$8,336	\$6,640
With Inventories at Standard Cost	\$9,118	\$7,321
Operating Profit	\$4,386	\$3,334
Percent of Net Sales	19.9%	20.2%
Operating Return on Assets		
With Inventories at LIFO	52.6%	50.2%
With Inventories at Standard Cost	48.1%	45.5%
SVA Cost of Assets	\$(1,094)	\$(878)
SVA	\$3,292	\$2,456

SMALL AGRICULTURE & TURF

Dollars in Millions	2022	2021
Net Sales	\$13,381	\$11,860
Average Identifiable Assets		
With Inventories at LIFO	\$4,349	\$3,625
With Inventories at Standard Cost	\$4,795	\$4,047
Operating Profit	\$1,949	\$2,045
Percent of Net Sales	14.6%	17.2%
Operating Return on Assets		
With Inventories at LIFO	44.8%	56.4%
With Inventories at Standard Cost	40.6%	50.5%
SVA Cost of Assets	\$(576)	\$(486)
SVA	\$1,373	\$1,559

CONSTRUCTION & FORESTRY

Dollars in Millions	2022	2021
Net Sales	\$12,534	\$11,368
Average Identifiable Assets		
With Inventories at LIFO	\$6,735	\$6,415
With Inventories at Standard Cost	\$7,070	\$6,677
Operating Profit	\$2,014	\$1,489
Percent of Net Sales	16.1%	13.1%
Operating Return on Assets		
With Inventories at LIFO	29.9%	23.2%
With Inventories at Standard Cost	28.5%	22.3%
SVA Cost of Assets	\$(849)	\$(801)
SVA	\$1,165	\$688

FINANCIAL SERVICES

Dollars in Millions	2022	2021
Net Income Attributable to Deere & Company	\$880	\$881
Average Equity	\$5,725	\$5,497
Return on Equity	15.4%	16.0%
Operating Profit	\$1,159	\$1,144
Cost of Equity	\$(760)	\$(719)
SVA	\$399	\$425

Financial Services SVA is calculated on a pretax basis.



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MANAGEMENT'S DISCUSSION AND ANALYSIS

The following Management's Discussion and Analysis of Financial Condition and Results of Operations (MD&A) is intended to promote understanding of the financial condition and results of operations. The MD&A is provided as a supplement to, and should be read in conjunction with, the consolidated financial statements and the accompanying Notes to Consolidated Financial Statements (Part II, Item 8 of this Form 10-K).

RESULTS OF OPERATIONS FOR THE YEARS ENDED OCTOBER 30, 2022, OCTOBER 31, 2021, AND NOVEMBER 1, 2020

OVERVIEW

Organization

The company generates net sales from the sale of equipment to John Deere dealers and distributors. The company manufactures and distributes a full line of agricultural equipment; a variety of commercial and consumer equipment; and a broad range of equipment for construction, roadbuilding, and forestry. These operations (collectively known as the "equipment operations") are managed through the production and precision agriculture, small agriculture and turf, and construction and forestry operating segments. The company's financial services segment provides credit services, which finance sales and leases of equipment by John Deere dealers. 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.

Smart Industrial Operating Model and Leap Ambitions

The company's Smart Industrial operating model is focused on making significant investments, strengthening the company's capabilities in digital, automation, autonomy, and alternative propulsion technologies. These technologies are intended to increase worksite efficiency, improve yields, lower input costs, and ease labor constraints. The company's Leap Ambitions are goals designed to boost economic value and sustainability for the company's customers. The company anticipates opportunities in this area, as the company and its customers have a vested interest in sustainable practices.

Trends and Economic Conditions

Industry Trends for Fiscal Year 2023 – Industry sales of large agricultural machinery in the U.S. and Canada for 2023 are forecasted to increase 5 to 10 percent compared to 2022. Industry sales of small agricultural and turf equipment in the U.S. and Canada are expected to be flat to down 5 percent in 2023. Industry sales of agricultural machinery in Europe are forecasted to be flat to up 5 percent, while South American industry sales of tractors and combines are expected to be flat to up 5 percent in 2023. Asia industry sales are forecasted to be down moderately in 2023 as the demand in India, the world's largest tractor market by unit, stabilizes. On an industry basis, North American construction equipment and compact construction equipment sales are both expected to be flat to up 5 percent in 2023. Global forestry and global roadbuilding industry sales are each expected to be flat.

Company Trends – Customers' demand for integration of technology into equipment is a market trend underlying the company's Smart Industrial operating model and Leap Ambitions framework. Customers have sought to improve profitability, productivity, and sustainability through technology. The company's approach to technology involves hardware and software, guidance, connectivity and digital solutions, automation and machine intelligence, autonomy, and electrification. This technology is incorporated into products within each of the company's operating segments.

Customers continue to adopt technology integrated in the John Deere portfolio of "smart" machines, systems, and solutions. The company expects this trend to persist for the foreseeable future.

Demand for the company's equipment remains strong, as order books are full through a majority of 2023. Agricultural fundamentals are expected to remain solid into 2023, and retail demand will comprise most of 2023 sales. The company expects dealer stock inventory replenishment to occur in 2024. The North American retail customer fleet age remains above average, and dealer inventories are historically low due to the manufacturing and supply chain constraints over the past few years. Crop prices remain favorable to our customers in part due to low stock-to-use ratios for key grains and lower exports from the Black Sea region. The company expects to sell more large agricultural equipment in 2023 than 2022 in North America, Europe, and South America. Demand for small agricultural equipment remains stable, while turf and utility equipment product sales are expected to be lower due to the overall U.S. economic conditions. Construction equipment markets are forecasted to be steady. Rental fleets replenishment, the energy industry, and U.S. infrastructure spend will offset moderation in residential home construction. Roadbuilding demand remains strongest in the U.S., largely offset by softening demand in Europe and sluggish demand in Asia. Net income for the company's financial services operations is expected to be slightly higher than fiscal year 2022 due to a higher average portfolio, partially offset by less-favorable financing spreads and lower gains on operating leases. Excluding the portfolio in Russia, a higher provision for credit losses is forecasted for 2023.

Additional Trends – The company experienced supply chain disruptions and inflationary pressures in 2022. While these are two distinct issues and discussed separately below, their impact may be intertwined.

Supply chain disruptions impacted many aspects of the business, including parts availability, increased production costs, and more partially completed machines in inventory. Past due deliveries from suppliers were at elevated levels. Late part deliveries incurred expedited freight charges and rework of partially built machines, contributing to production inefficiencies and higher overhead costs. The company implemented the following mitigation efforts to minimize the impact of supply chain disruptions on its ability to meet customer demand:

- Worked with the supply base to obtain allocations and improve on-time deliveries of parts.
- Multi-sourced some parts and materials.
- Provided resources to suppliers to address constraints.
- Entered into long-term contracts for some critical components.
- Utilized alternative freight carriers to expedite delivery.

While supply chain disruptions are expected to persist into 2023, the company is working diligently to secure the parts and components that customers need to deliver essential food and infrastructure more profitably and sustainably.

Inflation was a pervasive feature throughout 2022, increasing the cost of material, freight, energy, salaries, and wages. Higher costs due to general business inflation were offset by price realization, which mitigated the impact of inflation on the company's operating results. The company expects inflation to continue in 2023 resulting in higher costs. If customers are unwilling to accept increases in cost of John Deere products, or the company is otherwise unable to offset increases in production costs, inflation could have an adverse effect on the company's operations and financial condition.

Interest rates rose in 2022 and further central bank policy rate increases are projected in 2023. Most retail customer receivables are fixed rate, while wholesale financing receivables are floating rate. The company has both fixed and floating rate borrowings. The company manages the risk of interest rate fluctuations through balancing the types and amounts of its funding sources to its financing receivable and equipment on operating lease portfolios. Accordingly, the company enters into interest rate swap agreements to manage its interest rate exposure. Rising interest rates have historically impacted the company's borrowings sooner than the benefit is realized from the financing receivable and equipment on operating lease portfolios. As a result, the company's financial services operations experienced spread compression in 2022. If interest rates continue to rise, the company expects to continue experiencing spread compression in 2023.

Supply chain disruptions, inflationary pressures, and rising interest rates are driven by factors outside of the company's control, and as a result, the company cannot reasonably foresee when these conditions will subside.

Items of Concern and Uncertainties – Other items of concern include global and regional political conditions, economic and trade policies, imposition of new or retaliatory tariffs against

certain countries or covering certain products, the ongoing effects of the pandemic, capital market disruptions, changes in demand and pricing for new and used equipment, significant fluctuations in foreign currency exchange rates, volatility in the prices of many commodities, and potential recession. These items could impact the company's results. The company is making investments in technology and in strengthening its capabilities in digital, automation, autonomy, and electrification. As with most technology investments, marketplace adoption and monetization of these features holds an elevated level of uncertainty.

2022 COMPARED WITH 2021

CONSOLIDATED RESULTS

Deere & Company			
(In millions of dollars, except per share amounts)			
	2022		2021
Net sales and revenues	\$ 52,577	\$	44,024
Net income attributable to Deere & Company	7,131		5,963
Diluted earnings per share	23.28		18.99

Net income in 2022 and 2021 was impacted by special items. See Notes 3 and 4 for additional details. The discussion on net sales and operating profit is included in the Business Segment Results below.

An explanation of the cost of sales to net sales ratio and other significant statement of consolidated income changes follows:

Deere & Company			
(In millions of dollars)			
	2022	2021	% Change
Cost of sales to net sales	73.7%	73.3%	
Other income	\$ 1,295	\$ 991	+31
Research and development expenses	1,912	1,587	+20
Selling, administrative and general expenses	3,863	3,383	+14
Interest expense	1,062	993	+7
Other operating expenses	1,275	1,343	-5
Provision for income taxes	2,007	1,658	+21

The cost of sales to net sales ratio increased compared to 2021 mainly due to higher production costs partially offset by price realization. Other income increased due to a non-cash gain on the remeasurement of the previously held equity investment in the Deere-Hitachi joint venture. Research and development expenses were higher in 2022 largely due to continued focus on developing and incorporating technology solutions. Selling, administrative and general expenses increased mostly due to higher provision for credit losses, including higher reserves due to the economic uncertainty in Russia (see Note 4), as well as a higher merit pay increase due to inflationary conditions. Interest expense increased in 2022 due to higher average borrowings and higher average borrowing rates. Other operating expenses were lower compared to 2021 largely due to reduced depreciation of equipment on operating leases and lower retirement benefit costs. The provision for income taxes increased consistent with higher pretax income.

BUSINESS SEGMENT RESULTS

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

For the equipment operations, higher production costs were mostly due to elevated material and inbound freight expenses. Overhead spend was also higher for the year as factories continued to experience some production inefficiencies due to supply chain challenges and clearing partially completed machines in inventory.

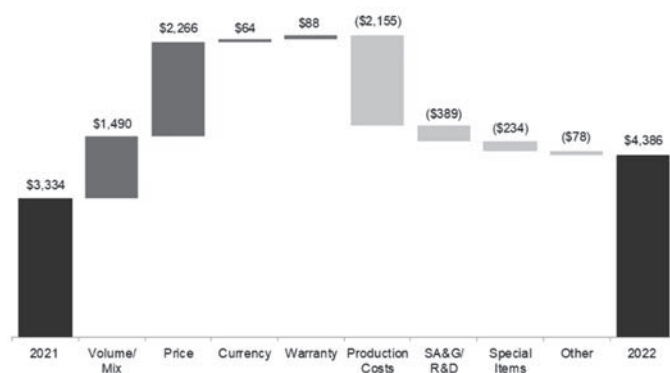
Production and Precision Agriculture Operations

(In millions of dollars)	2022	2021	% Change
Net sales	\$ 22,002	\$ 16,509	+33
Operating profit	4,386	3,334	+32
Operating margin	19.9%	20.2%	
Price realization			+14
Currency translation			-2

Segment sales increased due to higher shipment volumes and price realization. Operating profit benefitted from price realization and higher shipment volumes / sales mix. These items were partially offset by higher production costs, higher research and development expenses and selling, administrative and general expenses, the impact of higher reserves and impairments related to events in Russia / Ukraine, and the UAW contract ratification bonus. The prior year was also impacted by a favorable indirect tax ruling in Brazil (see Note 4).

Production & Precision Agriculture Operating Profit

2022 compared to 2021
\$ in millions



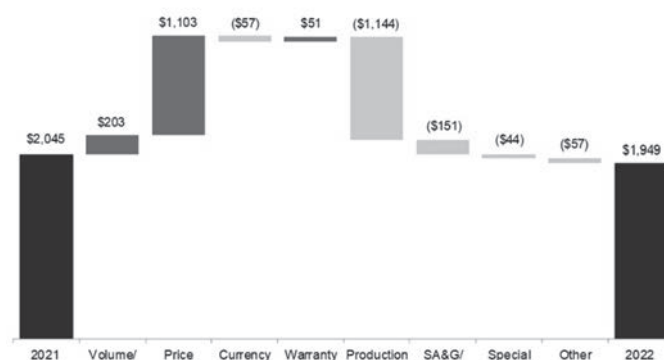
Small Agriculture and Turf Operations

(In millions of dollars)	2022	2021	% Change
Net sales	\$ 13,381	\$ 11,860	+13
Operating profit	1,949	2,045	-5
Operating margin	14.6%	17.2%	
Price realization			+9
Currency translation			-4

Segment sales were higher in 2022 due to price realization and higher shipment volumes, partially offset by the negative effects of currency translation. Operating profit decreased as a result of higher production costs, higher selling, administrative and general expenses and research and development expenses, and the unfavorable effects of foreign exchange, partially offset by price realization and improved shipment volumes. Results for the current year were affected by the impact of higher reserves and impairments related to events in Russia / Ukraine and the UAW contract ratification bonus, while results of the prior year were positively impacted by a gain on the sale of a factory in China (see Note 4).

Small Agriculture & Turf Operating Profit

2022 compared to 2021
\$ in millions



Construction and Forestry Operations

(In millions of dollars)	2022	2021	% Change
Net sales	\$ 12,534	\$ 11,368	+10
Operating profit	2,014	1,489	+35
Operating margin	16.1%	13.1%	
Price realization			+10
Currency translation			-3

Segment sales increased in 2022 due to price realization and higher shipment volumes, partially offset by the negative effects of currency translation. Operating profit increased mainly due to price realization, partially offset by higher production costs. The current year results included a non-cash gain on the remeasurement of the previously held equity investment in the Deere-Hitachi joint venture, partially offset by the impact of higher reserves and impairments related to events in Russia / Ukraine (see Note 4).

Construction & Forestry Operating Profit
2022 compared to 2021
\$ in millions



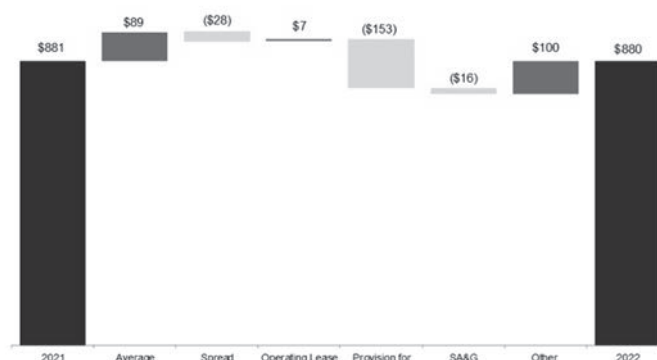
Financial Services Operations

(In millions of dollars)	2022	2021	% Change
Revenue (including intercompany)	\$ 4,085	\$ 3,794	+8
Interest expense	799	687	+16
Net income	880	881	

The average balance of receivables and leases financed was 8 percent higher in 2022, consistent with revenue growth. Interest expense increased in 2022 as a result of higher average borrowings and higher average borrowing rates. Net income in 2022 was roughly the same mainly due to income earned on a higher average portfolio, partially offset by less favorable financing spreads and unfavorable discrete income tax adjustments. The provision for credit losses increased, primarily due to economic uncertainty in Russia. The financial services operations received an intercompany benefit from the equipment operations, as the equipment

operations guarantees financial services' investments in certain international markets, including Russia (see Note 4).

Financial Services Net Income
2022 compared to 2021
\$ in millions



2021 COMPARED WITH 2020

The comparison of the 2021 results with 2020 can be found under the heading "2021 Compared With 2020" in the "Management's Discussion and Analysis" section of the company's 2021 Form 10-K.

CAPITAL RESOURCES AND LIQUIDITY

SOURCES OF LIQUIDITY, KEY METRICS, AND BALANCE SHEET DATA

The company has access to most global markets at a reasonable cost. 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 bank lines of credit. The company closely monitors its liquidity sources against the cash requirements and expects to have sufficient sources of global funding and liquidity to meet its funding needs in the short term (next 12 months) and long term (beyond 12 months). The company operates in multiple industries, which have different funding requirements. The production and precision agriculture, small agriculture and turf, and construction and forestry segments are capital intensive and are typically subject to seasonal variations in financing requirements for inventories and certain receivables from dealers. However, the patterns of seasonality in inventory have been affected by increases in production rates and supply chain disruptions experienced during fiscal year 2022, which continue to impact inventory levels. As a result, the company may not experience typical seasonal reduction in inventory during 2023. The financial services operations rely on their ability to raise substantial amounts of funds to finance their receivable and lease portfolios.

Key metrics are provided in the following table, in millions of dollars:

	2022	2021	2020
Cash, cash equivalents, and marketable securities	\$ 5,508	\$ 8,745	\$ 7,707
Trade accounts and notes receivable – net	6,410	4,208	4,171
Ratio to prior 12 month's net sales	13%	11%	13%
Inventories	8,495	6,781	4,999
Ratio to prior 12 month's cost of sales	24%	23%	21%
Unused credit lines	3,284	5,770	6,801
<i>Financial Services:</i>			
Ratio of interest-bearing debt to stockholder's equity	8.5 to 1	7.8 to 1	7.8 to 1

Due to the uncertainties around the COVID-19 pandemic, the company temporarily increased its cash, cash equivalents, and marketable securities balance beginning in March 2020. The cash balance decrease in 2022 was driven by working capital requirements. The reduction in unused credit lines in 2022 compared to both prior periods relates to an increase in commercial paper outstanding to fund growth in the receivable portfolio. The company forecasts higher operating cash flows in 2023 as identified previously in Trends and Economic Conditions.

Cash Flows

	2022	2021	2020
Net cash provided by operating activities	\$ 4,699	\$ 7,726	\$ 7,483
Net cash used for investing activities	(8,485)	(5,750)	(3,319)
Net cash provided by (used for) financing activities	826	(1,078)	(980)
Effect of exchange rate changes on cash, cash equivalents, and restricted cash	(224)	55	32
Net increase (decrease) in cash, cash equivalents, and restricted cash	\$ (3,184)	\$ 953	\$ 3,216

Positive cash flows from consolidated operating activities in 2022 were \$4,699 million. This resulted from net income adjusted for non-cash provisions, partially offset by an increase in receivables related to sales, an increase in inventories, and a \$1,000 million voluntary contribution to a U.S. other postretirement benefit (OPEB) plan. Cash outflows from investing activities were \$8,485 million in 2022. The primary drivers were growth in the retail customer receivable and lease portfolios; purchases of property and equipment; a change in collateral on derivatives – net; and acquisitions of businesses, net of cash acquired. Cash inflows from financing activities were \$826 million in 2022, due to an increase in borrowings, partially offset by repurchases of common stock and dividends paid. Cash, cash equivalents, and restricted cash decreased \$3,184 million during 2022.

Cash and Marketable Securities Held by Foreign Subsidiaries – The amount of the total cash and cash equivalents and marketable securities held by foreign subsidiaries was \$3,379 million at

October 30, 2022 and \$5,817 million at October 31, 2021. During 2022, the company's foreign subsidiaries returned \$5,643 million of cash and cash equivalents to the U.S. Distributions of profits from foreign subsidiaries are not expected to cause a significant incremental U.S. tax impact. However, these distributions may be subject to withholding taxes outside the U.S.

Trade Accounts and Notes Receivable – Trade accounts and notes receivable arise from sales of goods to customers. Trade receivables increased by \$2,202 million in 2022. The collection period for trade receivables averages less than 12 months. The percentage of trade receivables outstanding for a period exceeding 12 months was 1 percent at each of October 30, 2022 and October 31, 2021.

Financing Receivables and Equipment on Operating Leases – Financing receivables and leases consist of retail notes originated in connection with financing of new and used equipment, operating leases, revolving charge accounts, sales-type and direct financing leases, and wholesale notes. Financing receivables and equipment on operating leases increased by \$3,747 million in 2022, compared with 2021. Total acquisition volumes of financing receivables and equipment on operating leases were 7 percent higher in 2022 compared with the same period last year, as volumes of revolving charge accounts, operating leases, wholesale notes, and retail notes increased primarily due to higher sales by the company, while volumes of finance leases decreased.

Inventories – Inventories increased by \$1,714 million in 2022 due to higher production schedules and supply chain disruptions. 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 13), which approximates current cost, to fiscal year cost of sales were 31 percent at each of October 30, 2022 and October 31, 2021.

Property and Equipment – Property and equipment cash expenditures in 2022 were \$1,134 million, compared with \$848 million in 2021.

Borrowings – Total external borrowings increased by \$3,487 million in 2022, corresponding with the level of the receivable and the lease portfolio, as well as the level of cash and cash equivalents.

John Deere Capital Corporation (Capital Corporation), a U.S. financial services subsidiary, has a revolving warehouse facility to utilize bank conduit facilities to securitize retail notes (see Note 12). At October 30, 2022, \$948 million of short-term securitization borrowings were outstanding under the facility. At the end of the contractual 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. The agreement was renewed in November 2022 with an expiration in November 2023 and a capacity of \$1,500 million.

During 2022, the company issued \$4,085 million and retired \$2,965 million of retail note securitization borrowings, which are presented in "Increase (decrease) in total short-term borrowings" on the statements of consolidated cash flows.

Lines of Credit – The company also has access to bank lines of credit with various banks throughout the world. Worldwide lines of credit totaled \$8,402 million at October 30, 2022, \$3,284 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 considered to constitute utilization. See Note 17 for more information.

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	Positive
Standard & Poor's	A	A-1	Stable

CONTRACTUAL OBLIGATIONS AND CASH REQUIREMENTS

The company's material cash requirements include the following:

Borrowings – As of October 30, 2022, the company had \$15,274 million of payments due on borrowings and securitization borrowings in the next year, along with interest payments of \$1,460 million. The securitization borrowing payments are based on the expected liquidation of the retail notes. See Notes 12 and 19 for additional borrowing details. These payments will likely be replaced with new borrowings to finance the receivable and lease portfolio, which is expected to grow in 2023.

Purchase Obligations – As of October 30, 2022, the company's outstanding purchase obligations were \$4,701 million, with \$4,121 million payable within one year. These purchase obligations are noncancelable.

Other Cash Requirements – In addition to its contractual obligations, the company's quarterly cash dividend is \$1.20 per share, subject to change at the discretion of the company's Board of Directors. Total company pension and OPEB contributions in 2023 are expected to be approximately \$200 million. The company also plans capital expenditures of \$1,400 million in 2023. The company will consider share repurchases as a means of deploying excess cash to shareholders once the previously mentioned requirements are met.

CRITICAL ACCOUNTING ESTIMATES

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

Sales Incentives

The company provides sales incentives to dealers. 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. Actual cost differences from the original cost estimate are recognized in "Net sales."

The sales incentive accruals at October 30, 2022, October 31, 2021, and November 1, 2020 were \$2,364 million, \$1,680 million, and \$1,718 million, respectively. The total accruals recorded were \$1,320 million, \$880 million, and \$1,109 million in trade accounts and notes receivable – net, and \$1,044 million, \$800 million, and \$609 million in accounts payable and accrued expenses at October 30, 2022, October 31, 2021, and November 1, 2020, respectively. The accruals recorded against receivables relate to programs where the company has the contractual right and the intent to offset against existing receivables. The increase in each of 2022 and 2021 primarily resulted from higher retail demand. Additional factors in 2022 were higher incentives expected to be paid for dealer market share and incentives provided to offset elevated interest rates.

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 .8 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 would have increased or decreased .8 percent, the sales incentive accrual at October 30, 2022 would have increased or decreased by approximately \$74 million.

Product Warranties

For most equipment and service parts sales, the company provides a standard warranty to provide assurance that the equipment will function as intended for a specified period of time. At the time a sale is recognized, the company records the estimated future warranty costs. The company 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 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 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 statements of consolidated income 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 sheets (see Note 18).

The product warranty accruals, excluding extended warranty unamortized premiums, at October 30, 2022, October 31, 2021, and November 1, 2020 were \$1,427 million, \$1,312 million, and \$1,105 million, respectively. The increase in each of 2022 and 2021 related to higher sales volume, partially offset by a decrease in the warranty rate.

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 .11 percent, compared to the average warranty costs to sales percent during that period. Holding other assumptions constant, if this estimated cost experience percent would have increased or decreased .11 percent, the warranty accrual at October 30, 2022 would have increased or decreased by approximately \$57 million.

Postretirement Benefit Obligations

The estimation of defined benefit pension and OPEB plan obligations and expenses requires the use of estimates of the present value of the projected future benefit payments. Plan obligations and expenses are based on existing retirement plan provisions. No assumption is made regarding any potential changes to benefit provisions beyond those to which the company is presently committed (e.g., in existing labor contracts). The key assumptions used in developing the required estimates used by the company's actuaries include discount rates, health care cost trend rates, expected long-term return on plan assets, compensation increases, retirement rates, mortality rates, and expected contributions. Actual results that differ from the assumptions and changes in assumptions affect future expenses and obligations. Assumptions are set at each year-end and are not changed during the year unless there is a significant plan event, such as a curtailment or settlement that would trigger a plan remeasurement.

The company's pension and OPEB costs in 2022 were \$176 million, compared with \$197 million in 2021 and \$341 million in 2020. The long-term expected return on plan assets, which is reflected in these costs, was an expected gain of 5.0 percent in 2022 and 5.9 percent in 2021, or \$836 million and \$876 million, respectively. The actual return was a loss of \$3,565 million in 2022 and a gain of \$3,616 million in 2021. In 2023, the expected return is approximately 6.0 percent. The company's costs under these plans in 2023 are expected to decrease by \$225 million compared to 2022, resulting in a net periodic benefit. The reduction in the company's cost is due to increases in the expected long-term rates of return on plan assets and increases in discount rates.

The pension assets, net of pension liabilities, recognized on the balance sheets at October 30, 2022 and October 31, 2021 were \$2,690 million and \$2,665 million, respectively. The pension liabilities, net of pension assets, recognized on the balance sheets at November 1, 2020 were \$447 million. The increase in the pension net assets in 2022 was due to an increase in discount rates offset by losses on plan assets and UAW contract impacts. The increase in the pension net assets in 2021 was due to returns on plan assets.

The OPEB liabilities, net of OPEB assets, at October 30, 2022, October 31, 2021, and November 1, 2020 were \$1,205 million, \$3,175 million, and \$3,892 million, respectively. The decrease in OPEB net liabilities in 2022 was due to an increase in discount rates and a \$1,000 million contribution to a U.S. OPEB plan. The decrease in OPEB net liabilities in 2021 was due to returns on plan assets and favorable changes to medical assumptions.

The company employs de-risking strategies for the global funded pension plans that increase the matching characteristics of the plan assets relative to the obligations, through an increased allocation to fixed income assets, as the funded status improves. Changes in interest rates, which directly influence changes in discount rates, in addition to other factors, have a significant impact on the value of the pension obligation and the fixed income asset portfolio. The company anticipates that changes in interest rates will likely result in offsetting effects in the value of the pension obligation and the value of the fixed income asset portfolio, reducing funded status volatility.

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:

		October 30, 2022	2023
Assumptions	Percentage Change	Increase (Decrease) PBO/APBO*	Increase (Decrease) Expense
Pension			
Discount rate**	+/- .5	\$ (485)/547	\$ 0/1
Expected return on assets	+/- .5		(63)/63
OPEB			
Discount rate**	+/- .5	(149)/162	(2)/2
Expected return on assets	+/- .5		(10)/10
Health care cost trend rate**	+/-1.0	291/(250)	40/(29)

* 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.

The company has not identified a reporting unit for which the goodwill was impaired in 2022, 2021, or 2020. 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 2022.

Allowance for Credit Losses

The allowance for credit losses is an estimate of the credit losses expected over the life of the receivable portfolio. The allowance is measured on a collective basis when similar risk characteristics exist. Risk characteristics considered by the company include finance product category, market, geography, credit risk, and remaining duration. Receivables that do not share risk characteristics with other receivables in the portfolio are evaluated on an individual basis. Non-performing receivables are included in the estimate of expected credit losses.

The company utilizes loss forecast models, which are selected based on the size and credit risk of the underlying pool of receivables, to estimate expected credit losses. Transition matrix

models are used for large and complex retail customer receivable pools, while weighted average remaining maturity models are used for smaller and less complex retail customer receivable pools. Expected credit losses on wholesale receivables are based on historical loss rates, with consideration of current economic conditions and dealer financial risk. The modeled expected credit losses are adjusted based on reasonable and supportable forecasts, which may include economic indicators such as commodity prices, industry equipment sales, unemployment rates, and housing starts. Management reviews each model's output quarterly, and qualitative adjustments are incorporated as necessary.

In 2021, the company adopted ASU No. 2016-13, which revised the measurement of credit losses from an incurred loss to an expected loss methodology. Upon adoption the company's allowance for credit losses increased with an offset to retained earnings. The allowance for credit losses at November 1, 2020 was not restated under the expected loss methodology. The total allowance for credit losses at October 30, 2022, October 31, 2021, and November 1, 2020 was \$361 million, \$207 million, and \$223 million, respectively. The allowance increased in 2022 compared to 2021 due to higher reserves related to the economic uncertainty in Russia. The allowance decreased in 2021 compared to 2020 due to lower expected losses in the construction and forestry market, continued improvement in the agriculture and turf market, and better than expected performance of accounts granted payment relief due to the economic effects of COVID. As previously mentioned, the allowance decrease was partially offset by the adoption of ASU No. 2016-13.

The assumptions used in evaluating the company's exposure to credit losses involve estimates and significant judgment. While the company believes its allowance is sufficient to provide for losses over the life of its existing receivable portfolio, different assumptions or changes in economic conditions would result in changes to the allowance for credit losses. Historically, changes in economic conditions have had limited impact on credit losses within the company's wholesale receivable portfolio. Within the retail customer receivables portfolio, credit loss estimates are dependent on a number of factors, including historical portfolio performance, current delinquency levels, and estimated recoveries on defaulted accounts. The company's transition matrix models, which are utilized to estimate credit losses for more than 90 percent of retail customer receivables, use historical portfolio performance and current delinquency levels to forecast future defaults. Estimated recovery rates are applied to the estimated default balance to calculate the expected credit losses. Holding all other factors constant, a 10 percent increase in the transition matrix models' forecasted defaults and a simultaneous 10 percent decrease in recovery rates would have resulted in a \$40 million increase to the allowance for credit losses at October 30, 2022.

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 value guarantees. The company reviews residual value estimates during the lease term and tests the carrying value of its operating leases for impairment 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. Depreciation is adjusted prospectively on a straight-line basis over the remaining lease term if residual estimates are revised.

The total operating lease residual values at October 30, 2022, October 31, 2021, and November 1, 2020 were \$4,640 million, \$5,025 million, and \$5,254 million, respectively. The decreases in 2022 and 2021 related to a lower average operating lease portfolio.

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 and all the equipment on operating leases were returned to the company for remarketing at the end of the lease term, the total effect would be to increase the company's annual depreciation for equipment on operating leases by approximately \$40 million, after consideration of dealer residual value guarantees.

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.

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 8 to the consolidated financial statements.

FORWARD-LOOKING STATEMENTS

Certain statements contained herein, including in the section entitled "Overview" relating to future events, expectations, and trends constitute "forward-looking statements" as defined in the Private Securities Litigation Reform Act of 1995 and involve factors that are subject to change, assumptions, risks, and uncertainties that could cause actual results to differ materially. Some of these risks and uncertainties could affect all lines of the company's operations generally while others could more heavily affect a particular line of business.

Forward-looking statements are based on currently available information and current assumptions, expectations, and projections about future events and should not be relied upon. 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).

Factors Affecting All Lines of Business

All of the company's businesses and their results are affected by general global macroeconomic conditions, including but not limited to inflation, including rising costs for materials used in our production, slower growth or recession, higher interest rates and currency fluctuations which could adversely affect the U.S. dollar and customer confidence, customer access to capital, and overall demand for our products; delays or disruptions in the company's supply chain, including work stoppages or disputes by suppliers with their unionized labor; shipping delays; government spending and taxing; changes in weather and climate patterns; the political and social stability of the markets in which the company operates; the effects of, or response to, wars and other conflicts, including the current conflict between Russia and Ukraine; natural disasters; and the spread of major epidemics or pandemics (including the COVID-19 pandemic).

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 our access to or terms of future funding, which could reduce the company's earnings and cash flows. A debt crisis in Europe (including the recent volatility of the United Kingdom's bond market), Latin America, or elsewhere could negatively impact currencies, global financial markets, funding sources and costs, asset and obligation values, customers, suppliers, and demand for equipment. The company's investment management activities could be impaired by changes in the equity, bond, and other financial markets, which would negatively affect earnings.

Additional factors that could materially affect the company's operations, financial condition, and results include changes in governmental trade, banking, monetary, and fiscal policies, including policies and tariffs for the benefit of certain industries or sectors; actions by environmental, health, and safety regulatory agencies, including those related to engine emissions, carbon and other greenhouse gas emissions, and the effects of climate change; changes to GPS radio frequency bands and their permitted uses; speed of research and development; effectiveness of partnerships with third parties; the dealer channel's ability to support and service precision technology solutions; changes to accounting standards; changes to and compliance with economic sanctions and export controls laws and regulations (including those in place for Russia); and compliance with evolving U.S. and foreign laws when expanding to new markets and otherwise.

Other factors that could materially affect the company's results and operations include security breaches, cybersecurity attacks, technology failures, and other disruptions to the information technology infrastructure of the company and its suppliers and dealers; security breaches with respect to the company's products; the loss of or challenges to intellectual property rights; the availability and prices of strategically sourced materials, components, and whole goods; introduction of legislation that could affect the company's business model and intellectual property, such as so-called right to repair or right to modify legislation; events that damage the company's reputation or brand; significant investigations, claims, lawsuits, or other legal proceedings; the success or failure of new product initiatives or business strategies; changes in product preferences, sales mix, and take rates of products and life cycle solutions; 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; the inability to deliver precision technology and agricultural solutions to customers; labor relations and contracts, including work stoppages and other disruptions; changes in the ability to attract, develop, engage, and retain qualified personnel; and the integration of acquired businesses.

Production & Precision Agriculture and Small Agriculture & Turf Operations

The company's agricultural equipment operations are subject to a number of uncertainties, including customer profitability; consumer purchasing preferences; housing starts and supply; infrastructure investment; and consumable input costs. Additionally, these operations are subject to certain factors that affect farmers' confidence and financial condition. These factors include demand for agricultural products; world grain stocks; soil conditions; harvest yields; prices for commodities and livestock; availability and cost of fertilizer; availability of transport for crops; the growth and sustainability of non-food uses for some crops (including ethanol and biodiesel production); real estate values; availability of technological innovations; available acreage for farming; changes in government farm programs and policies; changes in and effects of crop insurance programs; changes in environmental regulations and their impact on farming practices; animal diseases and their effects on poultry, beef, and pork consumption and prices on livestock feed demand; and crop pests and diseases.

Production and Precision Agriculture Operations

In addition to the uncertainties discussed above, the production and precision agriculture operations rely in part on hardware and software, guidance, connectivity and digital solutions, and automation and machine intelligence. Many factors contribute to the company's production and precision agriculture sales and results, including the impact to customers' profitability and/or sustainability outcomes.

Small Agriculture and Turf Equipment

In addition to the uncertainties discussed above, factors affecting the company's small agriculture and turf equipment operations include spending by municipalities and golf courses.

Construction and Forestry

Factors affecting the company's construction and forestry equipment operations include real estate and housing prices; the number of housing starts; commodity prices such as oil and gas; the levels of public and non-residential construction; and investment in infrastructure, while prices for pulp, paper, lumber, and structural panels affect sales of forestry equipment.

John Deere Financial

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

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 production and precision agriculture operations, small 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 generate earnings and cash flows by manufacturing and selling equipment, service parts, and technology solutions to dealers and retail customers. Financial services 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 separate performance metrics. The supplemental consolidating data is also used by management due to these differences.

SUPPLEMENTAL CONSOLIDATING DATA

INCOME STATEMENTS

For the Years Ended October 30, 2022, October 31, 2021, and November 1, 2020

(In millions of dollars) Unaudited

	EQUIPMENT OPERATIONS			FINANCIAL SERVICES			ELIMINATIONS			CONSOLIDATED		
	2022	2021	2020	2022	2021	2020	2022	2021	2020	2022	2021	2020
Net Sales and Revenues												
Net sales	\$ 47,917	\$ 39,737	\$ 31,272							\$ 47,917	\$ 39,737	\$ 31,272
Finance and interest income	213	133	112	\$ 3,583	\$ 3,442	\$ 3,610	\$ (431)	\$ (279)	\$ (272)	3,365	3,296	3,450 ¹
Other income	1,261	941	808	502	352	257	(468)	(302)	(247)	1,295	991	818 ^{2,3}
Total	49,391	40,811	32,192	4,085	3,794	3,867	(899)	(581)	(519)	52,577	44,024	35,540
Costs and Expenses												
Cost of sales	35,341	29,119	23,679				(3)	(3)	(2)	35,338	29,116	23,677 ⁴
Research and development expenses	1,912	1,587	1,644							1,912	1,587	1,644
Selling, administrative and general expenses	3,137	2,887	2,878	735	504	606	(9)	(8)	(7)	3,863	3,383	3,477 ⁴
Interest expense	390	368	329	799	687	942	(127)	(62)	(24)	1,062	993	1,247 ⁵
Interest compensation to Financial Services	299	217	248				(299)	(217)	(248)			
Other operating expenses	350	181	278	1,386	1,453	1,572	(461)	(291)	(238)	1,275	1,343	1,612 ^{6,7}
Total	41,429	34,359	29,056	2,920	2,644	3,120	(899)	(581)	(519)	43,450	36,422	31,657
Income before Income Taxes	7,962	6,452	3,136	1,165	1,150	747				9,127	7,602	3,883
Provision for income taxes	1,718	1,386	899	289	272	183				2,007	1,658	1,082
Income after Income Taxes	6,244	5,066	2,237	876	878	564				7,120	5,944	2,801
Equity in income (loss) of unconsolidated affiliates	6	18	(50)	4	3	2				10	21	(48)
Net Income	6,250	5,084	2,187	880	881	566				7,130	5,965	2,753
Less: Net income (loss) attributable to noncontrolling interests	(1)	2	2							(1)	2	2
Net Income Attributable to Deere & Company	<u>\$ 6,251</u>	<u>\$ 5,082</u>	<u>\$ 2,185</u>	<u>\$ 880</u>	<u>\$ 881</u>	<u>\$ 566</u>				<u>\$ 7,131</u>	<u>\$ 5,963</u>	<u>\$ 2,751</u>

¹ Elimination of financial services' interest income earned from equipment operations.

² Elimination of equipment operations' margin from inventory transferred to equipment on operating leases (see Note 6).

³ Elimination of financial services' income related to intercompany guarantees of investments in certain international markets.

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.

⁷ Elimination of equipment operations' expense related to intercompany guarantees of investments in certain international markets.

SUPPLEMENTAL CONSOLIDATING DATA (continued)
CONDENSED BALANCE SHEETS
As of October 30, 2022 and October 31, 2021

(In millions of dollars) Unaudited

	EQUIPMENT OPERATIONS		FINANCIAL SERVICES		ELIMINATIONS		CONSOLIDATED	
	2022	2021	2022	2021	2022	2021	2022	2021
ASSETS								
Cash and cash equivalents	\$ 3,767	\$ 7,188	\$ 1,007	\$ 829			\$ 4,774	\$ 8,017
Marketable securities	61	3	673	725			734	728
Receivables from Financial Services	6,569	5,564			\$ (6,569)	\$ (5,564)		
Trade accounts and notes receivable - net	1,273	1,155	6,434	3,895	(1,297)	(842)	6,410	4,208
Financing receivables - net	47	73	36,587	33,726			36,634	33,799
Financing receivables securitized - net		10	5,936	4,649			5,936	4,659
Other receivables	1,670	1,629	832	159	(10)	(23)	2,492	1,765
Equipment on operating leases - net			6,623	6,988			6,623	6,988
Inventories	8,495	6,781					8,495	6,781
Property and equipment - net	6,021	5,783	35	37			6,056	5,820
Goodwill	3,687	3,291					3,687	3,291
Other intangible assets - net	1,218	1,275					1,218	1,275
Retirement benefits	3,666	3,539	66	64	(2)	(2)	3,730	3,601
Deferred income taxes	940	1,215	45	53	(161)	(231)	824	1,037
Other assets	1,794	1,646	626	499	(3)		2,417	2,145
Total Assets	\$ 39,208	\$ 39,152	\$ 58,864	\$ 51,624	\$ (8,042)	\$ (6,662)	\$ 90,030	\$ 84,114
LIABILITIES AND STOCKHOLDERS' EQUITY								
LIABILITIES								
Short-term borrowings	\$ 1,040	\$ 1,509	\$ 11,552	\$ 9,410			\$ 12,592	\$ 10,919
Short-term securitization borrowings		10	5,711	4,595			5,711	4,605
Payables to Equipment Operations			6,569	5,564	\$ (6,569)	\$ (5,564)		
Accounts payable and accrued expenses	12,962	11,198	3,170	2,015	(1,310)	(865)	14,822	12,348
Deferred income taxes	380	438	276	369	(161)	(231)	495	576
Long-term borrowings	7,917	8,915	25,679	23,973			33,596	32,888
Retirement benefits and other liabilities	2,351	4,239	108	107	(2)	(2)	2,457	4,344
Total liabilities	24,650	26,309	53,065	46,033	(8,042)	(6,662)	69,673	65,680
Commitments and contingencies (Note 20)								
Redeemable noncontrolling interest (Note 3)	92						92	
STOCKHOLDERS' EQUITY								
Total Deere & Company stockholders' equity	20,262	18,431	5,799	5,591	(5,799)	(5,591)	20,262	18,431
Noncontrolling interests	3	3					3	3
Financial Services' equity	(5,799)	(5,591)			5,799	5,591		
Adjusted total stockholders' equity	14,466	12,843	5,799	5,591			20,265	18,434
Total Liabilities and Stockholders' Equity	\$ 39,208	\$ 39,152	\$ 58,864	\$ 51,624	\$ (8,042)	\$ (6,662)	\$ 90,030	\$ 84,114

⁸ Elimination of receivables / payables between equipment operations and financial services.

⁹ Primarily reclassification of sales incentive accruals on receivables sold to financial services.

¹⁰ Reclassification of net pension assets / liabilities.

¹¹ Reclassification of deferred tax assets / liabilities in the same taxing jurisdictions.

¹² Elimination of financial services' equity.

SUPPLEMENTAL CONSOLIDATING DATA (continued)
STATEMENTS OF CASH FLOWS
For the Years Ended October 30, 2022, October 31, 2021, and November 1, 2020

(In millions of dollars) Unaudited

	EQUIPMENT OPERATIONS			FINANCIAL SERVICES			ELIMINATIONS			CONSOLIDATED		
	2022	2021	2020	2022	2021	2020	2022	2021	2020	2022	2021	2020
Cash Flows from Operating Activities												
Net income	\$ 6,250	\$ 5,084	\$ 2,187	\$ 880	\$ 881	\$ 566				\$ 7,130	\$ 5,965	\$ 2,753
Adjustments to reconcile net income to net cash provided by operating activities:												
Provision (credit) for credit losses	3	7	5	189	(13)	105				192	(6)	110
Provision for depreciation and amortization	1,041	1,043	1,016	1,050	1,140	1,227	\$ (196)	\$ (133)	\$ (125)	1,895	2,050	2,118
Impairment charges	88	50	162			32				88	50	194
Share-based compensation expense							85	82	81	85	82	81
Loss on sale of businesses and unconsolidated affiliates			24									24
Gain on remeasurement of previously held equity investment	(326)									(326)		
Undistributed earnings of Financial Services	444	555	386				(444)	(555)	(386)			
Provision (credit) for deferred income taxes	8	(369)	105	(74)	(72)	(116)				(66)	(441)	(11)
Changes in assets and liabilities:												
Trade, notes, and financing receivables related to sales	(189)	(105)	373				(2,294)	1,074	1,636	(2,483)	969	2,009
Inventories	(1,924)	(1,835)	1,011				(167)	(662)	(614)	(2,091)	(2,497)	397
Accounts payable and accrued expenses	1,444	1,589	(331)	143	57	(1)	(454)	238	325	1,133	1,884	(7)
Accrued income taxes payable/receivable	166	13	(14)	(25)	(2)	22				141	11	8
Retirement benefits	(1,016)	30	(544)	1	(1)	7				(1,015)	29	(537)
Other	250	(162)	380	(287)	(25)	134	53	(183)	(170)	16	(370)	344
Net cash provided by operating activities	6,239	5,900	4,760	1,877	1,965	1,976	(3,417)	(139)	747	4,699	7,726	7,483
Cash Flows from Investing Activities												
Collections of receivables (excluding receivables related to sales)				22,400	20,527	18,829	(1,493)	(1,568)	(1,448)	20,907	18,959	17,381
Proceeds from sales of equipment on operating leases				2,093	2,094	1,783				2,093	2,094	1,783
Cost of receivables acquired (excluding receivables related to sales)				(26,903)	(25,305)	(21,360)	603	1,652	1,395	(26,300)	(23,653)	(19,965)
Acquisitions of businesses, net of cash acquired	(498)	(244)	(66)							(498)	(244)	(66)
Purchases of property and equipment	(1,131)	(845)	(816)	(3)	(3)	(4)				(1,134)	(848)	(820)
Cost of equipment on operating leases acquired				(2,879)	(2,627)	(2,666)	225	895	830	(2,654)	(1,732)	(1,836)
Decrease (increase) in trade and wholesale receivables				(3,601)	1,364	1,999	3,601	(1,364)	(1,999)			
Collateral on derivatives - net	5	(7)	(6)	(647)	(274)	274				(642)	(281)	268
Other	(206)	62	(103)	(81)	(84)	(71)	30	(23)	110	(257)	(45)	(64)
Net cash used for investing activities	(1,830)	(1,034)	(991)	(9,621)	(4,308)	(1,216)	2,966	(408)	(1,112)	(8,485)	(5,750)	(3,319)
Cash Flows from Financing Activities												
Increase (decrease) in total short-term borrowings	136	65	(177)	3,716	753	(1,183)				3,852	818	(1,360)
Change in intercompany receivables/payables	(1,633)	(354)	(3,207)	1,633	354	3,207						
Proceeds from long-term borrowings	138	11	4,586	10,220	8,711	4,685				10,358	8,722	9,271
Payments of long-term borrowings	(1,356)	(94)	(607)	(7,089)	(6,996)	(6,776)				(8,445)	(7,090)	(7,383)
Proceeds from issuance of common stock	63	148	331							63	148	331
Repurchases of common stock	(3,597)	(2,538)	(750)							(3,597)	(2,538)	(750)
Dividends paid	(1,313)	(1,040)	(956)	(444)	(555)	(386)	444	555	386	(1,313)	(1,040)	(956)
Other	(57)	(61)	(105)	(42)	(29)	(7)	7	(8)	(21)	(92)	(98)	(133)
Net cash provided by (used for) financing activities	(7,619)	(3,863)	(885)	7,994	2,238	(460)	451	547	365	826	(1,078)	(980)
Effect of Exchange Rate Changes on Cash, Cash Equivalents, and Restricted Cash												
	(209)	41	76	(15)	14	(44)				(224)	55	32
Net Increase (Decrease) in Cash, Cash Equivalents, and Restricted Cash												
	(3,419)	1,044	2,960	235	(91)	256				(3,184)	953	3,216
Cash, Cash Equivalents, and Restricted Cash at Beginning of Year												
	7,200	6,156	3,196	925	1,016	760				8,125	7,172	3,956
Cash, Cash Equivalents, and Restricted Cash at End of Year												
	\$ 3,781	\$ 7,200	\$ 6,156	\$ 1,160	\$ 925	\$ 1,016				\$ 4,941	\$ 8,125	\$ 7,172
Components of cash, cash equivalents, and restricted cash												
Cash and cash equivalents	\$ 3,767	\$ 7,188	\$ 6,145	\$ 1,007	\$ 829	\$ 921				\$ 4,774	\$ 8,017	\$ 7,066
Restricted cash (Other assets)	14	12	11	153	96	95				167	108	106
Total cash, cash equivalents, and restricted cash	\$ 3,781	\$ 7,200	\$ 6,156	\$ 1,160	\$ 925	\$ 1,016				\$ 4,941	\$ 8,125	\$ 7,172

¹³ Elimination of depreciation on leases related to inventory transferred to equipment on operating leases (see Note 6).

¹⁴ Reclassification of share-based compensation expense.

¹⁵ Elimination of dividends from financial services to the equipment operations, which are included in the equipment operations operating activities, and capital investments in financial services from the equipment operations.

¹⁶ Primarily reclassification of receivables related to the sale of equipment.

¹⁷ Reclassification of direct lease agreements with retail customers.

¹⁸ Reclassification of sales incentive accruals on receivables sold to financial services

¹⁹ 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.

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 sales incentive programs. 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 derivative agreements related to the management of these foreign currency transaction risks.

Interest Rate Risk

Interest rates rose in 2022 and further central bank policy rate increases are projected in 2023. Rising interest rates have historically impacted the company's borrowings sooner than the benefit is realized from the financing receivable and equipment on operating lease portfolios. As a result, the company's financial services operations experienced spread compression in 2022. If interest rates continue to rise, the company expects to continue experiencing spread compression in 2023.

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 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 impact in these financial instruments' fair values which would be caused by increasing or decreasing the interest rates by 10 percent from the market rates at October 30, 2022 and October 31, 2021 would have been approximately \$50 million and \$20 million, respectively.

The company continues to transition its financing, funding, and hedging portfolios from the London Interbank Offered Rate (LIBOR) to alternative reference rates. These transition activities are not expected to have a material impact on the company's financial statements.

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 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 2023 would decrease the 2023 expected net cash inflows by approximately \$125 million, with the estimated impacts by currency as follows:

(In millions of dollars)	2023
Australian dollar	\$ (100)
Brazilian real	(150)
British pound	(25)
Canadian dollar	(25)
Euro	50
Japanese yen	125
Mexican peso	25
All other	(25)
Total increase (decrease)	\$ (125)

At October 31, 2021, a hypothetical 10 percent strengthening of the U.S. dollar under similar assumptions and calculations indicated a potential \$110 million decrease on the 2022 net cash inflows.

In the financial services operations, the company's policy is to manage foreign currency risk through hedging strategies 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.

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 October 30, 2022 and October 31, 2021, 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 October 30, 2022, 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 October 30, 2022 and October 31, 2021, and the results of its operations and its cash flows for each of the three years in the period ended October 30, 2022, 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 October 30, 2022, 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 15, 2022, 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 October 30, 2022 was \$2,364 million, of which \$1,320 million is recorded within trade accounts and notes receivable – net and \$1,044 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 retail sales by 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 tested 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.
- 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.
 - Comparing historical and current sales incentive data for eligible products in the following manner:
 - Type and number of programs
 - Geography
 - Program size and duration

Allowance for Credit Losses – Refer to Notes 2 and 11 to the financial statements

Critical Audit Matter Description

The allowance for credit losses as of October 30, 2022 was \$361 million. The allowance for credit losses is an estimate of the credit losses expected over the life of the Company's receivable portfolio. The Company measures expected credit losses on a collective basis when similar risk characteristics exist. Risk characteristics considered by the Company include finance product category, market, geography, credit risk, and remaining duration. The Company utilizes loss forecast models, which are selected based on the size and credit risk of the underlying pool of receivables, to estimate expected credit losses. Transition matrix models are used for large and complex retail customer receivable pools. The modeled expected credit losses are adjusted based on reasonable and supportable forecasts, which may include economic indicators such as commodity prices, industry equipment sales, unemployment rates, and housing starts. Management reviews each model's output quarterly, and qualitative adjustments are incorporated as necessary.

We identified the allowance for credit losses as a critical audit matter because determining the appropriate methodology and assumptions used in the estimate requires significant judgment by management. Given the subjective nature and judgment applied by management to determine the allowance for credit losses, auditing the methodology and assumptions requires a high degree of auditor judgment and an increased extent of effort, including the need to involve credit specialists.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to testing the Company's allowance for credit losses included the following, among others:

- We tested the effectiveness of management's controls over the methodology, data and assumptions used to estimate the allowance for credit losses.
- We tested the accuracy and evaluated the relevance of the underlying historical data used in the Company's model.
- With the assistance of our credit specialists, we evaluated the reasonableness and accuracy of the models used to estimate the allowance for credit losses, including model assumptions and the selection and application of relevant risk characteristics and use of qualitative adjustments.
- We evaluated qualitative adjustments to the model estimate. Our evaluation included:
 - Comparison of 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.
- We evaluated management's ability to accurately forecast credit losses by performing a retrospective review, which involved comparing actual credit losses to historical estimates.

/s/ DELOITTE & TOUCHE LLP

Chicago, Illinois

December 15, 2022

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

MANAGEMENT'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

The management of Deere & Company (the "company") 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 October 30, 2022, 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 October 30, 2022, 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. This report appears below.

December 15, 2022

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 October 30, 2022, 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 October 30, 2022, 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 October 30, 2022 of the Company and our report dated December 15, 2022, 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 15, 2022

DEERE & COMPANY

STATEMENTS OF CONSOLIDATED INCOME

For the Years Ended October 30, 2022, October 31, 2021, and November 1, 2020

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

	2022	2021	2020
Net Sales and Revenues			
Net sales	\$ 47,917	\$ 39,737	\$ 31,272
Finance and interest income	3,365	3,296	3,450
Other income	1,295	991	818
Total	52,577	44,024	35,540
Costs and Expenses			
Cost of sales	35,338	29,116	23,677
Research and development expenses	1,912	1,587	1,644
Selling, administrative and general expenses	3,863	3,383	3,477
Interest expense	1,062	993	1,247
Other operating expenses	1,275	1,343	1,612
Total	43,450	36,422	31,657
Income of Consolidated Group before Income Taxes	9,127	7,602	3,883
Provision for income taxes	2,007	1,658	1,082
Income of Consolidated Group	7,120	5,944	2,801
Equity in income (loss) of unconsolidated affiliates	10	21	(48)
Net Income	7,130	5,965	2,753
Less: Net income (loss) attributable to noncontrolling interests	(1)	2	2
Net Income Attributable to Deere & Company	\$ 7,131	\$ 5,963	\$ 2,751
Per Share Data			
Basic	\$ 23.42	\$ 19.14	\$ 8.77
Diluted	\$ 23.28	\$ 18.99	\$ 8.69
Dividends declared	\$ 4.36	\$ 3.61	\$ 3.04
Dividends paid	\$ 4.28	\$ 3.32	\$ 3.04
Average Shares Outstanding			
Basic	304.5	311.6	313.5
Diluted	306.3	314.0	316.6

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

DEERE & COMPANY

STATEMENTS OF CONSOLIDATED COMPREHENSIVE INCOME

For the Years Ended October 30, 2022, October 31, 2021, and November 1, 2020

(In millions of dollars)

	2022	2021	2020
Net Income	<u>\$ 7,130</u>	<u>\$ 5,965</u>	<u>\$ 2,753</u>
Other Comprehensive Income (Loss), Net of Income Taxes			
Retirement benefits adjustment	645	2,884	(3)
Cumulative translation adjustment	(1,116)	118	55
Unrealized gain on derivatives	63	16	2
Unrealized gain (loss) on debt securities	(109)	(18)	14
Other Comprehensive Income (Loss), Net of Income Taxes	<u>(517)</u>	<u>3,000</u>	<u>68</u>
Comprehensive Income of Consolidated Group	<u>6,613</u>	<u>8,965</u>	<u>2,821</u>
Less: Comprehensive income (loss) attributable to noncontrolling interests	(16)	2	2
Comprehensive Income Attributable to Deere & Company	<u>\$ 6,629</u>	<u>\$ 8,963</u>	<u>\$ 2,819</u>

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

DEERE & COMPANY
CONSOLIDATED BALANCE SHEETS
As of October 30, 2022 and October 31, 2021
(In millions of dollars)

	2022	2021
ASSETS		
Cash and cash equivalents	\$ 4,774	\$ 8,017
Marketable securities	734	728
Trade accounts and notes receivable - net	6,410	4,208
Financing receivables - net	36,634	33,799
Financing receivables securitized - net	5,936	4,659
Other receivables	2,492	1,765
Equipment on operating leases - net	6,623	6,988
Inventories	8,495	6,781
Property and equipment - net	6,056	5,820
Goodwill	3,687	3,291
Other intangible assets - net	1,218	1,275
Retirement benefits	3,730	3,601
Deferred income taxes	824	1,037
Other assets	2,417	2,145
Total Assets	\$ 90,030	\$ 84,114
LIABILITIES AND STOCKHOLDERS' EQUITY		
LIABILITIES		
Short-term borrowings	\$ 12,592	\$ 10,919
Short-term securitization borrowings	5,711	4,605
Accounts payable and accrued expenses	14,822	12,348
Deferred income taxes	495	576
Long-term borrowings	33,596	32,888
Retirement benefits and other liabilities	2,457	4,344
Total liabilities	69,673	65,680
Commitments and contingencies (Note 20)		
Redeemable noncontrolling interest (Note 3)	92	
STOCKHOLDERS' EQUITY		
Common stock, \$1 par value (authorized – 1,200,000,000 shares; issued – 536,431,204 shares in 2022 and 2021), at paid-in amount	5,165	5,054
Common stock in treasury, 237,659,289 shares in 2022 and 228,366,144 shares in 2021, at cost	(24,094)	(20,533)
Retained earnings	42,247	36,449
Accumulated other comprehensive income (loss)	(3,056)	(2,539)
Total Deere & Company stockholders' equity	20,262	18,431
Noncontrolling interests	3	3
Total stockholders' equity	20,265	18,434
Total Liabilities and Stockholders' Equity	\$ 90,030	\$ 84,114

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

DEERE & COMPANY

STATEMENTS OF CONSOLIDATED CASH FLOWS

For the Years Ended October 30, 2022, October 31, 2021, and November 1, 2020

(In millions of dollars)

	2022	2021	2020
Cash Flows from Operating Activities			
Net income	\$ 7,130	\$ 5,965	\$ 2,753
Adjustments to reconcile net income to net cash provided by operating activities:			
Provision (credit) for credit losses	192	(6)	110
Provision for depreciation and amortization	1,895	2,050	2,118
Impairment charges	88	50	194
Share-based compensation expense	85	82	81
Loss on sales of businesses and unconsolidated affiliates			24
Gain on remeasurement of previously held equity investment	(326)		
Credit for deferred income taxes	(66)	(441)	(11)
Changes in assets and liabilities:			
Trade, notes, and financing receivables related to sales	(2,483)	969	2,009
Inventories	(2,091)	(2,497)	397
Accounts payable and accrued expenses	1,133	1,884	(7)
Accrued income taxes payable/receivable	141	11	8
Retirement benefits	(1,015)	29	(537)
Other	16	(370)	344
Net cash provided by operating activities	<u>4,699</u>	<u>7,726</u>	<u>7,483</u>
Cash Flows from Investing Activities			
Collections of receivables (excluding receivables related to sales)	20,907	18,959	17,381
Proceeds from sales of equipment on operating leases	2,093	2,094	1,783
Cost of receivables acquired (excluding receivables related to sales)	(26,300)	(23,653)	(19,965)
Acquisitions of businesses, net of cash acquired	(498)	(244)	(66)
Purchases of property and equipment	(1,134)	(848)	(820)
Cost of equipment on operating leases acquired	(2,654)	(1,732)	(1,836)
Collateral on derivatives - net	(642)	(281)	268
Other	(257)	(45)	(64)
Net cash used for investing activities	<u>(8,485)</u>	<u>(5,750)</u>	<u>(3,319)</u>
Cash Flows from Financing Activities			
Increase (decrease) in total short-term borrowings	3,852	818	(1,360)
Proceeds from long-term borrowings	10,358	8,722	9,271
Payments of long-term borrowings	(8,445)	(7,090)	(7,383)
Proceeds from issuance of common stock	63	148	331
Repurchases of common stock	(3,597)	(2,538)	(750)
Dividends paid	(1,313)	(1,040)	(956)
Other	(92)	(98)	(133)
Net cash provided by (used for) financing activities	<u>826</u>	<u>(1,078)</u>	<u>(980)</u>
Effect of Exchange Rate Changes on Cash, Cash Equivalents, and Restricted Cash	<u>(224)</u>	<u>55</u>	<u>32</u>
Net Increase (Decrease) in Cash, Cash Equivalents, and Restricted Cash	<u>(3,184)</u>	<u>953</u>	<u>3,216</u>
Cash, Cash Equivalents, and Restricted Cash at Beginning of Year	<u>8,125</u>	<u>7,172</u>	<u>3,956</u>
Cash, Cash Equivalents, and Restricted Cash at End of Year	<u>\$ 4,941</u>	<u>\$ 8,125</u>	<u>\$ 7,172</u>
Components of cash, cash equivalents, and restricted cash			
Cash and cash equivalents	\$ 4,774	\$ 8,017	\$ 7,066
Restricted cash (Other assets)	167	108	106
Total cash, cash equivalents, and restricted cash	<u>\$ 4,941</u>	<u>\$ 8,125</u>	<u>\$ 7,172</u>

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

DEERE & COMPANY

STATEMENTS OF CHANGES IN CONSOLIDATED STOCKHOLDERS' EQUITY

For the Years Ended November 1, 2020, October 31, 2021, and October 30, 2022

(In millions of dollars)

	Total Stockholders' Equity							Redeemable Noncontrolling Interest
	Deere & Company Stockholders							
	Total Stockholders' Equity	Common Stock	Treasury Stock	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Noncontrolling Interests		
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 4)							(14)	
Share based awards and other	254	253		(2)		3		
Balance November 1, 2020	12,944	4,895	(18,065)	31,646	(5,539)	7		
ASU No. 2016-13 adoption	(35)			(35)				
Net income	5,965			5,963		2		
Other comprehensive income	3,000				3,000			
Repurchases of common stock	(2,538)		(2,538)					
Treasury shares reissued	70		70					
Dividends declared	(1,127)			(1,125)		(2)		
Share based awards and other	155	159				(4)		
Balance October 31, 2021	18,434	5,054	(20,533)	36,449	(2,539)	3		
Acquisitions (see Note 3)							104	
Net income (loss)	7,133			7,131		2	(3)	
Other comprehensive loss	(517)				(517)		(15)	
Repurchases of common stock	(3,597)		(3,597)					
Treasury shares reissued	36		36					
Dividends declared	(1,329)			(1,327)		(2)		
Share based awards and other	105	111		(6)			6	
Balance October 30, 2022	\$ 20,265	\$ 5,165	\$ (24,094)	\$ 42,247	\$ (3,056)	\$ 3	\$ 92	

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

1. ORGANIZATION AND CONSOLIDATION

Deere & Company has been developing innovative solutions to help its customers become more profitable for 185 years. References to Deere & Company, John Deere, Deere, or the company include its consolidated subsidiaries and consolidated variable interest entities (VIEs). The company is managed through the following operating segments: production and precision agriculture (PPA), small agriculture and turf (SAT), construction and forestry (CF), and financial services (FS). References to “equipment operations” include production and precision agriculture, small agriculture and turf, and construction and forestry, while references to “agriculture and turf” include both production and precision agriculture and small agriculture and turf.

Principles of Consolidation

The consolidated financial statements represent the consolidation of all companies in which Deere & Company has a controlling interest. Certain 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. The company consolidates certain VIEs related to retail note securitizations (see Note 12). Deere & Company records its investment in each unconsolidated affiliated company (20 to 50 percent ownership) at cost, plus or minus the company’s share of the profit or loss after acquisition and further reduced for any dividends (see Note 16). 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, which generally occurs near the end of October. An additional week is included in the fourth fiscal quarter every five or six years to realign the company’s fiscal quarters with the calendar. The fiscal year ends for 2022, 2021, and 2020 were October 30, 2022, October 31, 2021, and November 1, 2020, respectively. Fiscal years 2022, 2021, and 2020 contained 52 weeks. Unless otherwise stated, references to particular years or quarters refer to the company’s fiscal years and the associated periods in those fiscal years.

Wirtgen Reporting Lag Removal

Prior to November 2, 2020, the operating results of the Wirtgen Group (Wirtgen) were incorporated into the company’s consolidated financial statements using a one-month lag period. The reporting lag was eliminated resulting in one additional month of Wirtgen activity in 2021. The effect was an increase to fiscal year 2021 “Net sales” of \$270 million, which the company considers immaterial to construction and forestry’s annual net sales. Fiscal year 2020 results were not restated.

Argentina

The company has equipment operations and financial services operations in Argentina. The U.S. dollar has historically been the functional currency for the company’s Argentina operations, as its business is indexed to the U.S. dollar due to the highly inflationary conditions. The Argentine government has certain capital and

currency controls that restrict the company’s ability to access U.S. dollars in Argentina and remit earnings from its Argentine operations. As of October 30, 2022 and October 31, 2021, the company’s net investment in Argentina was approximately \$742 million and \$578 million, respectively. Net sales and revenues from the company’s Argentine operations represented approximately 1 percent of consolidated net sales and revenues for 2022. The company has employed mechanisms to convert Argentine pesos into U.S. dollars to the extent possible. The net peso exposure was not material as of October 30, 2022 and October 31, 2021. Argentine peso-denominated monetary assets and liabilities are remeasured at each balance sheet date using the official currency exchange rate.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES AND NEW ACCOUNTING STANDARDS

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

Use of Estimates in Financial Statements

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

Revenue Recognition

Sales of equipment and service parts are recognized when the company transfers control of the good to the independent customer, which generally occurs upon shipment. In most situations, the independent customer is a dealer, which subsequently sells the equipment and service parts purchased from the company to a retail customer, who can finance the equipment with the financial services segment or another source of financing. In some situations, the company sells directly to a retail customer. The term “customer” includes both dealers and retail customers to whom the company makes direct sales.

Prior to 2022, certain goods were shipped to dealers in Canada on a consignment basis under which the risks and rewards of ownership were not transferred to the dealer at the time the goods are shipped. Accordingly, sales for consigned goods were not recorded until a retail customer purchased the goods or the goods were otherwise removed from the dealer’s inventory. The dealer contract in Canada was changed such that all goods delivered after November 1, 2021 are delivered on terms, resulting in transfer of control and revenue recognition upon delivery of all goods. For certain goods delivered to Canadian dealers prior to November 1, 2021, the dealer consignment terms already in place remain in effect. As of October 30, 2022 and October 31, 2021, the remaining consigned inventory was \$7 million and \$150 million, respectively. Consignment terms are not prevalent in any other market.

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. 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 charged to dealers on outstanding balances, from the earlier of the date when goods are sold to a retail customer by the dealer or the expiration of the interest-free period granted at the time of the sale to the dealer, until payment is received by the company. Interest charged may not be forgiven and the past due interest rates exceed market rates. Dealers cannot cancel purchases after the company recognizes a sale and are responsible for payment even if the equipment is not sold to retail customers. If the interest-free or below market interest rate period exceeds one year, the company adjusts the expected sales revenue for the effects of the time value of money using a current market interest rate. The revenue related to the financing component is recognized in "Finance and interest income" using the interest method. The company does not adjust the sales price to account for a financing component if the expected interest-free or below market period is one year or less.

Generally, no right of return exists on sales of equipment. Service parts and certain attachments returns are estimable and accrued at the time a sale is recognized. The estimated returns are recorded in "Other assets" for the inventory value of estimated 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 retail 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 sheets. 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, 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 statements of consolidated income.

Certain equipment is sold with precision guidance, telematics, and other information gathering and analyzing capabilities. These

technology solutions require hardware, software, and may include an obligation to provide services for a period of time. These solutions are mostly 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 recognized at the time of the equipment sale and recorded in "Net sales" in the statements of consolidated income. The revenue for the future services is 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 sheets and is recognized in "Other income" with the associated expenses recognized in "Other operating expenses" in the statements 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

At the time of the sale to a dealer, the company records an estimated cost of sales incentive 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 service 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 18).

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).

Contract Costs

Incremental costs of obtaining an equipment 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 \$227 million in 2022, \$212 million in 2021, and \$196 million in 2020.

Depreciation and Amortization

Property and equipment, capitalized software, and other intangible assets are stated at cost less accumulated depreciation or amortization. These assets are depreciated over their estimated useful lives 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 charged to expense as incurred.

Securitization of Receivables

Certain financing receivables are periodically transferred to special purpose entities (SPEs) in securitization transactions (see Note 12). 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 and accrued interest, adjusted for any write-offs, the allowance for credit losses, and any unamortized deferred fees or costs on originated 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 credit losses expected over the life of the receivable portfolio. The company measures expected credit losses on a collective basis when similar risk characteristics exist. Risk characteristics considered by the company include finance product category, market, geography, credit risk, and remaining duration. Receivables that do not share risk characteristics with other receivables in the portfolio are evaluated on an individual basis.

The company utilizes loss forecast models, which are selected based on the size and credit risk of the underlying pool of receivables, to estimate expected credit losses. Transition matrix models are used for large and complex retail customer receivable pools, while weighted average remaining maturity models are used for smaller and less complex retail customer receivable pools. Expected credit losses on wholesale receivables are based on historical loss rates, with consideration of current economic

conditions and dealer financial risk. The modeled expected credit losses are adjusted based on reasonable and supportable forecasts, which may include economic indicators such as commodity prices, industry equipment sales, unemployment rates, and housing starts. Management reviews each model's output quarterly, and qualitative adjustments are incorporated as necessary. Receivables are written-off to the allowance when the account is considered uncollectible (see Note 11).

Long-Lived Asset, Goodwill, and Other Intangible Asset Impairment

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 unamortized intangible assets 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 unit. 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 4 and 25).

Derivative Financial Instruments

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

All derivatives are recorded at fair value on the consolidated balance sheets. Cash collateral received or paid is not offset against the derivative fair values on the balance sheet. The cash flows from the derivative contracts are recorded in operating activities in the statements of consolidated cash flows. 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 26).

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 components of derivative contracts are included in net income, with trade flow activity recorded in Cost of sales, sales incentive activity recorded in Net sales, and all other activity recorded in Other operating expenses. The pretax net gain (loss) for foreign exchange in 2022, 2021, and 2020 was (\$175) million, (\$134) million, and \$18 million, respectively.

New Accounting Standards

The company closely monitors all Accounting Standard Updates (ASUs) issued by the Financial Accounting Standards Board (FASB) and other authoritative guidance. The company adopted the following standards in 2022, none of which had a material effect on the company's consolidated financial statements:

Accounting Standards Updates

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

ASUs to be adopted in future periods are being evaluated and at this point are not expected to have a material impact on the company's financial statements. The FASB issued ASU No. 2022-04, Liabilities – Supplier Finance Programs, which enhances the transparency about the use of supplier finance programs. Deere has not entered into any material supplier finance programs in connection with buying goods or services.

3. ACQUISITIONS AND DISPOSITIONS

Acquisitions

Kreisel

In February 2022, the company acquired majority ownership in Kreisel Electric Inc. (Kreisel), a pioneer in the development of immersion-cooled battery technology. The Austrian company manufactures high-density, high-durability electric battery modules and packs for high-performance and off-highway applications and has created a battery-buffered, high-powered charging infrastructure platform.

The transaction includes a call option to purchase the remaining ownership interest in Kreisel in 2027. The minority interest holders also have a put option that would require the company to purchase the holder's ownership interest in 2027. The put and call options cannot be separated from the noncontrolling interest. Due to the redemption features, the minority interest is classified as redeemable noncontrolling interest in the company's consolidated balance sheets.

The total cash purchase price was \$276 million, consisting of \$253 million for the acquired equity interests, \$21 million to reduce the option price, and customary working capital adjustments, net of cash acquired. The preliminary fair values assigned to the assets and liabilities of the acquired entity in millions of dollars, which is based on information as of the acquisition date and available at October 30, 2022 follows:

	February 2022
Trade accounts and notes receivable	\$ 2
Other receivables	11
Inventories	11
Property and equipment	11
Goodwill	218
Other intangible assets	178
Other assets	6
Total assets	\$ 437
Accounts payable and accrued expenses	\$ 26
Deferred income taxes	39
Redeemable noncontrolling interest	\$ 96

The identifiable intangible assets were related to technology, trade name, and customer relationships with a weighted average amortization period of 12 years. The goodwill is not deductible for income tax purposes. Kreisel will be allocated amongst the company's production and precision agriculture, small agriculture and turf, and construction and forestry segments.

Excavator Factories

In March 2022, the company acquired full ownership of three former Deere-Hitachi joint venture factories and began new license and supply agreements with Hitachi Construction Machinery Co., Ltd. (Hitachi). The two companies also ended their joint venture manufacturing and marketing agreements. The former joint venture factories continue to manufacture Deere-branded construction excavators and forestry equipment. Through a new supply agreement with Hitachi, Deere continues to offer a full portfolio of excavators. Deere's marketing arrangement for Hitachi-branded construction excavators and mining equipment in the Americas ended with Hitachi assuming distribution and support of these products. John Deere dealers may continue to support their existing field population of Hitachi-branded excavators.

With the completion of this acquisition, the company now has complete control over its excavator design, product, and feature updates, making it possible to more rapidly respond to customer requirements and integrate excavators with other construction products in the John Deere product portfolio. The company can leverage technology developed for other product lines and production systems across the enterprise and extend those advanced solutions to Deere-designed excavators, strengthening the entire product portfolio. The total invested capital is as follows in millions of dollars:

	March 2022
Cash consideration for factories	\$ 205
Cash consideration for license agreement	70
Deferred consideration	271
Total purchase price consideration	546
Less: Cash obtained	(187)
Less: Settlement of intercompany balances	(113)
Net purchase price consideration	246
Fair value of previously held equity investment	444
Total invested capital	\$ 690

The total purchase price consideration includes deferred consideration that will be paid as the company purchases Deere-branded excavators, components, and service parts from Hitachi under the new supply agreement with a duration that ranges from 5 to 30 years. The deferred consideration represents the price increases under the new supply arrangement. Excluding inflation adjustments, the price increases for products to be acquired by the company from Hitachi are as much as 27 percent higher than the prior supply arrangement. At October 30, 2022, the net present value of the deferred consideration was approximately \$236 million, subject to changes in market conditions, developments in the company's product offerings, and sourcing changes. The company financed the acquisition and associated transaction expenses from cash on hand. The fair value of the previously held equity investment created a non-cash gain of \$326 million (pretax and after-tax), which was recorded in Other income and included in the construction and forestry segment's operating profit.

Prior to the acquisition, the company purchased Deere and Hitachi-branded excavators, components, and parts from the Deere-Hitachi joint venture factories for sale to John Deere dealers. These purchases were included in Cost of sales, while the sales to John Deere dealers were included in Net sales. Cost of sales also included profit-sharing payments to Hitachi in accordance with the previous marketing agreements. Following the acquisition, Net sales only includes the sale of Deere-branded excavators to John Deere dealers, while Cost of sales reflects market pricing to purchase and manufacture excavators, as well as the related components and service parts.

The preliminary fair values assigned to the assets and liabilities of the acquired factories in millions of dollars, which are based on information as of the acquisition date and available at October 30, 2022, follow:

	March 2022
Other receivables	\$ 29
Inventories	286
Property and equipment	180
Goodwill	529
Other intangible assets	70
Deferred income taxes	56
Other assets	3
Total assets	\$ 1,153
Accounts payable and accrued expenses	\$ 300
Long-term borrowings	163
Total liabilities	\$ 463

The identifiable intangible assets were related to technology with a 10-year amortization period. The goodwill is not deductible for income tax purposes. The excavator factories will be reported in the company's construction and forestry segment.

Other Acquisitions

In 2022, the company acquired AgriSync Inc. (AgriSync), a technology service provider; an 80 percent stake in both SureFire Ag Systems, Inc. and SureFire Electronics, LLC (renamed after acquisition and collectively referred to as SurePoint), which design and manufacture liquid fertilizer application and spray tendering systems; a 40 percent equity method investment in GUSS Automation LLC (GUSS Automation), a pioneer in semi-autonomous orchard and vineyard sprayers; LGT, LLC (Light), which specializes in depth sensing and camera-based perception for autonomous vehicles; and an equity method investment in InnerPlant, Inc. (InnerPlant), an early-stage biotech company. The combined cost of these acquisitions was \$134 million, net of cash acquired of \$3 million. The preliminary asset and liability fair values at the respective acquisition dates follow in millions of dollars:

	October 2022
Trade accounts and notes receivable	\$ 8
Inventories	8
Property and equipment	4
Goodwill	53
Other intangible assets	21
Other assets	60
Total assets	\$ 154
Accounts payable and accrued expenses	\$ 6
Deferred income taxes	5
Total liabilities	\$ 11
Redeemable noncontrolling interest	\$ 9

The identifiable intangible assets were related to trade name, technology, and customer relationships with a weighted average amortization period of 7 years. AgriSync was allocated amongst the company's production and precision agriculture, small agriculture and turf, and construction and forestry segments, while SurePoint, Light, and InnerPlant were allocated to the production and precision agriculture segment. GUSS Automation was assigned to the small agriculture and turf segment.

Bear Flag

In August 2021, the company acquired Bear Flag Robotics, Inc. (Bear Flag) to further accelerate Deere's development and delivery of advanced technology. Bear Flag's technology is complementary to other Deere technology efforts and enables autonomous tractor operations. The total cash purchase price before final adjustments, net of cash acquired of \$4 million, was \$225 million, with an additional \$25 million to be recognized as compensation expense over the four-year post-acquisition service period. In addition to the cash purchase price, \$19 million of liabilities were assumed. The asset and liability fair values at the acquisition date in millions of dollars follow:

	August 2021
Property and equipment	\$ 1
Goodwill	189
Other intangible assets	54
Total assets	\$ 244
Accounts payable and accrued expenses	\$ 1
Deferred income taxes	18
Total liabilities	\$ 19

The identified intangible was related to technology with a seven-year amortization period. The goodwill will not be deductible for tax purposes.

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

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. The results of these operations have been included in the company's consolidated financial

statements, 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 small agriculture and turf segment.

4. SPECIAL ITEMS

UAW Collective Bargaining Agreement

In November 2021, employees represented by the International Union, United Automobile, Aerospace and Agricultural Implement Workers of America (UAW) approved a new collective bargaining agreement. The agreement, which has a term of six years, covers the wages, hours, benefits, and other terms and conditions of employment for the company's UAW-represented employees at 14 U.S. facilities. The labor agreement included a lump sum ratification bonus payment of \$8,500 per eligible employee, totaling \$90 million, and an immediate wage increase of 10 percent plus further wage increases over the term of the contract. The lump sum payment was expensed in the first quarter of 2022. The company remeasured the U.S. hourly pension plan as of November 30, 2021 due to the new collective bargaining agreement. See Note 7 for more information on the U.S. hourly plan remeasurement.

Impact of Events in Russia / Ukraine

The events in Russia / Ukraine have resulted in the company suspending shipments of machines and service parts to Russia. The company manufactures and markets equipment and provides financial services in Russia. As of October 30, 2022, the company's net exposure in Russia / Ukraine was approximately \$266 million, including ruble exposure of \$31 million (ruble-denominated financial assets, net of cross-currency interest rate contracts). Net sales from the company's Russian operations represented 2 percent of consolidated annual Net sales from 2017 to 2021. The Ukraine operations were not material to the consolidated financial statements.

The suspension of shipments to Russia reduced the forecasted revenue for the region, which made it probable future cash flows will not cover the carrying value of certain assets. As a result, an impairment was recorded for most long-lived assets in Russia, and the company's U.S. senior management decided to initiate a voluntary employee-separation program. The company also recorded a reserve on inventory, and increased its allowance for credit losses, reflecting economic uncertainty in Russia.

The financial services operations received an intercompany benefit from the equipment operations, which guarantees the financial services' investments in certain international markets, including Russia.

The Russian government has imposed certain restrictions on companies' abilities to repatriate or remit cash from their Russian-based operations to locations outside of Russia. Cash in excess of what is required to fund operations in Russia has been reclassified as restricted. The company's U.S. senior management continues to closely monitor all financial risks to company operations in the region. A summary of the reserves, impairments, and voluntary-separation costs recorded in 2022 follows in millions of dollars. See Note 25 for fair value measurement information.

	PPA	SAT	CF	FS	Total
Inventory reserve –					
Cost of sales	\$ 14	\$ 2	\$ 3		\$ 19
Fixed asset impairment –					
Cost of sales	30		11		41
Intangible asset impairment –					
Cost of sales			28		28
Allowance for credit losses –					
Financing receivables –					
SA&G expenses				\$ 153	153
Voluntary-separation program:					
– Cost of sales	3				3
– SA&G expenses	4		6	1	11
Intercompany agreement	82	9	62	(153)	
Total Russia/Ukraine events					
pretax expense	\$ 133	\$ 11	\$ 110	\$ 1	255
Net tax impact					(40)
Total Russia/Ukraine events					
after-tax expense					\$ 215

Gain on Previously Held Equity Investment

In March 2022, the company acquired full ownership of three former Deere-Hitachi joint venture factories and began new license and supply agreements with Hitachi. The fair value of the previous equity investment resulted in a non-cash gain of \$326 million (pretax and after-tax; see Note 3).

2021 Special Items

In 2021, the company sold a closed factory that previously produced small agricultural equipment in China, resulting in a \$27 million pretax gain. The fixed assets in an asphalt plant factory in Germany were impaired by \$38 million, pretax and after-tax. The company also continued to assess its manufacturing locations, resulting in additional long-lived asset impairments of \$12 million pretax. The impairments were the result of a decline in forecasted financial performance that indicated it was probable future cash flows would not cover the carrying amount of the net assets. The company recognized a favorable indirect tax ruling in Brazil of \$58 million pretax. See Note 25 for fair value measurement information.

Summary of 2022 and 2021 Special Items

The following table summarizes the operating profit impact, in millions of dollars, of the special items recorded in 2022 and 2021:

	PPA	SAT	CF	FS	Total
2022 Expense (benefit)					
Gain on remeasurement of equity investment – Other income (Note 3)			\$ (326)		\$ (326)
Total Russia/Ukraine events pretax expense	\$ 133	\$ 11	110	\$ 1	255
UAW ratification bonus – Cost of sales	53	9	28		90
Total expense (benefit)	186	20	(188)	1	19

2021 Expense (benefit)					
Gain on sale – Other income		(27)			(27)
Long-lived asset impairments – Cost of sales	5	3	42		50
Brazil indirect tax – Cost of sales	(53)		(5)		(58)
Total expense (benefit)	(48)	(24)	37		(35)

Year over year change	\$ 234	\$ 44	\$ (225)	\$ 1	\$ 54
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2020 Special Items

In 2020, the company closed a factory that produced small agricultural equipment in China, recognized impairments in the fixed assets in an asphalt plant factory in Germany, a construction equipment factory in Brazil, and other international locations, and recorded impairments of equipment on operating leases and matured lease inventory, as well as impairments of the investment in certain affiliate companies. A summary of the factory closure and costs related to impairments follows in millions of dollars. See Note 25 for a description of the valuation methodologies used to measure these impairments.

	PPA	SAT	CF	FS	Total
Factory closure – Cost of sales		\$ 20			\$ 20
Long-lived asset impairments:					
Cost of sales		13	\$ 80		93
SA&G expenses	\$ 2	2			4
Other operating expenses				\$ 32	32
Affiliate company impairments – Equity in loss of unconsolidated affiliates			50		50
Total pretax impairments and closure costs	\$ 2	\$ 35	\$ 130	\$ 32	\$ 199

Employee-Separation Programs

During 2020, the company implemented employee-separation programs for the company's salaried workforce in several geographic areas, including the U.S., 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 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 in millions of dollars:

	PPA	SAT	CF	FS	Total
Cost of sales	\$ 51	\$ 31	\$ 22		\$ 104
Research and development expenses	29	18	8		55
Selling, administrative and general expenses	53	43	24	\$ 15	135
Total operating profit impact	\$ 133	\$ 92	\$ 54	\$ 15	294
Non-operating profit impact*					41
Total pretax expense					\$ 335

* Relates primarily to non-cash charges of \$34 million from curtailments in certain OPEB plans (see Note 7) 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.

Redeemable Noncontrolling Interest

In 2020, the minority interest holder in Hagie Manufacturing Company, LLC (Hagie) exercised its right to sell the remaining 20 percent interest to the company for \$14 million. As a result of such transaction, the company became a 100 percent interest holder in Hagie. The arrangement was accounted for as an equity transaction with no gain or loss recorded in the statements of consolidated income. This operation is included in the company's production and precision agriculture segment.

5. REVENUE RECOGNITION

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

	PPA	SAT	CF	FS	Total
2022					
Primary geographic markets:					
United States	\$ 10,975	\$ 7,741	\$ 7,103	\$ 2,419	\$ 28,238
Canada	1,387	676	1,238	601	3,902
Western Europe	2,188	2,478	1,576	102	6,344
Central Europe and CIS	1,207	488	545	49	2,289
Latin America	4,991	578	1,467	303	7,339
Asia, Africa, Australia, New Zealand, and Middle East	1,570	1,608	1,136	151	4,465
Total	\$ 22,318	\$ 13,569	\$ 13,065	\$ 3,625	\$ 52,577
Major product lines:					
Production agriculture	\$ 21,685				\$ 21,685
Small agriculture	\$ 10,027				10,027
Turf		3,027			3,027
Construction			\$ 5,864		5,864
Compact construction			1,667		1,667
Roadbuilding			3,441		3,441
Forestry			1,308		1,308
Financial products	60	52	32	\$ 3,625	3,769
Other	573	463	753		1,789
Total	\$ 22,318	\$ 13,569	\$ 13,065	\$ 3,625	\$ 52,577
Revenue recognized:					
At a point in time	\$ 22,178	\$ 13,493	\$ 12,980	\$ 105	\$ 48,756
Over time	140	76	85	3,520	3,821
Total	\$ 22,318	\$ 13,569	\$ 13,065	\$ 3,625	\$ 52,577

	PPA	SAT	CF	FS	Total
2021					
Primary geographic markets:					
United States	\$ 8,223	\$ 6,505	\$ 5,697	\$ 2,389	\$ 22,814
Canada	853	498	1,047	617	3,015
Western Europe	2,086	2,433	1,807	103	6,429
Central Europe and CIS	1,322	475	828	39	2,664
Latin America	2,916	456	903	247	4,522
Asia, Africa, Australia, New Zealand, and Middle East	1,417	1,679	1,331	153	4,580
Total	\$ 16,817	\$ 12,046	\$ 11,613	\$ 3,548	\$ 44,024
Major product lines:					
Production agriculture	\$ 16,248				\$ 16,248
Small agriculture	\$ 8,619				8,619
Turf		2,853			2,853
Construction			\$ 4,684		4,684
Compact construction			1,489		1,489
Roadbuilding			3,749		3,749
Forestry			1,280		1,280
Financial products	55	46	20	\$ 3,548	3,669
Other	514	528	391		1,433
Total	\$ 16,817	\$ 12,046	\$ 11,613	\$ 3,548	\$ 44,024
Revenue recognized:					
At a point in time	\$ 16,659	\$ 11,969	\$ 11,522	\$ 105	\$ 40,255
Over time	158	77	91	3,443	3,769
Total	\$ 16,817	\$ 12,046	\$ 11,613	\$ 3,548	\$ 44,024
	PPA	SAT	CF	FS	Total
2020					
Primary geographic markets:					
United States	\$ 6,889	\$ 5,059	\$ 4,548	\$ 2,500	\$ 18,996
Canada	640	350	802	598	2,390
Western Europe	1,827	1,937	1,479	90	5,333
Central Europe and CIS	898	493	646	35	2,072
Latin America	1,902	334	553	234	3,023
Asia, Africa, Australia, New Zealand, and Middle East	1,119	1,322	1,153	132	3,726
Total	\$ 13,275	\$ 9,495	\$ 9,181	\$ 3,589	\$ 35,540
Major product lines:					
Production agriculture	\$ 12,662				\$ 12,662
Small agriculture	\$ 6,827				6,827
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	69	37	25	\$ 3,589	3,720
Other	544	241	342		1,127
Total	\$ 13,275	\$ 9,495	\$ 9,181	\$ 3,589	\$ 35,540
Revenue recognized:					
At a point in time	\$ 13,106	\$ 9,439	\$ 9,071	\$ 106	\$ 31,722
Over time	169	56	110	3,483	3,818
Total	\$ 13,275	\$ 9,495	\$ 9,181	\$ 3,589	\$ 35,540

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

Production Agriculture – Includes net sales of large and certain mid-size tractors and associated attachments, combines, cotton pickers, cotton strippers, sugarcane harvesters, sugarcane loaders and pull behind scrapers, tillage, seeding, and application equipment, including sprayers and nutrient management and soil preparation machinery, and related attachments and service parts.

Small Agriculture – Includes net sales of mid-size and utility tractors, self-propelled forage harvesters, 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 attachments and 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 from retail notes related to sales of John Deere equipment to retail 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 components to other equipment manufacturers that are included in "Net sales"; and 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 that are included in "Other income."

The company invoices in advance of recognizing the sale of certain products and the revenue for certain services. These relate to extended warranty premiums, 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 sheets. The deferred revenue received, but not recognized in revenue, including extended warranty premiums also shown in Note 20, was \$1,423 million and \$1,344 million at October 30, 2022 and October 31, 2021, 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 \$609 million in 2022, \$485 million in 2021, and \$425 million in 2020.

The total amount of unsatisfied performance obligations for contracts with an original duration greater than one year and the estimated revenue to be recognized by fiscal year at October 30, 2022 follows in millions of dollars:

Year	Net Sales and Revenues
2023	\$ 336
2024	319
2025	230
2026	131
2027	84
Later years	124
Total	\$ 1,224

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 for sales to dealers and retail customers for equipment, service parts, repair services, and certain telematics services.

6. CASH FLOW INFORMATION

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.

All cash flows from the changes in trade accounts and notes receivable (see Note 11) are classified as operating activities in the statements 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 11) 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.

Restricted cash, recorded in "Other assets" in the consolidated balance sheets, relates to securitization of financing receivables (see Note 12) and certain cash held in Russia.

Supplemental cash flow information follows in millions of dollars:

	2022	2021	2020
Cash paid for interest	\$ 1,101	\$ 1,041	\$ 1,279
Cash paid for income taxes	1,940	2,075	1,069
Inventory transferred to equipment on operating leases	167	662	614
Accounts payable related to purchases of property and equipment	165	121	98

7. 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.

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

The company's U.S. salaried pension plan will be closed to new entrants effective January 1, 2023. Certain participants will have the opportunity to make a one-time election in 2023 to freeze their defined benefit pension plan benefit for an enhanced defined contribution benefit.

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

	2022	2021	2020
Pensions			
Service cost	\$ 349	\$ 332	\$ 321
Interest cost	330	276	347
Expected return on plan assets	(726)	(799)	(819)
Amortization of actuarial loss	132	259	256
Amortization of prior service cost	34	12	13
Settlements/curtailments	45	21	25
Net cost	\$ 164	\$ 101	\$ 143
Weighted-average assumptions			
Discount rates - service cost	3.0%	2.5%	2.9%
Discount rates - interest cost	2.6%	2.1%	2.7%
Rate of compensation increase	3.7%	3.7%	3.8%
Expected long-term rates of return	5.1%	6.0%	6.4%
Interest crediting rate - U.S. cash balance plans	2.1%	1.7%	2.1%

In November 2021, employees represented by the UAW approved a new collective bargaining agreement. The company remeasured the U.S. hourly pension plan, which increased the 2022 pension expense by nearly \$80 million with \$35 million negatively impacting operating profit.

A curtailment loss of \$34 million was recognized during 2022 when 10 percent of active, eligible U.S. hourly employees elected

to freeze their defined benefit pension plan benefit for an enhanced defined contribution benefit.

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

	2022	2021	2020
OPEB			
Service cost	\$ 45	\$ 48	\$ 49
Interest cost	99	102	140
Expected return on plan assets	(110)	(77)	(50)
Amortization of actuarial (gain) loss	(18)	27	29
Amortization of prior service credit	(4)	(4)	(4)
Curtailments			34
Net cost	\$ 12	\$ 96	\$ 198
Weighted-average assumptions			
Discount rates - service cost	3.6%	3.4%	3.7%
Discount rates - interest cost	2.3%	2.1%	2.7%
Expected long-term rates of return	4.4%	5.4%	5.7%

The 2020 OPEB curtailments were a result of the employee-separation programs (see Note 4).

The benefit plan obligations, funded status, and the assumptions related to the obligations at October 30, 2022 and October 31, 2021 in millions of dollars follow:

	Pensions		OPEB	
	2022	2021	2022	2021
Change in benefit obligations				
Beginning of year balance	\$ (14,525)	\$ (15,021)	\$ (4,930)	\$ (5,410)
Service cost	(349)	(332)	(45)	(48)
Interest cost	(330)	(276)	(99)	(102)
Actuarial gain	4,122	373	1,492	381
Prior service cost	(505)		(12)	
Benefits paid	757	755	282	290
Health care subsidies			(33)	(29)
Settlements/curtailments		1		
Foreign exchange and other	301	(25)	4	(12)
End of year balance	<u>(10,529)</u>	<u>(14,525)</u>	<u>(3,341)</u>	<u>(4,930)</u>
Change in plan assets (fair value)				
Beginning of year balance	17,190	14,574	1,755	1,518
Actual return on plan assets	(3,070)	3,249	(495)	367
Employer contribution	85	101	1,155	157
Benefits paid	(757)	(755)	(282)	(290)
Foreign exchange and other	(229)	21	3	3
End of year balance	<u>13,219</u>	<u>17,190</u>	<u>2,136</u>	<u>1,755</u>
Funded status	\$ 2,690	\$ 2,665	\$ (1,205)	\$ (3,175)
Weighted-average assumptions				
Discount rates	5.4%	2.7%	5.6%	2.8%
Rate of compensation increase	3.8%	3.7%		
Interest crediting rate - U.S. cash balance plans	4.4%	1.8%		

The actuarial gains for pension and OPEB for 2022 were due to an increase in discount rates. The actuarial gain for pension for 2021 was due to an increase in discount rates. The actuarial gain for OPEB for 2021 was due to a decrease in health care trend rates, favorable mortality assumptions, and an increase in discount rates. The pension prior service cost for 2022 was due to the new UAW collective bargaining agreement.

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

The mortality assumptions for the 2022 and 2021 U.S. benefit plan obligations used the most recent tables and scales issued by the Society of Actuaries at that time. The 2022 and 2021 mortality assumptions included an adjustment to the scale related to COVID for some plans.

The weighted-average annual rates of increase in the per capita cost of covered health care benefits (the health care cost trend rates) for medical and prescription drug claims for pre- and post-65 age groups used to determine the October 30, 2022 and October 31, 2021 accumulated postretirement benefit obligations were as follows:

	2022	2021
Initial year	0.0% (2022 to 2023)	2.1% (2021 to 2022)
Second year	12.6% (2023 to 2024)	8.4% (2022 to 2023)
Ultimate	4.7% (2032 to 2033)	4.7% (2028 to 2029)

A decrease in Medicare Advantage premiums impacted the weighted-average annual rates of increase for the initial years in 2022 and 2021.

The amounts recognized at October 30, 2022 and October 31, 2021 in millions of dollars consisted of the following:

	Pensions		OPEB	
	2022	2021	2022	2021
Amounts recognized in balance sheet				
Noncurrent asset	\$ 3,223	\$ 3,601	\$ 507	
Current liability	(42)	(51)	(39)	\$ (36)
Noncurrent liability	(491)	(885)	(1,673)	(3,139)
Total	<u>\$ 2,690</u>	<u>\$ 2,665</u>	<u>\$ (1,205)</u>	<u>\$ (3,175)</u>
Amounts recognized in accumulated other comprehensive income – pretax				
Net actuarial (gain) loss	\$ 926	\$ 1,376	\$ (820)	\$ 49
Prior service cost (credit)	446	9	(4)	(20)
Total	<u>\$ 1,372</u>	<u>\$ 1,385</u>	<u>\$ (824)</u>	<u>\$ 29</u>

Information related to pension plans benefit obligations at October 30, 2022 and October 31, 2021 in millions of dollars follows:

	2022	2021
Total accumulated benefit obligations for all plans	\$ 10,068	\$ 13,787
Plans with accumulated benefit obligation exceeding fair value of plan assets:		
Accumulated benefit obligations	1,116	2,012
Fair value of plan assets	672	1,207
Plans with projected benefit obligation exceeding fair value of plan assets:		
Projected benefit obligations	1,225	2,163
Fair value of plan assets	692	1,227

Actuarial gains and losses are recorded in accumulated other comprehensive income (loss). To the extent unamortized gains and losses exceed 10 percent 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.

Contributions

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 \$1,240 million in 2022 and \$258 million in 2021, which included both required and voluntary contributions and direct benefit payments. 2022 OPEB contributions included a voluntary contribution of \$1,000 million to a U.S. plan.

The company expects to contribute approximately \$70 million to its pension plans and approximately \$130 million to its OPEB plans in 2023. The contributions are direct benefit payments from company funds. The company has no significant required contributions to U.S. pension plan assets in 2023 under applicable funding regulations.

Expected Future Benefit Payments

The expected future benefit payments at October 30, 2022 were as follows in millions of dollars:

	Pensions	OPEB*
2023	\$ 739	\$ 246
2024	730	248
2025	729	250
2026	728	252
2027	721	253
2028 to 2032	3,589	1,274

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

Plan Asset Information

The fair values of the pension plan assets at October 30, 2022 follow in millions of dollars:

	Total	Level 1	Level 2
Cash and short-term investments	\$ 338	\$ 283	\$ 55
Equity:			
U.S. equity securities	311	290	21
International equity securities and funds	196	195	1
Fixed Income:			
Government and agency securities	1,296	1,053	243
Corporate debt securities	4,587		4,587
Mortgage-backed securities	213		213
Other investments	49	31	18
Derivative contracts - assets	92	54	38
Derivative contracts - liabilities	(209)	(106)	(103)
Receivables, prepaids, and payables	(207)	(207)	
Securities lending collateral	684		684
Securities lending liability	(684)		(684)
Securities sold short	(64)	(58)	(6)
Total of Level 1 and Level 2 assets	6,602	\$ 1,535	\$ 5,067
Investments at net asset value:			
Short-term investments	633		
U.S. equity funds	54		
International equity funds	125		
Fixed income funds	1,736		
Real estate funds	592		
Hedge funds	569		
Private equity	1,322		
Venture capital	1,553		
Other investments	33		
Total net assets	\$ 13,219		

The fair values of the health care assets at October 30, 2022 follow in millions of dollars:

	Total	Level 1	Level 2
Cash and short-term investments	\$ 79	\$ 79	
Fixed Income:			
Government and agency securities	629	597	\$ 32
Corporate debt securities	516		516
Mortgage-backed securities	83		83
Other	(4)	(7)	3
Securities lending collateral	98		98
Securities lending liability	(98)		(98)
Total of Level 1 and Level 2 assets	1,303	\$ 669	\$ 634
Investments at net asset value:			
U.S. equity funds	40		
International equity funds	22		
Fixed income funds	347		
Real estate funds	140		
Hedge funds	188		
Private equity	41		
Venture capital	48		
Other investments	7		
Total net assets	\$ 2,136		

The fair values of the pension plan assets at October 31, 2021 follow in millions of dollars:

	Total	Level 1	Level 2
Cash and short-term investments	\$ 378	\$ 355	\$ 23
Equity:			
U.S. equity securities	1,151	1,123	28
International equity securities and funds	951	931	20
Fixed Income:			
Government and agency securities	1,475	1,159	316
Corporate debt securities	4,841		4,841
Mortgage-backed securities	144		144
Real estate investment trusts	62	55	7
Derivative contracts - assets	116	37	79
Derivative contracts - liabilities	(75)	(15)	(60)
Receivables, payables, and other	(155)	(177)	22
Securities lending collateral	982	107	875
Securities lending liability	(982)	(107)	(875)
Securities sold short	(139)	(128)	(11)
Total of Level 1 and Level 2 assets	8,749	\$ 3,340	\$ 5,409
Investments at net asset value:			
Short-term investments	815		
U.S. equity funds	796		
International equity funds	528		
Fixed income funds	1,701		
Real estate funds	566		
Hedge funds	751		
Private equity	1,385		
Venture capital	1,537		
Other investments	362		
Total net assets	\$ 17,190		

The fair values of the health care assets at October 31, 2021 follow in millions of dollars:

	Total	Level 1	Level 2
Cash and short-term investments	\$ 55	\$ 55	
Equity securities and funds	30	29	\$ 1
Fixed Income:			
Government and agency securities	243	215	28
Corporate debt securities	307		307
Mortgage-backed securities	10		10
Securities lending collateral	64	20	44
Securities lending liability	(64)	(20)	(44)
Securities sold short	(3)	(3)	
Total of Level 1 and Level 2 assets	642	\$ 296	\$ 346
Investments at net asset value:			
Short-term investments	20		
U.S. equity funds	619		
International equity funds	358		
Fixed income funds	18		
Real estate funds	42		
Hedge funds	13		
Private equity	18		
Venture capital	20		
Other investments	5		
Total net assets	\$ 1,755		

Investments at net asset value in the preceding tables are measured at fair value using the net asset value per share practical expedient and are not classified in the fair value hierarchy. Fair value measurement levels in the preceding tables are defined in Note 25.

Fair values are determined as follows:

Cash and Short-Term Investments – The investments include (1) cash accounts that are valued based on the account value, which approximates fair value; (2) investments that are valued at quoted prices in the active markets in which the investment trades or 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; and (3) investment funds that are valued based on a constant fund net asset value (NAV), which is based on quoted prices in the active market in which the investment fund trades, or the fund's NAV using the NAV per share practical expedient, which is based on the fair value of the underlying securities.

Equity Securities and Funds – The values are determined by quoted 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 and Other 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 quoted prices in the active market in which the fixed income investment trades. Fixed income and other 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 the fund's NAV, which is based on the fair value of the underlying investments. Valuations may be lagged up to six months. The NAV is adjusted for cash flows (additional investments or contributions, and distributions) and any known substantive valuation changes through year end. Real estate investment trusts were valued at the quoted 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 (quoted prices in the active market in which the derivative instrument trades).

The investment objective for the pension and health care plan assets is to fulfill the projected obligations to the beneficiaries over a long period of time, while meeting the company's fiduciary responsibilities. 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 20 percent for equity, 66 percent for debt, 3 percent for real estate, and 11 percent for other investments. The target allocations for health care assets are approximately 15 percent for equity, 72 percent for debt, 4 percent for real estate, and 9 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 8.6 percent during the past ten years and approximately 8.9 percent during the past 20 years. Since return premiums over inflation and total returns for major asset classes vary widely even over ten-year periods, recent history is not necessarily indicative of long-term future expected returns. The company's systematic methodology for determining the long-term rate of return for the company's investment strategies supports its long-term expected return assumptions.

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

Defined Contribution Plans

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 \$263 million in 2022, \$207 million in 2021, and \$160 million in 2020. The contribution rate varies based on the company's performance in the prior year and employee participation in the plans.

8. INCOME TAXES

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

	2022	2021	2020
Current:			
U.S.:			
Federal	\$ 514	\$ 899	\$ 400
State	136	183	53
Foreign	1,423	1,017	640
Total current	2,073	2,099	1,093
Deferred:			
U.S.:			
Federal	29	(303)	(68)
State	24	(45)	9
Foreign	(119)	(93)	48
Total deferred	(66)	(441)	(11)
Provision for income taxes	\$ 2,007	\$ 1,658	\$ 1,082

Based upon the location of the company's operations, the consolidated income before income taxes in the U.S. in 2022, 2021, and 2020 was \$4,977 million, \$4,061 million, and \$2,082 million, respectively, and in foreign countries was \$4,150 million, \$3,541 million, and \$1,801 million, respectively. Certain foreign operations are branches or partnerships of Deere & Company and are subject to U.S. as well as foreign income tax regulations. The pretax income by location and the preceding analysis of the income tax provision by taxing jurisdiction are not directly related.

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

	2022	2021	2020
U.S. federal income tax provision at the U.S. statutory rate (21 percent)	\$ 1,917	\$ 1,597	\$ 815
State and local taxes, net of federal effect	133	119	59
Other impacts of Tax Cuts and Jobs Act of 2017	(29)	(85)	39
Rate differential on foreign subsidiaries	121	148	106
Research and business tax credits	(65)	(48)	(50)
Excess tax benefits on equity compensation	(55)	(79)	(87)
Valuation allowances	179	18	139
Other - net	(194)	(12)	61
Provision for income taxes	\$ 2,007	\$ 1,658	\$ 1,082

At October 30, 2022, undistributed profits of subsidiaries outside the U.S. of approximately \$5,043 million are considered indefinitely reinvested. 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 October 30, 2022 and October 31, 2021 in millions of dollars follows:

	2022		2021	
	Deferred Tax Assets	Deferred Tax Liabilities	Deferred Tax Assets	Deferred Tax Liabilities
OPEB - net	\$ 213		\$ 676	
Lessor lease transactions		\$ 310		\$ 399
Tax loss and tax credit carryforwards	1,405		1,542	
Accrual for sales allowances	579		466	
Tax over book depreciation		174		154
Goodwill and other intangible assets		178		337
Pension - net		532		448
Allowance for credit losses	90		78	
Accrual for employee benefits	304		298	
Share-based compensation	41		53	
Deferred compensation	44		49	
Lessee lease transactions	62	57	46	43
Unearned revenue	154		172	
Other items	487	254	333	341
Less valuation allowances	(1,545)		(1,530)	
Deferred income tax assets and liabilities	\$ 1,834	\$ 1,505	\$ 2,183	\$ 1,722

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 as if they filed separate income tax returns, with a modification for realizability of certain tax benefits.

At October 30, 2022, tax loss and tax credit carryforwards of \$1,405 million were available with \$940 million expiring from 2023 through 2042 and \$465 million with an indefinite carryforward period.

A reconciliation of the total amounts of unrecognized tax benefits at October 30, 2022, October 31, 2021, and November 1, 2020 in millions of dollars follows:

	2022	2021	2020
Beginning of year balance	\$ 811	\$ 668	\$ 553
Increases to tax positions taken during the current year	98	81	63
Increases to tax positions taken during prior years	29	100	95
Decreases to tax positions taken during prior years	(18)	(23)	(30)
Decreases due to lapse of statute of limitations	(7)	(12)	(9)
Other	2	(3)	(1)
Foreign exchange	(24)		(3)
End of year balance	\$ 891	\$ 811	\$ 668

The amount of unrecognized tax benefits at October 30, 2022 and October 31, 2021 that would impact the effective tax rate if the tax benefits were recognized was \$303 million and \$227 million, respectively. 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 federal income tax returns for years 2015 to 2020 are currently under examination. Various state and foreign income tax returns 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 2022 and 2021, the total amount of expense from interest and penalties was \$23 million and \$7 million. During 2020, interest and penalties previously recorded were reversed when tax positions were effectively settled resulting in a \$3 million net benefit. The interest income in 2022, 2021, and 2020 was \$12 million, \$8 million, and \$11 million, respectively. At October 30, 2022 and October 31, 2021, the liability for accrued interest and penalties totaled \$80 million and \$75 million, respectively, and the receivable for interest was \$19 million and \$11 million, respectively.

9. OTHER INCOME AND OTHER OPERATING EXPENSES

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

	2022	2021	2020
Other income			
Revenues from services	\$ 283	\$ 322	\$ 314
Insurance premiums and fees earned*	289	227	223
Trademark licensing income	89	87	73
Operating lease disposition gains	72	65	
Gain on previously held equity investment	326		
Investment income	14	41	26
Other	222	249	182
Total	\$ 1,295	\$ 991	\$ 818

Other operating expenses

Depreciation of equipment on operating leases	\$ 827	\$ 983	\$ 1,083
Insurance claims and expenses*	267	235	231
Cost of services	214	202	188
Operating lease disposition losses and impairments			52
Pension and OPEB benefit, excluding service cost component	(218)	(183)	(31)
Foreign exchange loss	132	59	4
Other	53	47	85
Total	\$ 1,275	\$ 1,343	\$ 1,612

* Primarily related to extended warranties (see Note 20).

10. MARKETABLE SECURITIES

All marketable securities are classified as available-for-sale. 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 October 30, 2022 and October 31, 2021 in millions of dollars follow:

	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
2022				
U.S. equity fund				\$ 70
International equity securities				3
Total equity securities				73
U.S. government				
debt securities	\$ 220		\$ 37	183
Municipal debt securities	74		11	63
Corporate debt securities	236		36	200
International debt securities	64		4	60
Mortgage-backed securities*	186		31	155
Total debt securities	\$ 780		\$ 119	661
Marketable securities				\$ 734
2021				
U.S. equity fund				\$ 75
International equity securities				2
Total equity securities				77
U.S. government				
debt securities	\$ 196	\$ 5	\$ 3	198
Municipal debt securities	69	4		73
Corporate debt securities	215	11	2	224
International debt securities	5		3	2
Mortgage-backed securities*	152	3	1	154
Total debt securities	\$ 637	\$ 23	\$ 9	651
Marketable securities				\$ 728

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

During 2022, 2021, and 2020, purchases of marketable securities were \$250 million, \$194 million, and \$130 million, respectively, while proceeds from the maturities and sales of marketable securities were \$79 million, \$109 million, and \$93 million, respectively.

Equity Securities

Proceeds of equity securities sold during 2022, 2021, and 2020 were not material. Unrealized gain (loss) on equity securities during 2022 and 2021 in millions of dollars follow:

	2022	2021
Net gain (loss) recognized on equity securities	\$ (11)	\$ 24
Less: Net gain on equity securities sold		2
Unrealized gain (loss) on equity securities	\$ (11)	\$ 22

Debt Securities

The contractual maturities of debt securities at October 30, 2022 in millions of dollars follow:

	Amortized Cost	Fair Value
Due in one year or less	\$ 81	\$ 81
Due after one through five years	105	96
Due after five through 10 years	196	166
Due after 10 years	212	163
Mortgage-backed securities	186	155
Debt securities	\$ 780	\$ 661

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, realized gains, realized losses, and unrealized losses that have been continuous for over twelve months were not significant in 2022, 2021, and 2020. Unrealized losses at October 30, 2022 and October 31, 2021 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.

11. RECEIVABLES

Trade Accounts and Notes Receivable

Trade accounts and notes receivable at October 30, 2022 and October 31, 2021 in millions of dollars follow:

	2022	2021
Trade accounts and notes receivable:		
Production & precision ag	\$ 2,397	\$ 1,204
Small ag & turf	2,065	1,683
Construction & forestry	1,948	1,321
Trade accounts and notes receivable – net	\$ 6,410	\$ 4,208

Trade accounts and notes receivable have significant concentrations of credit risk in the agriculture and turf and construction and forestry markets as shown in the previous table. On a geographic basis, 52 percent of the company's trade accounts and notes receivable are located in the U.S. and Canada at October 30, 2022. There is not a disproportionate concentration of credit risk with any single dealer.

The allowance for credit losses on trade accounts and notes receivable at October 30, 2022, October 31, 2021, and November 1, 2020, as well as the related activity, in millions of dollars follow:

	2022	2021	2020
Beginning of year balance	\$ 41	\$ 39	\$ 72
ASU No. 2016-13		(2)	
Provision	1	10	
Write-offs	(5)	(7)	(23)
Recoveries			1
Translation adjustments	(1)	1	(11)
End of year balance	\$ 36	\$ 41	\$ 39

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

Trade accounts and notes receivable arise from sales of goods to independent dealers. See Note 2 for the company's revenue recognition policy. The company evaluates and assesses dealers on an ongoing basis as to their creditworthiness and 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.

Financing Receivables

While the company implemented a new operating model in fiscal year 2021 resulting in new operating segments, assets managed by financial services, including most financing receivables and equipment on operating leases, continue to be evaluated by market (agriculture and turf or construction and forestry).

Financing receivables at October 30, 2022 and October 31, 2021 in millions of dollars follow:

	2022		2021	
	Unrestricted/Securitized		Unrestricted/Securitized	
Retail notes:				
Agriculture and turf	\$ 23,830	\$ 4,868	\$ 21,736	\$ 4,041
Construction and forestry	4,396	1,179	4,334	712
Total	28,226	6,047	26,070	4,753
Wholesale notes	3,285		2,577	
Revolving charge accounts	4,316		3,880	
Financing leases (direct and sales-type)	2,832		2,879	
Total financing receivables	38,659	6,047	35,406	4,753
Less:				
Unearned finance income:				
Retail notes	1,358	95	1,131	80
Wholesale notes	12		11	
Revolving charge accounts	61		55	
Financing leases	285		258	
Total	1,716	95	1,455	80
Allowance for credit losses	309	16	152	14
Financing receivables – net	\$ 36,634	\$ 5,936	\$ 33,799	\$ 4,659

Financing receivables have significant concentrations of credit risk in the agriculture and turf and construction and forestry markets. On a geographic basis, 85 percent of the company's financing receivables were located in the U.S. and Canada at October 30, 2022. There is no disproportionate concentration of credit risk with any single customer or dealer. The company retains as collateral security in the equipment associated with retail notes, wholesale notes, and financing leases, and requires theft and physical damage insurance on such equipment.

Financing receivables at October 30, 2022 and October 31, 2021 related to the company's sales of equipment that were included in the previous table consisted of the following in millions of dollars:

	2022	2021
Retail notes*:		
Agriculture and turf	\$ 1,392	\$ 1,977
Construction and forestry	304	378
Total	1,696	2,355
Wholesale notes	3,285	2,577
Sales-type leases	799	1,269
Total	5,780	6,201
Less:		
Unearned finance income:		
Retail notes	133	159
Wholesale notes	12	11
Sales-type leases	67	98
Total	212	268
Financing receivables related to the company's sales of equipment	\$ 5,568	\$ 5,933

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

Included in the table above were \$10 million of securitized construction and forestry retail notes at October 31, 2021.

Financing receivable installments, including unearned finance income, at October 30, 2022 and October 31, 2021 were scheduled as follows in millions of dollars:

	2022		2021	
	Unrestricted/Securitized		Unrestricted/Securitized	
Due in months:				
0 – 12	\$ 17,032	\$ 2,226	\$ 15,205	\$ 1,904
13 – 24	7,975	1,667	7,412	1,323
25 – 36	5,987	1,209	5,629	885
37 – 48	4,297	709	3,991	478
49 – 60	2,559	227	2,397	150
Thereafter	809	9	772	13
Total	\$ 38,659	\$ 6,047	\$ 35,406	\$ 4,753

The maximum terms for retail notes are seven years for agriculture and turf equipment, and five years for construction and forestry equipment. The maximum term for financing leases is seven years. In total, wholesale notes turned four times during 2022 and three times during 2021.

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 from the customer 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 resumed when the receivable becomes contractually current and collections are reasonably assured.

The company monitors the credit quality of financing receivables based on delinquency status. The credit quality analysis of retail notes, financing leases, and revolving charge accounts (collectively, retail customer receivables) by year of origination was as follows in millions of dollars:

	October 30, 2022			
	2022	2021	2020	2019
Retail customer receivables:				
Agriculture and turf				
Current	\$ 13,500	\$ 7,984	\$ 4,091	\$ 1,875
30-59 days past due	46	63	36	17
60-89 days past due	14	25	13	6
90+ days past due	1			
Non-performing	27	60	44	28
Construction and forestry				
Current	2,964	1,974	842	292
30-59 days past due	53	52	23	9
60-89 days past due	19	16	7	3
90+ days past due	1	4	1	3
Non-performing	25	61	34	19
Total retail customer receivables	<u>\$ 16,650</u>	<u>\$ 10,239</u>	<u>\$ 5,091</u>	<u>\$ 2,252</u>

	October 30, 2022			
	2018	Prior Years	Revolving Charge Accounts	Total
Retail customer receivables:				
Agriculture and turf				
Current	\$ 785	\$ 200	\$ 4,111	\$ 32,546
30-59 days past due	7	3	19	191
60-89 days past due	2	1	5	66
90+ days past due				1
Non-performing	18	19	8	204
Construction and forestry				
Current	73	12	108	6,265
30-59 days past due	2	1	3	143
60-89 days past due	1		1	47
90+ days past due		1		10
Non-performing	7	3		149
Total retail customer receivables	<u>\$ 895</u>	<u>\$ 240</u>	<u>\$ 4,255</u>	<u>\$ 39,622</u>

	October 31, 2021			
	2021	2020	2019	2018
Retail customer receivables:				
Agriculture and turf				
Current	\$ 12,877	\$ 6,676	\$ 3,463	\$ 1,738
30-59 days past due	43	53	29	16
60-89 days past due	16	23	12	6
90+ days past due		1		
Non-performing	23	57	53	32
Construction and forestry				
Current	3,122	1,575	754	273
30-59 days past due	50	40	27	7
60-89 days past due	15	11	9	6
90+ days past due	1	2	3	3
Non-performing	26	56	39	17
Total retail customer receivables	<u>\$ 16,173</u>	<u>\$ 8,494</u>	<u>\$ 4,389</u>	<u>\$ 2,098</u>

	October 31, 2021			
	2017	Prior Years	Revolving Charge Accounts	Total
Retail customer receivables:				
Agriculture and turf				
Current	\$ 728	\$ 211	\$ 3,704	\$ 29,397
30-59 days past due	7	3	14	165
60-89 days past due	3	1	4	65
90+ days past due				1
Non-performing	17	23	7	212
Construction and forestry				
Current	57	7	92	5,880
30-59 days past due	4	1	3	132
60-89 days past due	1		1	43
90+ days past due	4	2		15
Non-performing	7	3		148
Total retail customer receivables	<u>\$ 828</u>	<u>\$ 251</u>	<u>\$ 3,825</u>	<u>\$ 36,058</u>

The credit quality analysis of wholesale receivables by year of origination was as follows in millions of dollars:

	October 30, 2022			
	2022	2021	2020	2019
Wholesale receivables:				
Agriculture and turf				
Current	\$ 387	\$ 64	\$ 27	\$ 4
30+ days past due				
Non-performing				1
Construction and forestry				
Current	7	29	2	1
30+ days past due				
Non-performing				
Total wholesale receivables	<u>\$ 394</u>	<u>\$ 93</u>	<u>\$ 29</u>	<u>\$ 6</u>

	October 30, 2022			
	2018	Prior Years	Revolving	Total
Wholesale receivables:				
Agriculture and turf				
Current	\$ 2	\$ 2,371	\$ 2,855	
30+ days past due				
Non-performing				1
Construction and forestry				
Current	1	377	417	
30+ days past due				
Non-performing				
Total wholesale receivables	<u>\$ 3</u>	<u>\$ 2,748</u>	<u>\$ 3,273</u>	

	October 31, 2021			
	2021	2020	2019	2018
Wholesale receivables:				
Agriculture and turf				
Current	\$ 346	\$ 80	\$ 22	\$ 9
30+ days past due				
Non-performing				12
Construction and forestry				
Current	41	7	7	
30+ days past due				
Non-performing				
Total wholesale receivables	<u>\$ 387</u>	<u>\$ 87</u>	<u>\$ 41</u>	<u>\$ 9</u>

	October 31, 2021			
	2017	Prior Years	Revolving	Total
Wholesale receivables:				
Agriculture and turf				
Current	\$ 3	\$ 1,696	\$ 2,156	
30+ days past due				
Non-performing				12
Construction and forestry				
Current	1	1	340	397
30+ days past due				1
Non-performing				
Total wholesale receivables	<u>\$ 4</u>	<u>\$ 2</u>	<u>\$ 2,036</u>	<u>\$ 2,566</u>

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

	Retail Notes & Financing Leases	Revolving Charge Accounts	Wholesale Receivables	Total
2022				
Allowance:				
Beginning of year balance	\$ 138	\$ 21	\$ 7	\$ 166
Provision (credit)	197	(2)	(3)	192
Write-offs	(61)	(27)		(88)
Recoveries	22	30		52
Translation adjustments	3			3
End of year balance*	\$ 299	\$ 22	\$ 4	\$ 325
Financing receivables:				
End of year balance	\$ 35,367	\$ 4,255	\$ 3,273	\$ 42,895
2021				
Allowance:				
Beginning of year balance	\$ 133	\$ 43	\$ 8	\$ 184
ASU No. 2016-13	44	(13)		31
Provision (credit)		(17)	(1)	(18)
Write-offs	(60)	(28)		(88)
Recoveries	20	36		56
Translation adjustments	1			1
End of year balance*	\$ 138	\$ 21	\$ 7	\$ 166
Financing receivables:				
End of year balance	\$ 32,233	\$ 3,825	\$ 2,566	\$ 38,624
2020				
Allowance:				
Beginning of year balance	\$ 107	\$ 40	\$ 3	\$ 150
Provision	81	26	3	110
Write-offs	(65)	(53)		(118)
Recoveries	17	30		47
Translation adjustments	(7)		2	(5)
End of year balance*	\$ 133	\$ 43	\$ 8	\$ 184
Financing receivables:				
End of year balance	\$ 27,206	\$ 3,902	\$ 3,529	\$ 34,637

* Individual allowances were not significant.

As part of the allowance setting process, the company continues to monitor the economy, including potential impacts of inflation and rising interest rates, among other factors, and qualitative adjustments to the allowance are incorporated, as necessary. In 2022, the allowance for credit losses on retail notes and financing lease receivables increased due to higher reserves related to the events in Russia / Ukraine and higher portfolio balances. This was partially offset by continued positive agricultural market conditions, which drove favorable impacts on the allowance. Similar to the strong performance in 2021, the revolving portfolio experienced low write-offs and solid recoveries. In 2021, the allowance for credit losses on retail notes and financing lease receivables increased due to the adoption of ASU No. 2016-13. This was partially offset by lower expected losses in the construction and forestry market and better than expected performance of accounts granted payment relief due to the economic effects of COVID. The allowance for credit losses on revolving charge accounts decreased in 2021, reflecting a decrease due to the

adoption of ASU No. 2016-13 and continued improvement in the agricultural and turf market.

Financing receivable analysis metrics follow in millions of dollars:

	2022	2021
Percent of the overall financing receivable portfolio:		
Past-due amounts	1.07	1.09
Non-performing	.83	.96
Allowance for credit losses	.76	.43
Deposits held as credit enhancements	\$ 158	\$ 154

A troubled debt restructuring is a significant 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. The following table includes receivable contracts identified as troubled debt restructurings:

	2022	2021	2020
Number of receivable contracts	276	397	574
Pre-modification balance in millions	\$ 12	\$ 18	\$ 108
Post modification balance in millions	10	17	95

Troubled debt restructurings in 2022 and 2021 related to retail notes, while 2020 modifications related to wholesale receivables in Argentina. The short-term relief related to COVID (primarily granted in 2020) did not meet the definition of a troubled debt restructuring. In 2022, 2021, and 2020, there were no significant troubled debt restructurings that subsequently defaulted and were written off. At October 30, 2022, the company had no commitments to lend to customers whose accounts were modified in troubled debt restructurings.

Other Receivables

Other receivables at October 30, 2022 and October 31, 2021 consisted of the following in millions of dollars:

	2022	2021
Taxes receivable	\$ 1,450	\$ 1,436
Collateral on derivatives	709	13
Receivables from unconsolidated affiliates		27
Other	333	289
Other receivables	\$ 2,492	\$ 1,765

12. SECURITIZATION OF FINANCING RECEIVABLES

As a part of its overall funding strategy, the company 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, which in turn issue debt to investors, or to non-VIE banking operations, which provide funding directly to the company. The funding provided by these third-parties result in secured borrowings, which are recorded as "Short-term securitization borrowings" on the balance sheets. The securitized retail notes are recorded as "Financing receivables securitized - net" on the balance sheets. The total restricted assets on the balance sheets 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 \$5,037 million and \$3,094 million at October 30, 2022 and October 31, 2021, respectively. The liabilities (short-term securitization borrowings and accrued interest) of these SPEs totaled \$4,768 million and

\$3,024 million at October 30, 2022 and October 31, 2021, respectively. The credit holders of these SPEs do not have legal recourse to the company's general credit.

The company has a revolving warehouse facility to utilize bank conduit facilities to securitize retail notes, described further in the following paragraphs. At October 30, 2022, the facility had a total capacity, or "financing limit," of up to \$1,000 million of secured financings at any time. The agreement was renewed in November 2022 with an expiration in November 2023 and a capacity of \$1,500 million.

Through the revolving warehouse facility, 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 \$843 million and \$1,176 million at October 30, 2022 and October 31, 2021, respectively. The liabilities (short-term securitization borrowings and accrued interest) related to these conduits were \$759 million and \$1,113 million at October 30, 2022 and October 31, 2021, 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 October 30, 2022 in millions of dollars:

	2022
Carrying value of liabilities	\$ 759
Maximum exposure to loss	843

The total assets of the unconsolidated conduits related to securitizations were approximately \$18 billion at October 30, 2022.

In addition, through the revolving warehouse facility, the company transfers retail notes to banks, which may elect to fund the retail notes through the use of their own funding sources. These non-VIE banking operations are not consolidated since the company does not have a controlling interest in them. 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 \$211 million and \$496 million at October 30, 2022 and October 31, 2021, respectively. The liabilities (short-term securitization borrowings and accrued interest) were \$190 million and \$470 million at October 30, 2022 and October 31, 2021, respectively.

The components of consolidated restricted assets, secured borrowings, and other liabilities related to secured borrowings at October 30, 2022 and October 31, 2021 were as follows in millions of dollars:

	2022	2021
Financing receivables securitized (retail notes)	\$ 5,952	\$ 4,673
Allowance for credit losses	(16)	(14)
Other assets (primarily restricted cash)	155	107
Total restricted securitized assets	\$ 6,091	\$ 4,766
Short-term securitization borrowings	\$ 5,711	\$ 4,605
Accrued interest on borrowings	6	2
Total liabilities related to restricted securitized assets	\$ 5,717	\$ 4,607

The short-term securitization borrowings are presented net of debt acquisition costs. The weighted-average interest rates on short-term securitization borrowings at October 30, 2022 and October 31, 2021 were 2.8 percent and .9 percent, respectively. 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 on cash flows generated by the restricted assets. Depending on the company's ability to obtain and meet certain pre-established credit rating criteria, cash collections from these restricted assets are required to be placed into a segregated collection account either on a daily basis or immediately prior to the time payment is required to the secured creditors. At October 30, 2022 the maximum remaining term of all securitized retail notes was approximately seven years.

The payment schedule for these borrowings at October 30, 2022 based on the expected liquidation of the retail notes in millions of dollars is as follows: 2023 - \$2,703, 2024 - \$1,662, 2025 - \$955, 2026 - \$373, 2027 - \$25, and later years - \$3.

13. 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 October 30, 2022 and October 31, 2021 represented 57 percent and 54 percent, respectively, of worldwide gross inventories at FIFO value. If all inventories had been valued on a FIFO basis, estimated inventories by major classification at October 30, 2022 and October 31, 2021 in millions of dollars would have been as follows:

	2022	2021
Raw materials and supplies	\$ 4,442	\$ 3,524
Work-in-process	1,190	994
Finished goods and parts	5,363	4,373
Total FIFO value	10,995	8,891
Less adjustment to LIFO value	2,500	2,110
Inventories	\$ 8,495	\$ 6,781

14. PROPERTY AND DEPRECIATION

A summary of property and equipment at October 30, 2022 and October 31, 2021 in millions of dollars follows:

	Useful Lives* (Years)	2022	2021
Land		\$ 274	\$ 297
Buildings and building equipment	22	4,386	4,352
Machinery and equipment	11	6,208	6,123
Dies, patterns, tools, etc.	8	1,558	1,679
All other	5	1,205	1,197
Construction in progress		818	527
Total at cost		14,449	14,175
Less accumulated depreciation		8,393	8,355
Property and equipment - net		\$ 6,056	\$ 5,820

* Weighted-averages

Total property and equipment additions in 2022, 2021, and 2020 were \$1,197 million, \$897 million, and \$815 million and depreciation was \$806 million, \$830 million, and \$800 million, respectively. Capitalized interest was \$4 million, \$3 million, and \$6 million in the same periods, respectively. The cost of leased property and equipment under finance leases was \$117 million and \$131 million, with accumulated depreciation of \$68 million and \$60 million at October 30, 2022 and October 31, 2021, respectively.

For property and equipment, more than 10 percent resides in the U.S. and Germany, separately disclosed below in millions of dollars:

	2022	2021	2020
U.S.	\$ 3,452	\$ 3,138	\$ 3,150
Germany	991	1,096	1,113
Other countries	1,613	1,586	1,554
Total	\$ 6,056	\$ 5,820	\$ 5,817

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.

15. GOODWILL AND OTHER INTANGIBLE ASSETS - NET

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

	PPA	SAT	CF	Total
November 1, 2020	\$ 333	\$ 268	\$ 2,480	\$ 3,081
Acquisitions (Note 3)	201			201
Translation adjustments and other	8	(3)	4	9
October 31, 2021	542	265	2,484	3,291
Acquisitions (Note 3)	132	69	599	800
Translation adjustments and other	(28)	(16)	(360)	(404)
October 30, 2022	\$ 646	\$ 318	\$ 2,723	\$ 3,687

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

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

	2022	2021
Amortized intangible assets:		
Customer lists and relationships	\$ 493	\$ 542
Technology, patents, trademarks, and other	1,301	1,104
Total at cost	1,794	1,646
Less accumulated amortization:		
Customer lists and relationships	166	151
Technology, patents, trademarks, and other	410	343
Total accumulated amortization	576	494
Amortized intangible assets	1,218	1,152
Unamortized intangible assets:		
In-process research and development		123
Other intangible assets - net	\$ 1,218	\$ 1,275

In September 2017, the company acquired Blue River Technology's in-process research and development related to machine learning technology to optimize the use of farm inputs. Those research and development activities were completed, and the company started amortizing the acquired technology in 2022.

Other intangible assets are stated at cost less accumulated amortization. The amortization of other intangible assets in 2022, 2021, and 2020 was \$145 million, \$116 million, and \$102 million, respectively. The estimated amortization expense for the next five years is as follows in millions of dollars:

Year	Estimated Amortization
2023	\$ 162
2024	158
2025	131
2026	111
2027	110

16. OTHER ASSETS

Other assets at October 30, 2022 and October 31, 2021 consisted of the following in millions of dollars:

	2022	2021
Operating lease asset (Note 24)	\$ 299	\$ 291
Capitalized software, net	372	282
Investment in unconsolidated affiliates	117	175
Deferred charges (including prepaids)	383	281
Derivative assets (Note 26)	373	275
Prepaid taxes	185	193
Parts return asset	119	114
Restricted cash	167	108
Matured lease & repossessed inventory	44	55
Other	358	371
Total	\$ 2,417	\$ 2,145

Capitalized software has an estimated useful life of three years. Amortization of these software costs in 2022, 2021, and 2020 was \$117 million, \$121 million, and \$133 million, respectively.

Investment in unconsolidated affiliates are companies in which Deere & Company 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. In March 2022, the company acquired full ownership of three former Deere-Hitachi joint venture factories and began new license and supply agreements with Hitachi (see Note 3). During 2021, the company sold its investment in Bell Equipment Limited, resulting in no material gain or loss.

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

Operations	2022	2021	2020
Sales	\$ 1,023	\$ 2,095	\$ 1,793
Net income	11	51	7
Deere & Company's equity in net income (loss)	10	21	(48)

Financial Position	2022	2021
Total assets	\$ 696	\$ 1,289
Total external borrowings	470	497
Total net assets	166	366
Deere & Company's share of the net assets	117	175

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 statements of consolidated income in millions of dollars follow:

	2022	2021	2020
Net sales	\$ 26	\$ 78	\$ 81
Purchases	761	1,605	1,288

17. SHORT-TERM BORROWINGS

Short-term borrowings at October 30, 2022 and October 31, 2021 consisted of the following in millions of dollars:

	2022	2021
Commercial paper	\$ 4,703	\$ 2,230
Notes payable to banks	402	336
Finance lease obligations due within one year	21	23
Long-term borrowings due within one year*	7,466	8,330
Short-term borrowings	\$ 12,592	\$ 10,919

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

The weighted-average interest rates on short-term borrowings, excluding current maturities of finance lease obligations and long-term borrowings, at October 30, 2022 and October 31, 2021 were 4.1 percent and .8 percent, respectively.

Lines of credit available from U.S. and foreign banks were \$8,402 million at October 30, 2022. At October 30, 2022, \$3,284 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 October 30, 2022 was a 364-day credit facility agreement of \$3,000 million, expiring in the second quarter of 2023. In addition, total credit lines included long-term credit facility agreements of \$2,500 million, expiring in the second quarter of 2026, and \$2,500

million, expiring in the second quarter of 2027. The agreements are mutually extendable, and the annual facility fees are not significant.

In October 2022, the company amended these credit agreements with pricing adjustments tied to the Leap Ambitions framework. Failure to meet certain Scope 1 and 2 emissions targets or engaged acres goals will result in a maximum 6 basis-point penalty rate, while exceeding certain thresholds on the same metrics will result in a similar favorable rate adjustment.

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 October 30, 2022 was \$18,526 million. Alternatively under this provision, the equipment operations had the capacity to incur additional debt of \$34,405 million at October 30, 2022. 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. At October 30, 2022, Deere & Company indirectly owned 100 percent of the voting shares of Capital Corporation's capital stock and Capital Corporation's consolidated tangible net worth was \$4,803 million.

18. ACCOUNTS PAYABLE AND ACCRUED EXPENSES

Accounts payable and accrued expenses at October 30, 2022 and October 31, 2021 consisted of the following in millions of dollars:

	2022	2021
Accounts payable and accrued expenses		
Accounts payable:		
Trade payables	\$ 3,894	\$ 3,173
Payables to unconsolidated affiliates	11	143
Dividends payable	343	329
Operating lease liabilities	302	279
Deposits withheld from dealers and merchants	163	157
Other	214	159
Accrued expenses:		
Dealer sales discounts	2,324	1,636
Product warranties	1,427	1,312
Employee benefits	1,528	1,531
Accrued taxes	1,265	1,075
Unearned operating lease revenue	399	421
Unearned revenue (contractual liability)	557	570
Extended warranty premium	866	774
Accrued interest	288	251
Derivative liabilities	1,231	228
Other	1,320	1,175
Total	16,132	13,213
Eliminations*	1,310	865
Total accounts payable and accrued expenses	\$ 14,822	\$ 12,348

* Primarily sales incentive accruals with a right of set-off against trade receivables. At October 30, 2022 and October 31, 2021, \$1,280 million and \$836 million, respectively, of sales incentive accruals were classified as accrued expenses by the equipment operations as the related trade receivables had been sold to financial services.

19. LONG-TERM BORROWINGS

Long-term borrowings at October 30, 2022 and October 31, 2021 consisted of the following in millions of dollars:

	2022	2021
Underwritten term debt		
U.S. dollar notes and debentures:		
2.75% notes due 2025	\$ 700	\$ 700
6.55% debentures due 2028	200	200
5.375% notes due 2029	500	500
3.10% notes due 2030	700	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	850
Euro notes:		
.5% notes due 2023 (€500 principal)		584
1.375% notes due 2024 (€800 principal)	797	934
1.85% notes due 2028 (€600 principal)	598	701
2.20% notes due 2032 (€600 principal)	598	701
1.65% notes due 2039 (€650 principal)	648	759
Serial issuances		
Medium-term notes: (principal \$25,629 - 2022, \$22,647 - 2021) Average interest rates of 2.9% - 2022, 1.2% - 2021	24,604	22,899
Other notes and finance lease obligations	1,223	1,178
Less debt issuance costs and debt discounts	(122)	(118)
Long-term borrowings	\$ 33,596	\$ 32,888

Medium-term notes serially due 2023 through 2032 are primarily offered by prospectus and issued at fixed and variable rates. These notes are presented in the table above with fair value adjustments related to interest rate swaps. All outstanding notes and debentures are senior unsecured borrowings and rank equally with each other.

In April 2022, the company issued \$600 million of sustainability-linked medium-term notes with an initial interest rate of 3.35 percent, which are due in 2029. This transaction supports the company's commitment to environmental sustainability. Failure to meet the stated sustainability performance target will result in a 25-basis point increase to the interest rate payable on the 2029 notes from and including April 2026.

The principal amounts of the company's long-term borrowings maturing in each of the next five years in millions of dollars are as follows: 2023 - \$7,453, 2024 - \$7,960, 2025 - \$6,820, 2026 - \$4,154, and 2027 - \$3,242.

20. COMMITMENTS AND CONTINGENCIES

The company 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 determined by a review of five-year claims costs and current quality developments.

The premiums for extended warranties are recognized in "Other income" in the statements of consolidated 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 \$866 million and \$774 million at October 30, 2022 and October 31, 2021, respectively.

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

	Warranty Liability/ Unearned Premiums	
	2022	2021
Beginning of year balance	\$ 2,086	\$ 1,743
Payments	(951)	(864)
Amortization of premiums received	(289)	(227)
Accruals for warranties	1,094	1,071
Premiums received	404	358
Foreign exchange	(51)	5
End of year balance	<u>\$ 2,293</u>	<u>\$ 2,086</u>

At October 30, 2022, the company had approximately \$287 million of guarantees issued 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 October 30, 2022, the accrued losses under these agreements were not material. The maximum remaining term of the receivables guaranteed at October 30, 2022 was about eight years.

At October 30, 2022, the company had commitments of approximately \$418 million for the construction and acquisition of property and equipment. Also at October 30, 2022, the company had restricted assets of \$221 million, classified as "Other assets."

The company also had other miscellaneous contingent liabilities and guarantees totaling approximately \$110 million at October 30, 2022. The accrued liability for these contingencies was not material at October 30, 2022.

The company has commitments to extend credit to customers through lines of credit and other pre-approved credit arrangements. The amount of unused commitments to extend credit to John Deere dealers was approximately \$10 billion at October 30, 2022. The amount of unused commitments to extend credit to retail customers was approximately \$32 billion at October 30, 2022, primarily related to revolving charge accounts. A significant portion of these commitments is not expected to be fully drawn upon; therefore, the total commitment amounts likely do not represent a future cash requirement. The company generally has the right to unconditionally cancel, alter, or amend the terms of these commitments at any time. The company has a reserve for credit losses of \$3 million on unfunded commitments that are not unconditionally cancellable at October 30, 2022.

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, trademark, and antitrust 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.

21. CAPITAL STOCK

The \$1 par value common stock of Deere & Company is listed on the New York Stock Exchange under the symbol "DE". At October 30, 2022, there were 17,829 holders of record of the company's common stock.

The number of common shares the company is authorized to issue is 1,200 million. The number of common shares issued at October 30, 2022, October 31, 2021, and November 1, 2020 was 536.4 million. The number of authorized preferred shares is nine million. No preferred shares have been issued.

The Board of Directors at a meeting in December 2019 authorized the repurchase of up to \$8,000 million of common stock. At the end of fiscal year 2022, this repurchase program had \$2,228 million (5.6 million shares based on the fiscal year end closing common stock price of \$396.85 per share) remaining to be repurchased. Repurchases of the company's common stock under this plan are 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:

	2022	2021	2020
Net income attributable to Deere & Company	\$ 7,131	\$ 5,963	\$ 2,751
Average shares outstanding	304.5	311.6	313.5
Basic per share	\$ 23.42	\$ 19.14	\$ 8.77
Average shares outstanding	304.5	311.6	313.5
Effect of dilutive stock options	1.8	2.4	3.1
Total potential shares outstanding	306.3	314.0	316.6
Diluted per share	\$ 23.28	\$ 18.99	\$ 8.69

All stock options outstanding were included in the computation of diluted shares except .2 million in 2022 and .6 million in 2020 that had an antidilutive effect under the treasury stock method.

22. STOCK OPTION AND RESTRICTED STOCK UNIT AWARDS

The company issues stock options and restricted stock unit awards to key employees under plans approved by stockholders. Restricted stock unit awards consist of service-based and performance /service-based awards. Restricted stock units are also issued to nonemployee directors for their services as directors under a plan approved by stockholders. At October 30, 2022, the company is authorized to grant an additional 17.2 million shares related to stock options or restricted stock units. The company currently uses shares that have been repurchased through its stock repurchase programs to satisfy share option exercises.

Service-based restricted stock units cliff vest after a three-year service period and include dividend equivalent payments. Performance/service-based awards 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 three-year 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. Stock options ratably vest over a three-year service period and expire ten years from the grant date.

The fair value of stock options and service-based restricted stock units, which is based on the closing price of the company's common stock on the grant date, are expensed over the shorter of the award vesting period or the employee's retirement eligibility period. Performance/service-based units expense, which are based on the fair value at the grant date excluding dividends, are recognized over the employees' requisite service period and adjusted quarterly for the probable number of shares to be awarded. The fair value of each stock option award was estimated on the date of grant using a binomial lattice option valuation model. The company recognizes the effect of award forfeitures as an adjustment to compensation expense in the period the forfeiture occurs.

The total share-based compensation expense, recognized income tax benefits, and total grant-date fair values of stock options and

restricted stock units vested consisted of the following in millions of dollars:

	2022	2021	2020
Share-based compensation expense	\$ 85	\$ 82	\$ 81
Income tax benefits	17	16	19
Stock options and restricted stock units vested	74	93	79

At October 30, 2022, there was \$66 million of total unrecognized compensation cost from share-based compensation arrangements granted under the plans. This compensation is expected to be recognized over a weighted-average period of approximately 1.5 years.

Stock Options

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:

	2022	2021	2020
Risk-free interest rate*	1.27%	.47%	1.67%
Expected dividends	1.2%	1.2%	1.8%
Volatility*	32.0%	31.0%	26.0%
Expected term (in years)*	5.1	5.5	5.7

* Weighted-averages

The activity for outstanding stock options at October 30, 2022, and changes during 2022 in millions of dollars and shares follow:

	Shares	Exercise Price*	Remaining Contractual Term (Years)	Aggregate Intrinsic Value
Outstanding at beginning of year	2.5	\$ 127.82		
Granted	.2	343.94		
Exercised	(.6)	105.85		
Forfeited	(.1)	290.65		
Outstanding at end of year	2.0	153.11	4.81	\$ 497.2
Exercisable at end of year	1.6	119.16	3.79	436.9

* Weighted-averages

The amounts related to stock options were as follows in millions of dollars unless otherwise noted:

	2022	2021	2020
Weighted-average grant date fair values (per share)	\$ 89.20	\$ 62.73	\$ 35.83
Intrinsic value of options exercised	\$ 169	\$ 318	\$ 398
Cash received from exercises	63	148	331
Tax benefit from exercises	39	71	93

Restricted Stock Units

The weighted-average grant date fair values were as follows:

	2022	2021	2020
Service-based	\$ 347.59	\$ 258.86	\$ 168.94
Performance/service-based	331.47	245.73	160.81

The company's restricted stock units at October 30, 2022 and changes during 2022 in thousands of shares follow:

	Shares	Grant-Date Fair Value*
Service-based		
Nonvested at beginning of year	486	\$ 190.87
Granted	139	347.59
Vested	(208)	173.62
Forfeited	(13)	259.72
Nonvested at end of year	404	251.42
Performance/service based		
Nonvested at beginning of year	197	\$ 171.82
Granted	37	331.47
Vested	(168)	139.37
Performance change	84	139.37
Forfeited	(7)	267.13
Nonvested at end of year	143	227.70

* Weighted-averages

23. OTHER COMPREHENSIVE INCOME ITEMS

The after-tax components of accumulated other comprehensive income follow in millions of dollars.

	2022	2021	2020
Retirement benefits adjustment	\$ (389)	\$ (1,034)	\$ (3,918)
Cumulative translation adjustment	(2,594)	(1,478)	(1,596)
Unrealized gain (loss) on derivatives	21	(42)	(58)
Unrealized gain (loss) on debt securities	(94)	15	33
Total accumulated other comprehensive income (loss)	<u>\$ (3,056)</u>	<u>\$ (2,539)</u>	<u>\$ (5,539)</u>

Following are amounts recorded in and reclassifications out of other comprehensive income (loss), and the income tax effects, in millions of dollars. Retirement benefits adjustment reclassifications for actuarial (gain) loss, prior service (credit) cost,

and settlements/curtailment are included in net periodic pension and other postretirement benefit costs (see Note 7).

	Before Tax Amount	Tax (Expense) Credit	After Tax Amount
2022			
Cumulative translation adjustment	\$ (1,105)	\$ (11)	\$ (1,116)
Unrealized gain (loss) on derivatives:			
Unrealized hedging gain (loss)	89	(19)	70
Reclassification of realized (gain) loss to:			
Interest rate contracts – Interest expense	(9)	2	(7)
Net unrealized gain (loss) on derivatives	80	(17)	63
Unrealized gain (loss) on debt securities:			
Unrealized holding gain (loss)	(140)	30	(110)
Reclassification of realized (gain) loss –			
Other income	1		1
Net unrealized gain (loss) on debt securities	(139)	30	(109)
Retirement benefits adjustment:			
Net actuarial gain (loss)	1,192	(298)	894
Prior service credit (cost)	(517)	124	(393)
Reclassification to Other operating expenses through amortization of:			
Actuarial (gain) loss	116	(29)	87
Prior service (credit) cost	30	(7)	23
Settlements/curtailments	45	(11)	34
Net unrealized gain (loss) on retirement benefits adjustment	866	(221)	645
Total other comprehensive income (loss)	<u>\$ (298)</u>	<u>\$ (219)</u>	<u>\$ (517)</u>

	Before Tax Amount	Tax (Expense) Credit	After Tax Amount
2021			
Cumulative translation adjustment:			
Unrealized translation gain (loss)	\$ 112		\$ 112
Reclassification of realized (gain) loss to:			
Equity in (income) loss of unconsolidated affiliates	6		6
Net unrealized translation gain (loss)	118		118
Unrealized gain (loss) on derivatives:			
Unrealized hedging gain (loss)	8	(2)	6
Reclassification of realized (gain) loss to:			
Interest rate contracts – Interest expense	13	(3)	10
Net unrealized gain (loss) on derivatives	21	(5)	16
Unrealized gain (loss) on debt securities:			
Unrealized holding gain (loss)	(21)	3	(18)
Net unrealized gain (loss) on debt securities	(21)	3	(18)
Retirement benefits adjustment:			
Net actuarial gain (loss)	3,492	(845)	2,647
Reclassification to Other operating expenses through amortization of:			
Actuarial (gain) loss	283	(69)	214
Prior service (credit) cost	8	(2)	6
Settlements	22	(5)	17
Net unrealized gain (loss) on retirement benefits adjustment	3,805	(921)	2,884
Total other comprehensive income (loss)	<u>\$ 3,923</u>	<u>\$ (923)</u>	<u>\$ 3,000</u>

	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:			
Net actuarial gain (loss)	(302)	65	(237)
Reclassification to Other operating expenses through amortization of:			
Actuarial (gain) loss	278	(68)	210
Prior service (credit) cost	7	(2)	5
Settlements	26	(7)	19
Net unrealized gain (loss) on retirement benefits adjustment	9	(12)	(3)
Total other comprehensive income (loss)	\$ 83	\$ (15)	\$ 68

24. LEASES

The company is both a lessee and a lessor. The company leases for its own use warehouse facilities, office space, production equipment, information technology equipment, and vehicles. The expected use periods range 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 sheets 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 not readily determinable. The company determines the incremental borrowing rate for each lease based 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 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 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:

	2022	2021	2020
Operating lease expense	\$ 114	\$ 116	\$ 126
Short-term lease expense	55	29	23
Variable lease expense	74	53	41
Finance lease:			
Depreciation expense	26	26	20
Interest on lease liabilities	1	1	2
Total lease expense	\$ 270	\$ 225	\$ 212

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

	2022	2021
Operating leases:		
Other assets	\$ 299	\$ 291
Accounts payable and accrued expenses	302	279
Finance leases:		
Property and equipment — net	\$ 49	\$ 71
Short-term borrowings	21	23
Long-term borrowings	30	38
Total finance lease liabilities	\$ 51	\$ 61

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

	2022	2021
Weighted-average remaining lease terms:		
Operating leases	7	5
Finance leases	3	2
Weighted-average discount rates:		
Operating leases	2.4%	2.3%
Finance leases	1.9%	2.3%

Lease payment amounts in each of the next five years at October 30, 2022 follow in millions of dollars:

Due in:	Operating Leases	Finance Leases
2023	\$ 95	\$ 22
2024	77	14
2025	54	7
2026	27	3
2027	17	2
Later years	53	6
Total lease payments	323	54
Less imputed interest	21	3
Total lease liabilities	<u>\$ 302</u>	<u>\$ 51</u>

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

	2022	2021	2020
Operating cash flows for operating leases	\$ 127	\$ 104	\$ 124
Operating cash flows for finance leases	1	1	2
Financing cash flows for finance leases	28	25	17

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

	2022	2021
Operating leases	\$ 135	\$ 101
Finance leases	17	27

Lessor

The company leases equipment manufactured or sold by the company and a limited amount of non-John 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 sheets. Operating leases are reported in "Equipment on operating leases - net" on the consolidated balance sheets.

Leases offered by the company may include early termination and renewal options. At the end of a lease, the lessee 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 change. 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, the company recorded impairment losses on operating leases of \$22 million, due to higher expected equipment return rates and lower estimated values of used construction

equipment. Operating lease impairments were recorded in "Other operating expenses."

The company has elected to combine lease and nonlease components. The nonlease components 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 statements of consolidated income. Variable lease revenues relate to property taxes on leased assets in certain markets and late fees. Variable lease revenues also include excess use and damage fees of \$2 million, \$7 million, and \$8 million for 2022, 2021, and 2020 respectively, which were reported in "Other income" on the statements of consolidated income.

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

	2022	2021	2020
Sales-type and direct finance lease revenues	\$ 154	\$ 145	\$ 135
Operating lease revenues	1,318	1,423	1,469
Variable lease revenues	26	30	31
Total lease revenues	<u>\$ 1,498</u>	<u>\$ 1,598</u>	<u>\$ 1,635</u>

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 market follow in millions of dollars:

	2022	2021
Agriculture and turf	\$ 1,118	\$ 1,131
Construction and forestry	1,167	1,284
Total	2,285	2,415
Guaranteed residual values	491	394
Unguaranteed residual values	56	70
Less unearned finance income	(285)	(258)
Financing lease receivables	<u>\$ 2,547</u>	<u>\$ 2,621</u>

Scheduled payments, including guaranteed residual values, on sales-type and direct financing lease receivables at October 30, 2022 follow in millions of dollars:

Due in:	2022
2023	\$ 1,310
2024	722
2025	404
2026	200
2027	120
Later years	20
Total	<u>\$ 2,776</u>

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 market follow in millions of dollars:

	2022	2021
Agriculture and turf	\$ 6,912	\$ 7,317
Construction and forestry	1,342	1,616
Total	8,254	8,933
Less accumulated depreciation	(1,631)	(1,945)
Equipment on operating leases - net	\$ 6,623	\$ 6,988

The total operating lease residual values at October 30, 2022 and October 31, 2021 were \$4,640 million and \$5,025 million, respectively. For operating lease originations effective after January 2020, John Deere dealers provide a first-loss residual value guarantee. The total first-loss residual value guarantees were \$1,025 million and \$950 million at October 30, 2022 and October 31, 2021, respectively.

The equipment is depreciated on a straight-line basis over the term of the lease. The corresponding depreciation expense was \$827 million in 2022, \$983 million in 2021, and \$1,083 million in 2020.

Lease payments for equipment on operating leases at October 30, 2022 were scheduled as follows in millions of dollars:

Due in:	2022
2023	\$ 974
2024	709
2025	437
2026	228
2027	58
Later years	6
Total	\$ 2,412

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 \$68 million and \$70 million at October 30, 2022 and October 31, 2021, respectively.

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. In 2020, the company recorded impairment losses on matured operating lease inventory of \$10 million due to lower estimated values of used construction equipment. Impairment losses on matured operating lease inventory were included in "Other operating expenses."

25. 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.

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.

The fair values of financial instruments that do not approximate the carrying values at October 30, 2022 and October 31, 2021 in millions of dollars follow:

	2022		2021	
	Carrying Value	Fair Value*	Carrying Value	Fair Value*
Financing receivables – net	\$ 36,634	\$ 35,526	\$ 33,799	\$ 33,718
Financing receivables securitized – net	5,936	5,698	4,659	4,704
Short-term securitization borrowings	5,711	5,577	4,605	4,610
Long-term borrowings due within one year**	7,466	7,322	8,330	8,364
Long-term borrowings**	33,566	31,852	32,850	34,506

* Fair value measurements above were Level 3 for all financing receivables and Level 2 for all borrowings.

** Values exclude finance lease liabilities that are presented as borrowings (see Note 24).

Assets and liabilities measured at October 30, 2022 and October 31, 2021 at fair value on a recurring basis in millions of dollars follow, excluding the company's cash equivalents, which were carried at a cost that approximates fair value and consisted of money market funds and time deposits:

	2022	2021
Level 1:		
Marketable securities		
U.S. equity fund	\$ 70	\$ 75
International equity securities	3	2
U.S. government debt securities	62	59
Total Level 1 marketable securities	135	136
Level 2:		
Marketable securities		
U.S. government debt securities	121	139
Municipal debt securities	63	73
Corporate debt securities	200	224
International debt securities	60	2
Mortgage-backed securities*	155	154
Total Level 2 marketable securities	599	592
Other assets		
Derivatives	373	275
Accounts payable and accrued expenses		
Derivatives	1,231	228
Level 3:		
Accounts payable and accrued expenses –		
Deferred consideration	236	

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

Fair value, nonrecurring measurements from impairments at October 30, 2022 and October 31, 2021 in millions of dollars follow:

	Fair Value		Losses		
	2022 ¹	2021	2022	2021	2020
Other receivables					\$ 2
Equipment on operating leases – net					22
Inventories	\$ 19		\$ 19		
Property and equipment – net ²	15	\$ 41	41	\$ 44	102
Investments in unconsolidated affiliates					50
Other intangible assets – net			28		2
Other assets ³		1		6	16

¹ Related to assessments on the Russian operations, performed at May 1, 2022 and updated on July 31, 2022 and October 30, 2022.

² 2021 fair value of \$41 million at January 31, 2021.

³ 2021 fair value as of January 31, 2021.

The following is a description of the valuation methodologies the company uses to measure certain financial instruments on the balance sheets at fair value. For more information on asset impairments, see Note 4.

Marketable securities – The portfolio of investments is 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 valued

using the fund's net asset value, based on the fair value of the underlying securities.

Derivatives – The company's derivative financial instruments consist of interest rate contracts (swaps), foreign currency exchange contracts (futures, forwards and swaps), and cross-currency interest rate contracts (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 11).

Other receivables – The impairment was based on the expected realization of value-added tax receivables related to a closed factory operation.

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 historical return rates and realized sales values.

Inventories – The impairment was based on net realizable value, less reasonably predictable selling and disposal costs.

Property and equipment – net – The valuations were based on cost and market approaches. The inputs include replacement cost estimates adjusted for physical deterioration and economic obsolescence, or quoted prices when available.

Investment in unconsolidated affiliates – Other than temporary impairments for investments are measured as the difference between the implied fair value or the estimated realization amount, and the carrying value. The fair value for publicly traded entities is the share price multiplied by the shares owned, or the estimated realization amount.

Other intangible assets – net – In 2022, the company considered external valuations based on the company's probability weighted cash flow analysis. In 2020, the impairment was measured at the remaining net book value of customer relationships related to a closed factory operation.

Other assets – In 2021, the impairments were measured at the fair value of the right of use operating lease asset. In 2020, the impairments of the matured operating lease inventory were measured at the fair value of that equipment. The valuations were based on a market approach. The inputs include sales of comparable assets. Also in 2020, the impairment of the German lawn mower business was measured at the estimated realizable value. Fair value was based on estimates of the final sale price.

26. DERIVATIVE INSTRUMENTS

Cash Flow Hedges

Certain 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 October 30, 2022 and October 31, 2021 were \$1,950 million and \$2,700 million, respectively. Fair value gains or losses on cash flow hedges are recorded in OCI and subsequently reclassified into interest expense in the same periods during which the hedged transactions impact earnings. These amounts offset the effects of interest rate changes on the related borrowings.

The amount of gain recorded in OCI at October 30, 2022 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 \$44 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 October 30, 2022 and October 31, 2021 were \$10,112 million and \$8,043 million, respectively. The fair value gains or losses on these contracts were 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 October 30, 2022 and October 31, 2021, in the consolidated balance sheets related to borrowings designated in fair value hedging relationships were as follows in millions of dollars. Fair value hedging adjustments are included in the carrying amount of the hedged item.

	Active Hedging Relationships		Discontinued Hedging Relationships	
	Carrying Amount of Hedged Item	Cumulative Fair Value Hedging Amount	Carrying Amount of Formerly Hedged Item	Cumulative Fair Value Hedging Amount
2022				
Short-term borrowings			\$ 2,515	\$ 15
Long-term borrowings	\$ 9,060	\$ (1,006)	5,520	(19)
2021				
Short-term borrowings	\$ 191	\$ 3	\$ 1,997	\$ (2)
Long-term borrowings	7,847	29	6,287	223

Derivatives Not Designated as Hedging Instruments

The company has certain interest rate contracts (swaps), foreign currency 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 for certain borrowings, purchases or sales of inventory, and sales incentive programs. The total notional amounts of the interest rate swaps at October 30, 2022 and October 31, 2021 were \$10,568 million and \$10,848 million, the foreign currency exchange contracts were \$8,185 million and \$7,584 million, and the cross-currency interest rate contracts were \$260 million and

\$238 million, respectively. The fair value gains or losses from derivatives not designated as hedging instruments were recorded in the statements of consolidated income, generally offsetting over time the exposure on the hedged item.

Fair values of derivative instruments in the consolidated balance sheets at October 30, 2022 and October 31, 2021 in millions of dollars follow:

	2022	2021
Other Assets		
Designated as hedging instruments:		
Interest rate contracts	\$ 87	\$ 166
Not designated as hedging instruments:		
Interest rate contracts	212	73
Foreign exchange contracts	66	31
Cross-currency interest rate contracts	8	5
Total not designated	286	109
Total derivative assets	\$ 373	\$ 275
Accounts Payable and Accrued Expenses		
Designated as hedging instruments:		
Interest rate contracts	\$ 1,004	\$ 99
Not designated as hedging instruments:		
Interest rate contracts	107	33
Foreign exchange contracts	118	94
Cross-currency interest rate contracts	2	2
Total not designated	227	129
Total derivative liabilities	\$ 1,231	\$ 228

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

	2022	2021	2020
Fair Value Hedges			
Interest rate contracts – Interest expense	\$ (1,144)	\$ (236)	\$ 496
Cash Flow Hedges			
Recognized in OCI:			
Interest rate contracts – OCI (pretax)	89	8	(18)
Reclassified from OCI:			
Interest rate contracts – Interest expense	9	(13)	(21)
Not Designated as Hedges			
Interest rate contracts – Net sales	\$ 53	\$ 13	\$ (23)
Interest rate contracts – Interest expense*	81	14	(2)
Foreign exchange contracts – Net sales	(6)		
Foreign exchange contracts – Cost of sales	(64)	(101)	93
Foreign exchange contracts – Other operating expenses*	402	(262)	122
Total not designated	\$ 466	\$ (336)	\$ 190

* 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 October 30, 2022 and October 31, 2021, was \$1,113 million and \$135 million, respectively. In accordance with the limits established in these agreements, the company posted \$701 million of cash collateral at October 30, 2022 and no cash collateral at October 31, 2021. In addition, the company paid \$8 million of collateral either in cash or pledged securities that was outstanding at both October 30, 2022 and October 31, 2021 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 October 30, 2022 and October 31, 2021 in millions of dollars follows:

	Gross Amounts Recognized	Netting Arrangements	Collateral	Net Amount
2022				
Assets	\$ 373	\$ (179)	\$ (54)	\$ 140
Liabilities	1,231	(179)	(701)	351
2021				
Assets	\$ 275	\$ (105)		\$ 170
Liabilities	228	(105)	\$ (5)	118

27. SEGMENT DATA

The company's operations are presently organized and reported in four business segments described as follows. This presentation is consistent with how the chief operating decision maker (the CEO) assesses the performance of the segments and makes decisions about resource allocations.

The production and precision agriculture segment defines, develops, and delivers global equipment and technology solutions to unlock customer value for production-scale growers of large grains, small grains, cotton, and sugarcane. Main products include large and certain mid-size tractors, combines, cotton pickers, sugarcane harvesters and loaders, and soil preparation, seeding, application and crop care equipment.

The small agriculture and turf segment defines, develops, and delivers global equipment and technology solutions to unlock customer value for dairy and livestock producers, high-value crop producers, and turf and utility customers. The segment's primary products include certain mid-size and small tractors, as well as hay and forage equipment, riding and commercial lawn equipment, golf course equipment, and utility vehicles.

The construction and forestry segment defines, develops, and delivers a broad range of machines and technology solutions organized along the earthmoving, forestry, and roadbuilding production systems. The segment's primary products include crawler dozers and loaders, four-wheel-drive loaders, excavators, skid-steer loaders, milling machines, and log harvesters.

The products and services produced by the segments above are marketed through independent retail dealer networks and major retail outlets, and, as it relates to roadbuilding products in certain markets outside the U.S. and Canada, through company-owned sales and service subsidiaries.

The financial services segment finances sales and leases by John Deere dealers of new and used production and precision agriculture equipment, small 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 data. Intersegment sales and revenues represent sales of products and components or finance charges, which are based on market prices, from one operating segment to another operating segment. Intersegment sales of products and components are eliminated in all Net sales data presented in this Annual Report.

Intersegment sales and revenues in 2022, 2021, and 2020 were as follows: production and precision agriculture net sales of \$19 million, \$27 million, and \$22 million; small agriculture and turf net sales of \$10 million, \$11 million, and \$2 million; construction and forestry had \$1 million, none, and \$1 million; and financial services revenues of \$460 million, \$246 million, and \$278 million, respectively.

Identifiable assets assigned to the operating segments are those the units actively manage, consisting of trade receivables, inventories, property and equipment, intangible assets, and certain other assets. Corporate assets are managed collectively, including cash and cash equivalents, retirement benefit net assets, goodwill, and deferred income tax assets.

Information relating to operations by operating segment in millions of dollars follows for the years ended October 30, 2022, October 31, 2021 and November 1, 2020.

OPERATING SEGMENTS	2022	2021	2020
Net sales and revenues			
Unaffiliated customers:			
Production & precision ag net sales	\$22,002	\$ 16,509	\$ 12,962
Small ag & turf net sales	13,381	11,860	9,363
Construction & forestry net sales	12,534	11,368	8,947
Financial services revenues	3,625	3,548	3,589
Other revenues*	1,035	739	679
Total	<u>\$ 52,577</u>	<u>\$44,024</u>	<u>\$35,540</u>

* Other revenues are primarily the production and precision ag, small ag and turf, and construction and forestry revenues for finance and interest income, and other income.

OPERATING SEGMENTS	2022	2021	2020
Operating profit			
Production & precision ag	\$ 4,386	\$ 3,334	\$ 1,969
Small ag & turf	1,949	2,045	1,000
Construction & forestry	2,014	1,489	590
Financial services*	1,159	1,144	746
Total operating profit*	9,508	8,012	4,305
Interest income	159	82	62
Interest expense	(390)	(368)	(329)
Foreign exchange gains (losses) from equipment operations' financing activities	(103)	(45)	17
Pension and OPEB benefit (cost), excluding service cost component	218	183	31
Corporate expenses – net	(255)	(241)	(251)
Income taxes	(2,007)	(1,658)	(1,082)
Total	(2,378)	(2,047)	(1,552)
Net income	7,130	5,965	2,753
Less: Net income (loss) attributable to noncontrolling interests	(1)	2	2
Net income attributable to Deere & Company	\$ 7,131	\$ 5,963	\$ 2,751

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

Interest income*			
Production & precision ag	\$ 22	\$ 21	\$ 22
Small ag & turf	24	21	16
Construction & forestry	8	10	12
Financial services	2,245	1,999	2,122
Corporate	159	82	62
Intercompany	(431)	(279)	(272)
Total	\$ 2,027	\$ 1,854	\$ 1,962

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

Interest expense			
Production & precision ag	\$ 122	\$ 84	\$ 76
Small ag & turf	105	87	111
Construction & forestry	72	46	61
Financial services	799	687	942
Corporate	390	368	329
Intercompany	(426)	(279)	(272)
Total	\$ 1,062	\$ 993	\$ 1,247

Depreciation* and amortization expense			
Production & precision ag	\$ 523	\$ 495	\$ 480
Small ag & turf	236	245	247
Construction & forestry	282	303	289
Financial services	1,050	1,140	1,227
Intercompany	(196)	(133)	(125)
Total	\$ 1,895	\$ 2,050	\$ 2,118

* Includes depreciation for equipment on operating leases.

OPERATING SEGMENTS	2022	2021	2020
Equity in income (loss) of unconsolidated affiliates			
Small ag & turf	\$ 1	\$ 2	\$ 2
Construction & forestry	5	16	(52)
Financial services	4	3	2
Total	\$ 10	\$ 21	\$ (48)

Identifiable operating assets			
Production & precision ag	\$ 8,414	\$ 7,021	\$ 5,708
Small ag & turf	4,451	3,959	3,266
Construction & forestry	6,754	6,457	6,322
Financial services	58,864	51,624	48,719
Corporate	11,547	15,053	11,076
Total	\$ 90,030	\$ 84,114	\$ 75,091

Capital additions			
Production & precision ag	\$ 649	\$ 458	\$ 431
Small ag & turf	329	253	223
Construction & forestry	217	183	157
Financial services	2	3	4
Total	\$ 1,197	\$ 897	\$ 815

Investments in unconsolidated affiliates			
Production & precision ag	\$ 10		\$ 1
Small ag & turf	84	\$ 31	29
Construction & forestry		122	144
Financial services	23	22	19
Total	\$ 117	\$ 175	\$ 193

28. SUBSEQUENT EVENTS

On December 7, 2022, a quarterly dividend of \$1.20 per share was declared at the Board of Directors meeting, payable on February 8, 2023 to stockholders of record on December 30, 2022.

In December 2022, the Board of Directors authorized the repurchase of up to \$18,000 million of additional common stock. This repurchase program will supplement the existing \$8,000 million share repurchase program, which had \$2,228 million remaining at October 30, 2022. Repurchases of the company's common stock will be made at the company's discretion in the open market.

DEERE & COMPANY
SELECTED FINANCIAL DATA

(Dollars in millions except per share amounts)

	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Net sales and revenues	\$ 52,577	\$ 44,024	\$ 35,540	\$ 39,258	\$ 37,358	\$ 29,738	\$ 26,644	\$ 28,863	\$ 36,067	\$ 37,795
Net sales	47,917	39,737	31,272	34,886	33,351	25,885	23,387	25,775	32,961	34,998
Finance and interest income	3,365	3,296	3,450	3,493	3,107	2,732	2,511	2,381	2,282	2,115
Research and development expenses	1,912	1,587	1,644	1,783	1,658	1,373	1,394	1,410	1,437	1,445
Selling, administrative and general expenses	3,863	3,383	3,477	3,551	3,455	3,098	2,791	2,868	3,266	3,558
Interest expense	1,062	993	1,247	1,466	1,204	899	764	680	664	741
Net income*	7,131	5,963	2,751	3,253	2,368	2,159	1,524	1,940	3,162	3,537
Return on net sales	14.9%	15.0%	8.8%	9.3%	7.1%	8.3%	6.5%	7.5%	9.6%	10.1%
Return on beginning Deere & Company stockholders' equity	38.7%	46.1%	24.1%	28.8%	24.8%	33.1%	22.6%	21.4%	30.8%	51.7%
Comprehensive income*	6,629	8,963	2,819	2,081	3,222	3,221	627	994	2,072	5,416
Net income per share – basic*	\$ 23.42	\$ 19.14	\$ 8.77	\$ 10.28	\$ 7.34	\$ 6.76	\$ 4.83	\$ 5.81	\$ 8.71	\$ 9.18
– diluted*	23.28	18.99	8.69	10.15	7.24	6.68	4.81	5.77	8.63	9.09
Dividends declared per share	4.36	3.61	3.04	3.04	2.58	2.40	2.40	2.40	2.22	1.99
Dividends paid per share	4.28	3.32	3.04	2.97	2.49	2.40	2.40	2.40	2.13	1.94
Average number of common shares outstanding (in millions) – basic	304.5	311.6	313.5	316.5	322.6	319.5	315.2	333.6	363.0	385.3
– diluted	306.3	314.0	316.6	320.6	327.3	323.3	316.6	336.0	366.1	389.2
Total assets	\$ 90,030	\$ 84,114	\$ 75,091	\$ 73,011	\$ 70,108	\$ 65,786	\$ 57,918	\$ 57,883	\$ 61,267	\$ 59,454
Trade accounts and notes receivable – net	6,410	4,208	4,171	5,230	5,004	3,925	3,011	3,051	3,278	3,758
Financing receivables – net	36,634	33,799	29,750	29,195	27,054	25,104	23,702	24,809	27,422	25,633
Financing receivables securitized – net	5,936	4,659	4,703	4,383	4,022	4,159	5,127	4,835	4,602	4,153
Equipment on operating leases – net	6,623	6,988	7,298	7,567	7,165	6,594	5,902	4,970	4,016	3,152
Inventories	8,495	6,781	4,999	5,975	6,149	3,904	3,341	3,817	4,210	4,935
Property and equipment – net	6,056	5,820	5,817	5,973	5,868	5,068	5,171	5,181	5,578	5,467
Short-term borrowings	12,592	10,919	8,582	10,784	11,062	10,035	6,911	8,425	8,018	8,787
Short-term securitization borrowings	5,711	4,605	4,682	4,321	3,957	4,119	4,998	4,585	4,553	4,103
Long-term borrowings	33,596	32,888	32,734	30,229	27,237	25,891	23,703	23,775	24,318	21,518
Total Deere & Company stockholders' equity	20,262	18,431	12,937	11,413	11,288	9,557	6,520	6,743	9,063	10,266
Book value per share*	\$ 67.82	\$ 59.83	\$ 41.25	\$ 36.45	\$ 35.45	\$ 29.70	\$ 20.71	\$ 21.29	\$ 26.23	\$ 27.46
Capital expenditures	\$ 1,176	\$ 867	\$ 762	\$ 1,084	\$ 969	\$ 586	\$ 668	\$ 655	\$ 1,004	\$ 1,132
Number of employees (at year end)	82,239	75,550	69,634	73,489	74,413	60,476	56,767	57,180	59,623	67,044

* Attributable to Deere & Company.

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