

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549

FORM 10-K

☒ Annual report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934
For the fiscal year ended December 31, 2020

or

☐ Transition report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934
For the transition period from _____ to _____
Commission file number 1-3950

Ford Motor Company

(Exact name of Registrant as specified in its charter)

Delaware
(State of incorporation)

38-0549190
(I.R.S. Employer Identification No.)

One American Road
Dearborn, Michigan
(Address of principal executive offices)

48126
(Zip Code)

313-322-3000
(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

<u>Title of each class</u>	<u>Trading symbols</u>	<u>Name of each exchange on which registered</u>
Common Stock, par value \$.01 per share	F	New York Stock Exchange
6.200% Notes due June 1, 2059	FPRB	New York Stock Exchange
6.000% Notes due December 1, 2059	FPRC	New York Stock Exchange

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

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

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

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

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

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

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

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

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

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

As of June 30, 2020, Ford had outstanding 3,907,530,652 shares of Common Stock and 70,852,076 shares of Class B Stock. Based on the New York Stock Exchange Composite Transaction closing price of the Common Stock on that date (\$6.08 per share), the aggregate market value of such Common Stock was \$23,757,786,364. Although there is no quoted market for our Class B Stock, shares of Class B Stock may be converted at any time into an equal number of shares of Common Stock for the purpose of effecting the sale or other disposition of such shares of Common Stock. The shares of Common Stock and Class B Stock outstanding at June 30, 2020 included shares owned by persons who may be deemed to be “affiliates” of Ford. We do not believe, however, that any such person should be considered to be an affiliate. For information concerning ownership of outstanding Common Stock and Class B Stock, see the Proxy Statement for Ford’s Annual Meeting of Stockholders currently scheduled to be held on May 13, 2021 (our “Proxy Statement”), which is incorporated by reference under various Items of this Report as indicated below.

As of January 29, 2021, Ford had outstanding 3,907,842,941 shares of Common Stock and 70,852,076 shares of Class B Stock. Based on the New York Stock Exchange Composite Transaction closing price of the Common Stock on that date (\$10.53 per share), the aggregate market value of such Common Stock was \$41,149,586,169.

DOCUMENTS INCORPORATED BY REFERENCE

Document	Where Incorporated
Proxy Statement*	Part III (Items 10, 11, 12, 13, and 14)

* As stated under various Items of this Report, only certain specified portions of such document are incorporated by reference in this Report.

Exhibit Index begins on page [92](#)

FORD MOTOR COMPANY
ANNUAL REPORT ON FORM 10-K
For the Year Ended December 31, 2020

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PART I.

ITEM 1. *Business.*

Ford Motor Company was incorporated in Delaware in 1919. We acquired the business of a Michigan company, also known as Ford Motor Company, which had been incorporated in 1903 to produce and sell automobiles designed and engineered by Henry Ford. We are a global company based in Dearborn, Michigan. With about 186,000 employees worldwide, the Company designs, manufactures, markets, and services a full line of Ford trucks, utility vehicles, and cars – increasingly including electrified versions – and Lincoln luxury vehicles; provides financial services through Ford Motor Credit Company LLC (“Ford Credit”); and is pursuing leadership positions in electrification; mobility solutions, including self-driving services; and connected vehicle services.

In addition to the information about Ford and our subsidiaries contained in this Annual Report on Form 10-K for the year ended December 31, 2020 (“2020 Form 10-K Report” or “Report”), extensive information about our Company can be found at <http://corporate.ford.com>, including information about our management team, brands, products, services, and corporate governance principles.

The corporate governance information on our website includes our Corporate Governance Principles, Code of Ethics for Senior Financial Personnel, Code of Ethics for the Board of Directors, Code of Corporate Conduct for all employees, and the Charters for each of the Committees of our Board of Directors. In addition, any amendments to our Code of Ethics or waivers granted to our directors and executive officers will be posted on our corporate website. All of these documents may be accessed by going to our corporate website, or may be obtained free of charge by writing to our Shareholder Relations Department, Ford Motor Company, One American Road, P.O. Box 1899, Dearborn, Michigan 48126-1899.

Our recent periodic reports filed with the Securities and Exchange Commission (“SEC”) pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, are available free of charge at <http://shareholder.ford.com>. This includes recent Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, and Current Reports on Form 8-K, as well as any amendments to those reports, and our Section 16 filings. We post each of these documents on our website as soon as reasonably practicable after it is electronically filed with the SEC. Our reports filed with the SEC also may be found on the SEC’s website at www.sec.gov.

Our Sustainability Report, which details our performance and progress toward our sustainability and corporate responsibility goals, is available at <http://sustainability.ford.com>.

The foregoing information regarding our website and its content is for convenience only and not deemed to be incorporated by reference into this Report nor filed with the SEC.

OVERVIEW

Below is a description of our reportable segments and other activities.

AUTOMOTIVE SEGMENT

The Automotive segment primarily includes the sale of Ford and Lincoln vehicles, service parts, and accessories worldwide, together with the associated costs to develop, manufacture, distribute, and service the vehicles, parts, and accessories. This segment includes revenues and costs related to our electrification vehicle programs. The segment includes the following regional business units: North America, South America, Europe, China (including Taiwan), and the International Markets Group.

General

Our vehicle brands are Ford and Lincoln. In 2020, we sold approximately 4,187,000 vehicles at wholesale throughout the world. See “Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations” (“Item 7”) for a discussion of our calculation of wholesale unit volumes.

Substantially all of our vehicles, parts, and accessories are sold through distributors and dealers (collectively, “dealerships”), the substantial majority of which are independently owned. At December 31, the approximate number of dealerships worldwide distributing our vehicle brands was as follows:

Brand	2019	2020
Ford	9,883	9,618
Ford-Lincoln (combined)	759	707
Lincoln	279	392
Total	10,921	10,717

We do not depend on any single customer or a few customers to the extent that the loss of such customers would have a material adverse effect on our business.

In addition to the products we sell to our dealerships for retail sale, we also sell vehicles to our dealerships for sale to fleet customers, including commercial fleet customers, daily rental car companies, and governments. We also sell parts and accessories, primarily to our dealerships (which, in turn, sell these products to retail customers) and to authorized parts distributors (which, in turn, primarily sell these products to retailers). We also offer extended service contracts.

The worldwide automotive industry is affected significantly by general economic and political conditions over which we have little control. Vehicles are durable goods, and consumers and businesses have latitude in determining whether and when to replace an existing vehicle. The decision whether to purchase a vehicle may be affected significantly by slowing economic growth, geopolitical events, and other factors (including the cost of purchasing and operating cars, trucks, and utility vehicles and the availability and cost of financing and fuel). As a result, the number of cars, trucks, and utility vehicles sold may vary substantially from year to year. Further, the automotive industry is a highly competitive business that has a wide and growing variety of product and service offerings from a growing number of manufacturers.

Item 1. Business (Continued)

Our wholesale unit volumes vary with the level of total industry demand and our share of that industry demand. Our wholesale unit volumes also are influenced by the level of dealer inventory. Our share is influenced by how our products are perceived by customers in comparison to those offered by other manufacturers based on many factors, including price, quality, styling, reliability, safety, fuel efficiency, functionality, and reputation. Our share also is affected by the timing and frequency of new model introductions. Our ability to satisfy changing consumer and business preferences with respect to type or size of vehicle, as well as design and performance characteristics, affects our sales and earnings significantly.

As with other manufacturers, the profitability of our business is affected by many factors, including:

- Wholesale unit volumes
- Margin of profit on each vehicle sold - which, in turn, is affected by many factors, such as:
 - Market factors - volume and mix of vehicles and options sold, and net pricing (reflecting, among other factors, incentive programs)
 - Costs of components and raw materials necessary for production of vehicles
 - Costs for customer warranty claims and additional service actions
 - Costs for safety, emissions, and fuel economy technology and equipment
- A high proportion of relatively fixed structural costs, so that small changes in wholesale unit volumes can significantly affect overall profitability

Our industry has a very competitive pricing environment, driven in part by industry excess capacity. For the past several decades, manufacturers typically have given price discounts and other marketing incentives to provide value for customers and maintain market share and production levels. The decline in value of foreign currencies in the past has contributed significantly to competitive pressures in many of our markets. The U.S. administration has sought to address this issue with currency provisions that were included in the United States-Mexico-Canada Agreement and United States-China trade deals.

Competitive Position. The worldwide automotive industry consists of many producers, with no single dominant producer. Certain manufacturers, however, account for the major percentage of total sales within particular countries, especially their countries of origin.

Seasonality. We manage our vehicle production schedule based on a number of factors, including retail sales (i.e., units sold by our dealerships to their customers at retail) and dealer stock levels (i.e., the number of units held in inventory by our dealerships for sale to their customers). Historically, we have experienced some seasonal fluctuation in the business, with production in many markets tending to be higher in the first half of the year to meet demand in the spring and summer (typically the strongest sales months of the year). In 2020, because of production disruptions in the first half of the year due to COVID-19, production was higher in the second half of the year.

Backlog Orders. We generally produce and ship our products on average within approximately 20 days of an order becoming firm. Therefore, no significant amount of backlog orders accumulates during any period.

Raw Materials. We purchase a wide variety of raw materials from numerous suppliers around the world for use in the production of, and development of technologies in, our vehicles. These materials include base metals (e.g., steel and aluminum), precious metals (e.g., palladium), energy (e.g., natural gas), and plastics/resins (e.g., polypropylene). We believe we have adequate supplies or sources of availability of raw materials necessary to meet our needs; however, there always are risks and uncertainties with respect to the supply of raw materials that could impact availability in sufficient quantities and at cost effective prices to meet our needs. See the “Key Trends and Economic Factors Affecting Ford and the Automotive Industry” section of Item 7 for a discussion of supplier disruptions caused by a shortage of key components, as well as commodity and energy price changes, and “Item 7A. Quantitative and Qualitative Disclosures about Market Risk” (“Item 7A”) for a discussion of commodity price risks.

Intellectual Property. We own or hold licenses to use numerous patents, trade secrets, copyrights, and trademarks on a global basis. We expect to continue building this portfolio as we actively pursue innovation in every part of our business. We also own numerous trademarks and service marks that contribute to the identity and recognition of our Company and its products and services globally. While our intellectual property rights in the aggregate are important to the operation of each of our businesses, we do not believe that our business would be materially affected by the expiration of any particular intellectual property right or termination of any particular intellectual property agreement.

Item 1. Business (Continued)

Warranty Coverage, Field Service Actions, and Customer Satisfaction Actions. We provide warranties on vehicles we sell. Warranties are offered for specific periods of time and/or mileage, and vary depending upon the type of product and the geographic location of its sale. Pursuant to these warranties, we will repair, replace, or adjust all parts on a vehicle that are defective in factory-supplied materials or workmanship during the specified warranty period. In addition to the costs associated with this warranty coverage provided on our vehicles, we also incur costs as a result of field service actions (i.e., safety recalls, emission recalls, and other product campaigns), and for customer satisfaction actions.

For additional information regarding warranty and related costs, see “Critical Accounting Estimates” in Item 7 and Note 25 of the Notes to the Financial Statements.

Wholesales

Wholesales consist primarily of vehicles sold to dealerships. For the majority of such sales, we recognize revenue when we ship the vehicles to our dealerships from our manufacturing facilities. See Item 7 for additional discussion of revenue recognition practices. Wholesales in each region and in certain key markets within each region during the past three years were as follows:

	Wholesales (a)		
	(in thousands of units)		
	2018	2019	2020
United States	2,540	2,412	1,826
Canada	295	289	210
Mexico	69	53	34
North America	2,920	2,765	2,081
Brazil	235	218	135
Argentina	86	47	31
South America	365	295	185
United Kingdom	387	367	208
Germany	313	328	211
EU20 (b)	1,388	1,317	904
Turkey	65	47	102
Europe	1,482	1,390	1,020
China (c)	732	535	617
Australia	65	64	57
India	98	73	46
ASEAN (d)	117	102	67
Russia	51	28	14
International Markets Group	483	401	284
Total Company	5,982	5,386	4,187

- (a) Wholesale unit volumes include sales of medium and heavy trucks. Wholesale unit volumes also include all Ford and Lincoln badged units (whether produced by Ford or by an unconsolidated affiliate) that are sold to dealerships, units manufactured by Ford that are sold to other manufacturers, units distributed by Ford for other manufacturers, and local brand units produced by our unconsolidated Chinese joint venture Jiangling Motors Corporation, Ltd. (“JMC”) that are sold to dealerships. Vehicles sold to daily rental car companies that are subject to a guaranteed repurchase option (i.e., rental repurchase), as well as other sales of finished vehicles for which the recognition of revenue is deferred (e.g., consignments), also are included in wholesale unit volumes. Revenue from certain vehicles in wholesale unit volumes (specifically, Ford badged vehicles produced and distributed by our unconsolidated affiliates, as well as JMC brand vehicles) are not included in our revenue.
- (b) EU20 markets are United Kingdom, Germany, France, Italy, Spain, Austria, Belgium, Czech Republic, Denmark, Finland, Greece, Hungary, Ireland, the Netherlands, Norway, Poland, Portugal, Romania, Sweden, and Switzerland.
- (c) China includes Taiwan.
- (d) ASEAN includes Philippines, Thailand, and Vietnam.

Retail Sales, Industry Volume, and Market Share

Retail sales, industry volume, and market share in each region and in certain key markets within each region during the past three years were as follows:

	Retail Sales (a) (in millions of units)			Industry Volume (b) (in millions of units)			Market Share (c) (as a percentage)		
	2018	2019	2020	2018	2019	2020	2018	2019	2020
United States	2.5	2.4	2.0	17.7	17.5	14.9	14.1 %	13.8 %	13.7 %
Canada	0.3	0.3	0.2	2.0	2.0	1.6	14.7	14.6	15.1
Mexico	0.1	0.1	—	1.5	1.4	1.0	4.8	4.4	4.0
North America	2.9	2.8	2.3	21.5	21.1	17.6	13.4	13.2	13.2
Brazil	0.2	0.2	0.1	2.6	2.8	2.1	9.2	8.1	6.8
Argentina	0.1	0.1	—	0.8	0.5	0.3	12.1	11.4	9.7
South America	0.4	0.3	0.2	4.5	4.3	3.1	8.3	7.2	6.2
United Kingdom	0.4	0.4	0.2	2.8	2.7	1.9	13.7	13.0	12.9
Germany	0.3	0.3	0.2	3.8	4.0	3.3	7.9	8.3	7.4
EU20 (d)	1.4	1.3	1.0	17.7	17.9	13.7	7.6	7.4	7.1
Turkey	0.1	—	0.1	0.6	0.5	0.8	10.9	10.1	12.4
Europe	1.5	1.4	1.1	19.0	19.2	15.1	7.6	7.3	7.2
China (e)	0.8	0.6	0.6	26.7	26.1	25.2	2.9	2.2	2.4
Australia	0.1	0.1	0.1	1.2	1.1	0.9	6.0	6.0	6.5
India	0.1	0.1	0.1	4.4	3.8	2.8	2.2	2.0	1.7
ASEAN (f)	0.1	0.1	0.1	1.7	1.8	1.3	6.6	5.9	5.3
Russia	0.1	—	—	1.8	1.8	1.5	2.9	1.6	0.9
International Markets Group	0.5	0.4	0.3	22.5	21.2	17.5	2.2	1.9	1.7
Global / Total Company	6.0	5.5	4.5	94.2	91.9	78.5	6.3 %	6.0 %	5.8 %

(a) Retail sales represents primarily sales by dealers and is based, in part, on estimated vehicle registrations; includes medium and heavy trucks.

(b) Industry volume is an internal estimate based on publicly available data collected from various government, private, and public sources around the globe; includes medium and heavy trucks.

(c) Market share represents reported retail sales of our brands as a percent of total industry volume in the relevant market or region.

(d) EU20 markets are United Kingdom, Germany, France, Italy, Spain, Austria, Belgium, Czech Republic, Denmark, Finland, Greece, Hungary, Ireland, the Netherlands, Norway, Poland, Portugal, Romania, Sweden, and Switzerland.

(e) China includes Taiwan; China market share includes Ford brand and JMC brand vehicles produced and sold by our unconsolidated affiliates.

(f) ASEAN includes Philippines, Thailand, and Vietnam.

U.S. Sales by Type

The following table shows U.S. retail sales volume and U.S. wholesales segregated by truck, sport utility vehicle (“SUV”), and car sales. U.S. retail sales volume reflects transactions with (i) retail and fleet customers (as reported by dealers), (ii) government, and (iii) Ford management. U.S. wholesales reflect sales to dealers.

	U.S. Retail Sales		U.S. Wholesales	
	2019	2020	2019	2020
Trucks	1,243,136	1,102,097	1,285,859	953,165
SUVs	830,471	749,583	816,933	712,623
Cars	349,091	193,064	309,413	160,449
Total Vehicles	2,422,698	2,044,744	2,412,205	1,826,237

MOBILITY SEGMENT

The Mobility segment primarily includes development costs for Ford's autonomous vehicles and related businesses, Ford's equity ownership in Argo AI (a developer of autonomous driving systems), and other mobility businesses and investments (including Spin, a micro-mobility service provider). Effective January 1, 2021, the costs and benefits related to Ford's enterprise connectivity activities included in the Mobility segment will be reported in the Automotive segment.

FORD CREDIT SEGMENT

The Ford Credit segment is comprised of the Ford Credit business on a consolidated basis, which is primarily vehicle-related financing and leasing activities.

Ford Credit offers a wide variety of automotive financing products to and through automotive dealers throughout the world. The predominant share of Ford Credit's business consists of financing our vehicles and supporting our dealers. Ford Credit earns its revenue primarily from payments made under retail installment sale and finance lease (retail financing) and operating lease contracts that it originates and purchases; interest rate supplements and other support payments from us and our affiliates; and payments made under dealer financing programs.

As a result of these financing activities, Ford Credit has a large portfolio of finance receivables and operating leases which it classifies into two portfolios—"consumer" and "non-consumer." Finance receivables and operating leases in the consumer portfolio include products offered to individuals and businesses that finance the acquisition of our vehicles from dealers for personal and commercial use. Retail financing includes retail installment sale contracts for new and used vehicles and finance leases (comprised of sales-type and direct financing leases) for new vehicles to retail and commercial customers, including leasing companies, government entities, daily rental companies, and fleet customers. Finance receivables in the non-consumer portfolio include products offered to automotive dealers. Ford Credit makes wholesale loans to dealers to finance the purchase of vehicle inventory, also known as floorplan financing, as well as loans to dealers to finance working capital and improvements to dealership facilities, finance the purchase of dealership real estate, and finance other dealer vehicle programs. Ford Credit also purchases receivables generated by us and our affiliates, primarily related to the sale of parts and accessories to dealers and certain used vehicles from daily rental fleet companies. Ford Credit also provides financing to us for vehicles that we lease to our employees.

Ford Credit does business in the United States and Canada through business centers. Outside of the United States, Europe is Ford Credit's largest operation. Ford Credit's European operations are managed primarily through its United Kingdom-based subsidiary, FCE Bank plc ("FCE"). Within Europe, Ford Credit's largest markets are the United Kingdom and Germany.

See Item 7 and Notes 10 and 12 of the Notes to the Financial Statements for a detailed discussion of Ford Credit's receivables, credit losses, allowance for credit losses, loss-to-receivables ratios, funding sources, and funding strategies. See Item 7A for a discussion of how Ford Credit manages its financial market risks.

We routinely sponsor special retail financing and lease incentives to dealers' customers who choose to finance or lease our vehicles from Ford Credit. In order to compensate Ford Credit for the lower interest or lease payments offered to the retail customer, we pay the discounted value of the incentive directly to Ford Credit when it originates the retail finance or lease contract with the dealer's customer. These programs increase Ford Credit's financing volume and share. See Note 2 of the Notes to the Financial Statements for information about our accounting for these programs.

We have a Second Amended and Restated Relationship Agreement with Ford Credit, pursuant to which, if Ford Credit's managed leverage for a calendar quarter were to be higher than 11.5:1 (as reported in its most recent periodic report), Ford Credit could require us to make or cause to be made a capital contribution to it in an amount sufficient to have caused such managed leverage to have been 11.5:1. No capital contributions have been made pursuant to this agreement. In a separate agreement with FCE, Ford Credit has agreed to maintain FCE's net worth in excess of \$500 million. No payments have been made pursuant to that agreement.

Ford Credit files periodic reports with the SEC that contain additional information regarding Ford Credit. The reports are available through Ford Credit's website located at www.fordcredit.com/investor-center and can also be found on the SEC's website located at www.sec.gov.

The foregoing information regarding Ford Credit's website and its content is for convenience only and not deemed to be incorporated by reference into this Report nor filed with the SEC.

CORPORATE OTHER

Corporate Other primarily includes corporate governance expenses, interest income (excluding interest earned on our extended service contract portfolio that is included in our Automotive segment) and gains and losses from our cash, cash equivalents, marketable securities and other investments, and foreign exchange derivatives gains and losses associated with intercompany lending. Corporate governance expenses are primarily administrative, delivering benefit on behalf of the global enterprise, and are not allocated to specific Automotive business units or operating segments. These include expenses related to setting and directing global policy, providing oversight and stewardship, and promoting the Company's interests.

Effective January 1, 2021, (i) cash and other centrally managed corporate assets reported in the Automotive segment will be realigned to Corporate Other, and (ii) certain corporate governance expenses that benefit the global enterprise reported in the Automotive segment will be reported as part of Corporate Other.

INTEREST ON DEBT

Interest on Debt consists of interest expense on Automotive and Other debt.

GOVERNMENTAL STANDARDS

Many governmental standards and regulations relating to safety, fuel economy, emissions control, noise control, vehicle recycling, substances of concern, vehicle damage, and theft prevention are applicable to new motor vehicles, engines, and equipment. In addition, manufacturing and other automotive assembly facilities are subject to stringent standards regulating air emissions, water discharges, and the handling and disposal of hazardous substances. The most significant of the standards and regulations affecting us are discussed below:

Vehicle Emissions Control

U.S. Requirements - Federal and California Tailpipe Emission Standards. Both the U.S. Environmental Protection Agency ("EPA") and the California Air Resources Board ("CARB") have established motor vehicle tailpipe and evaporative emissions standards that become increasingly stringent over time. Thirteen states have adopted California's light-duty standards, and other states may join them. Both federal and California regulations also require motor vehicles to be equipped with on-board diagnostic ("OBD") systems that monitor emission-related systems and components. In addition, light- and medium-duty vehicles and heavy-duty engines must be certified by EPA prior to sale in the United States and by CARB prior to sale in California and the relevant states. Canada accepts EPA certification. Compliance with emissions standards, OBD requirements, and related regulations can be challenging and can drive increased product development costs, warranty costs, and vehicle recalls.

CARB is in the process of adopting new emissions regulations applicable to model year 2024 heavy-duty engines, and EPA has announced that it intends to adopt more stringent heavy-duty standards as well. These rules are likely to include more stringent emissions standards as well as new requirements affecting durability testing, warranty, and OBD. CARB has also begun to develop new light-duty emissions standards expected to include a more stringent fleet-average emissions standard and add other new emissions limits. These new rules are expected to impose increased challenges and costs on the development of light-duty vehicles and heavy-duty engines.

Compliance with automobile emissions standards depends in part on the widespread availability of high-quality and consistent automotive fuels that the vehicles were designed to use. Legislative, regulatory, and judicial developments related to fuel quality at both the national and state levels could affect vehicle manufacturers' warranty costs as well as their ability to comply with vehicle emissions standards.

The California vehicle emissions program also includes requirements for manufacturers to produce and deliver for sale zero-emission vehicles ("ZEVs"). The current light-duty vehicle ZEV regulation, which uses a system based on credits that can be banked and carried forward, mandates substantial annual increases in the production and sale of battery-electric, fuel cell, and plug-in hybrid vehicles through the 2025 model year. At that time, the regulation will require credits equating to 22 percent of a manufacturer's California light-duty vehicle sales volume. California has also instituted ZEV regulations aimed at medium- and heavy-duty vehicles, beginning with the 2024 model year. These medium- and heavy-duty rules, which could entail significant costs and compliance challenges, include complex warranty and recall requirements for some vehicle configurations. Compliance with ZEV rules depends on market conditions as well as the availability of adequate infrastructure to support vehicle charging.

European Requirements. European Union (“EU”) directives and related legislation limit the amount of regulated pollutants that may be emitted by new motor vehicles and engines sold in the EU. Regulatory stringency has increased significantly since 2014 when Stage VI emission standards were introduced. Since then, a laboratory test cycle for CO₂ and emissions was implemented in 2017, followed by the introduction of on-road emission testing using portable emission analyzers (Real Driving Emission or “RDE”). These on-road emission tests are in addition to the laboratory-based tests. The divergence between the regulatory limit that is tested in laboratory conditions and the allowed values measured in RDE tests will ultimately be reduced to zero as the regulatory demands increase. The costs associated with complying with these requirements are significant, and following the EU Commission’s indication of its intent to accelerate emissions rules in its road map publication “EU Green Deal” as well as the EU sustainable mobility action plan, the challenges will continue. In addition, the Whole Vehicle Type Approval (“WVTA”) regulation has been updated to increase the stringency of in-market surveillance. Moreover, following the United Kingdom’s withdrawal from the EU, we may be subject to diverging requirements in our European markets, which could increase vehicle complexity and duties.

There is an increasing trend of city access restrictions for internal combustion engine powered vehicles, particularly in European cities that do not meet air quality limits. The access rules being introduced are developed by individual cities based on their specific concerns, resulting in rapid deployment of access rules that differ greatly among cities. The speed of implementation of access rules may directly influence customer vehicle residual values and choice of next purchase, and there is a risk that these rules may result in the need for customers to retrofit their vehicles with emission after-treatment systems. In an effort to support the Paris Accord, some countries are adopting yearly increases in CO₂ taxes, where such a system is in place, and publishing dates by when internal combustion powered vehicles may no longer be registered, e.g., Norway in 2025 and the United Kingdom and the Netherlands in 2030.

Other National Requirements. Many countries, in an effort to address air quality and climate change concerns, are adopting previous versions of European or United Nations Economic Commission for Europe (“UN-ECE”) mobile source emission regulations. Some countries have adopted more advanced regulations based on the most recent version of European or U.S. regulations. For example, the China Stage VI emission standards, based on European Stage VI emission standards for light duty vehicles, U.S. evaporative and refueling emissions standards, and CARB OBD II requirements, incorporate two levels of stringency for tailpipe emissions. Level one (VI(a)) was implemented in July 2020, and the more stringent level two (VI(b)) is slated for implementation in July 2023. The government has encouraged the more economically developed cities to pull-ahead implementation. The earliest implementation of VI(a) began in July 2019, with a few areas, such as Shanghai and Guangdong province, implementing VI(b). China Stage VII emission regulations are currently under consideration, and the Ministry of Ecology and Environment has advised that the Stage VII regulations will have more stringent limits on pollutant emissions and will establish limits for greenhouse gas (primarily CO₂) tailpipe emissions.

Canadian criteria emissions regulations are largely aligned with U.S. requirements; however, the existing ZEV regulations in Quebec and those published in British Columbia in July 2020 are more stringent than those in place in California.

Elsewhere, there is a mix of regulations and processes based on U.S. and EU standards. Not all countries have adopted appropriate fuel quality standards to accompany the stringent emission standards adopted. This could lead to compliance problems, particularly if OBD or in-use surveillance requirements are implemented.

Global Developments. In recent years, EPA and CARB have increased their focus on the use of “defeat devices.” Defeat devices are elements of design (typically embedded in software) that improperly cause the emission control system to function less effectively during normal on-road driving than during an official laboratory emissions test, without justification. They are prohibited by law in many jurisdictions, and we do not use defeat devices in our vehicles.

Regulators around the world continue to scrutinize automakers’ emission testing, which has led to a number of defeat device settlements by various manufacturers. EPA is carrying out additional non-standard tests as part of its vehicle certification program. CARB has also been conducting extensive non-standard emission tests, which in some cases have resulted in certification delays for diesel vehicles. In the past, several European countries have conducted non-standard emission tests and published the results, and, in some cases, this supplemental testing has triggered investigations of manufacturers for possible defeat devices. Testing is expected to continue on an ongoing basis. In addition, plaintiffs’ attorneys are pursuing consumer class action lawsuits based on alleged excessive emissions from cars and trucks, which could, in turn, prompt further investigations by regulators.

Vehicle Fuel Economy and Greenhouse Gas Standards

U.S. Requirements - Light-Duty Vehicles. Federal law requires that light duty vehicles meet minimum corporate average fuel economy (“CAFE”) standards set by the National Highway Traffic Safety Administration (“NHTSA”). Manufacturers are subject to substantial civil penalties if they fail to meet the CAFE standard in any model year, after taking into account all available credits for the preceding five model years and expected credits for the three succeeding model years. The law requires NHTSA to promulgate and enforce separate CAFE standards applicable to each manufacturer’s fleet of domestic passenger cars, imported passenger cars, and light-duty trucks.

EPA also regulates vehicle greenhouse gas (“GHG”) emissions under the Clean Air Act. Because the vast majority of GHGs emitted by a vehicle are the result of fuel combustion, GHG emission standards are similar to fuel economy standards. Thus, NHTSA and EPA coordinate with each other on their fuel economy and GHG standards, respectively, to avoid potential inconsistencies.

Since the 2012 model year, EPA and NHTSA have jointly promulgated harmonized GHG and fuel economy regulations under what came to be known as the “One National Program” (“ONP”) framework. California, which had promulgated its own state-specific set of GHG regulations, agreed that compliance with the federal program would satisfy compliance with its own GHG requirements, thereby avoiding a patchwork of potentially conflicting federal and state GHG standards. ONP has required manufacturers to achieve increasingly stringent year-over-year standards.

ONP was envisioned to continue at least through the 2025 model year. The ONP rules provided for a mid-term evaluation process under which, by April 2018, EPA and NHTSA would re-evaluate the standards for model years 2022-2025 in order to ensure that they are feasible and optimal in light of intervening events. As a result of the mid-term evaluation process, the federal government issued a rule that significantly reduced the stringency of 2021-2026 fuel economy and GHG standards. The federal government also took the position that California’s vehicle GHG standards are preempted by federal law, together with other states that opted-in to California’s standards. California, which continues to assert its authority to regulate vehicle GHGs and has challenged in court the federal government’s preemption actions, took steps to withdraw from ONP and plans to return to enforcing its own state-specific GHG standard if it prevails in the litigation that is underway. The federal government’s revised fuel economy and GHG standards rule is also being challenged in court by a coalition of states and non-governmental organizations (“NGOs”).

The litigation over both standards and preemption, with uncertain outcomes, creates difficulty for purposes of Ford’s future product planning. One plausible outcome is a “bifurcated” scenario in which California, along with the 13 states that have adopted California’s GHG standards, enforce one set of rules, while a different set of rules applies in the rest of the country. Such an outcome would impose a layer of complexity on Ford’s product planning, testing, certification, and distribution activities. In an effort to avoid such an outcome and mitigate the current regulatory uncertainty, Ford reached an agreement with California on a set of terms for an alternative framework. Under this framework, Ford will meet a designated set of standards on a national basis in lieu of the California regulatory program. This framework enables Ford to continue its product planning on a nationwide basis, and it is also consistent with Ford’s environmental goals. Ford finalized its agreement with California in August 2020, and other states that opted into the California standards indicated they would respect the agreement.

While the California agreement helps mitigate the current regulatory uncertainty, it does not resolve all potential risks or litigation outcomes. The new presidential administration may re-evaluate the stringency of fuel economy and GHG standards and/or reinstate California’s authority to enforce its own GHG standards. Ford would face increased costs and complexity if the federal standards are revised to be more stringent than the California agreement. If any federal or state agency imposes and enforces fuel economy and GHG standards that are misaligned with market conditions, Ford would likely be forced to take various actions that could have substantial adverse effects on our sales volumes and results of operations. Such actions likely would include restricting offerings of selected engines and popular options; increasing market support programs for Ford’s most fuel-efficient vehicles; and ultimately curtailing the production and sale of certain vehicles, such as high-performance cars, utilities, and/or full-size light trucks in order to maintain compliance.

U.S. Requirements - Heavy-Duty Vehicles. EPA and NHTSA have jointly promulgated GHG and fuel economy standards for heavy-duty vehicles (generally, vehicles over 8,500 pounds gross vehicle weight rating) through the 2027 model year. In Ford’s case, the standards primarily affect heavy-duty pickup trucks and vans, plus vocational vehicles such as shuttle buses and delivery trucks. As the heavy-duty standards increase in stringency, it may become more difficult to comply while continuing to offer a full lineup of heavy-duty trucks.

Item 1. Business (Continued)

European Requirements. The EU regulates passenger car and light commercial vehicle CO₂ emissions using sliding scales with different CO₂ targets for each manufacturer based on the respective average vehicle weight for its fleet of vehicles first registered in a calendar year, with separate targets for passenger cars and light commercial vehicles. A penalty system applies to manufacturers failing to meet the individual CO₂ targets. Pooling agreements between manufacturers to utilize credits are possible under certain conditions, and we have entered into such pooling agreements in order to comply with fuel economy regulations without paying a penalty and to enable other manufacturers to benefit from our positive CO₂ performance. For “multi-stage vehicles” (e.g., Ford’s Transit chassis cabs), the base manufacturer (e.g., Ford) is fully responsible for the CO₂ performance of the final up-fitted vehicles. The initial target levels get significantly more stringent every five years (2020, 2025, 2030), requiring significant investments in propulsion technologies and extensive fleet management forcing low CO₂ emissions. Delayed launches, supply shortages, or lower demand for low CO₂ emission vehicles, as well as a limited charging infrastructure, can trigger compliance risks.

The EU Commission is investigating the introduction of Real Driving CO₂ and Life Cycle Assessment elements, and heavy-duty vehicles are addressed in separate regulations with analogous requirements and challenges. As discussed above, the EU Commission has announced a “Green Deal” that is likely to trigger more stringent requirements for CO₂ emissions and other regulated emissions and include recycling and substance restrictions. The announcement also included a pull ahead of revision dates for the CO₂ fleet regulation. The EU Commission targets net climate neutrality by 2050 and a more ambitious 2030 interim target (a 50-55% instead of 40% CO₂ reduction compared to 1990).

Outside of the EU, the United Kingdom and Switzerland have introduced similar rules. Ford faces the risk of advance premium payment requirements for both passenger cars as well as for light commercial vehicles due to, for example, unexpected market fluctuations and shorter lead times impacting average fleet performance.

The United Nations developed a technical regulation for passenger car emissions and CO₂. This world light duty test procedure (“WLTP”) is focused primarily on better aligning laboratory CO₂ and fuel consumption figures with customer-reported figures. The introduction of WLTP in Europe started in September 2017 and requires updates to CO₂ labeling, thereby impacting taxes in countries with a CO₂ tax scheme as well as CO₂ fleet regulations for passenger cars and light commercial vehicles. Costs associated with new or incremental testing for WLTP are significant.

Some European countries have implemented or are considering other initiatives for reducing CO₂ vehicle emissions, including fiscal measures and CO₂ labeling to address country specific targets associated with the Paris Accord. For example, the United Kingdom, France, Germany, Spain, Portugal, and the Netherlands, among others, have introduced taxation based on CO₂ emissions. The EU CO₂ requirements are likely to trigger further measures.

Other National Requirements. The Canadian federal government regulates vehicle GHG emissions under the Canadian Environmental Protection Act. In October 2014, the Canadian federal government published the final changes to the regulation for light-duty vehicles, which maintain alignment with U.S. EPA vehicle GHG standards for the 2017-2025 model years. The revised U.S. EPA standards were automatically adopted in Canada by reference for the 2022-2025 model years; however, Canada is also undertaking a mid-term evaluation of the standards for the 2022 model year and beyond, the outcome of which remains uncertain and may be influenced by U.S. actions. The Canadian federal government is expected to conclude the mid-term evaluation in the first quarter of 2021. The heavy-duty vehicle and engine GHG emissions regulations for the 2021 model year and beyond were published in May 2018 and are in line with U.S. requirements, subject to any change in those requirements under the new U.S. presidential administration.

The China fuel consumption requirement uses a weight-based approach to establish targets, specifies year-over-year target reductions, and requires mandated volumes of New Energy Vehicle (“NEV”), i.e., plug-in hybrids, battery electric vehicles, or fuel cell vehicles, credits. The requirement is for NEV credits to be at least 14%, 16%, and 18% of the annual ICE vehicle production or import fleet volume in 2021, 2022, and 2023, respectively. China’s 2020 fuel consumption industry fleet average was set at 5.0L/100km and lowers to 4.0L/100km by 2025 based on the New European Driving Cycle (“NEDC”) system. The government is projecting further fuel consumption reductions in 2030 and is targeting 3.2L/100km. The fuel efficiency targets and NEV mandate will impact the costs of vehicle technology in the future.

As discussed below in Item 1A. Risk Factors under “*Ford may need to substantially modify its product plans to comply with safety, emissions, fuel economy, autonomous vehicle, and other regulations,*” a production disruption, stop ship, lower than planned market acceptance of our vehicles, or other intervening events may cause us to modify our product plans or, in some cases, purchase credits in order to comply with fuel economy standards.

Vehicle Safety

U.S. Requirements. The National Traffic and Motor Vehicle Safety Act of 1966 (the “Safety Act”) regulates vehicles and vehicle equipment in two primary ways. First, the Safety Act prohibits the sale in the United States of any new vehicle or equipment that does not conform to applicable vehicle safety standards established by NHTSA. Meeting or exceeding many safety standards is costly and has continued to evolve as global compliance and public domain (e.g., New Car Assessment Programs (“NCAPs”), Insurance Institute for Highway Safety (“IIHS”)) requirements continue to evolve, are increasing in demands, and lack harmonization globally. As we expand our business priorities to include autonomous vehicles and broader mobility products and services, our financial exposure has increased. Second, the Safety Act requires that defects related to motor vehicle safety be remedied through safety recall campaigns. A manufacturer is obligated to recall vehicles if it determines the vehicles do not comply with a safety standard. Should we or NHTSA determine that either a safety defect or noncompliance issue exists with respect to any of our vehicles, the cost of such recall campaigns could be substantial.

European Requirements. The EU has established vehicle safety standards and regulations and is likely to adopt additional or more stringent requirements in the future, especially in the areas of access to in-vehicle data and autonomous vehicles.

The European General Safety Regulation (“GSR”) introduced UN-ECE regulations, which will be required for the European Type Approval process. The GSR includes the mandatory introduction of multiple active and passive safety features, including cybersecurity requirements for new vehicle models in 2022 and for all registrations in 2024. EU regulators also are focusing on active safety features, such as lane departure warning systems, electronic stability control, and automatic brake assist.

Other National Requirements. Globally, governments generally have been adopting UN-ECE based regulations with minor variations to address local concerns. Any difference between North American and UN-ECE based regulations can add complexity and costs to the development of global platform vehicles, and we continue to support efforts to harmonize regulations to reduce vehicle design complexity while providing a common level of safety performance; several on-going bilateral negotiations on free trade can potentially contribute to this goal.

Safety and recall requirements in Brazil, China, India, and Gulf Cooperation Council countries also may add substantial costs and complexity to our global recall practice. Brazil has set mandatory fleet safety targets, and penalties are applied, if these levels are not maintained, while a tax reduction may be available for over-performance. In Canada, regulatory requirements are currently aligned with U.S. regulations; however, under the Canadian Motor Vehicle Safety Act, the Minister of Transport has broad powers to order manufacturers to submit a notice of defect or non-compliance when the Minister considers it to be in the interest of safety. In China, a new mandatory Event Data Recorder regulation that is more complex than U.S. requirements has been released, and in China, Malaysia, and South Korea, mandatory e-Call requirements are being drafted. E-Call is mandatory in the UAE for new vehicles beginning with the 2021 model year.

New Car Assessment Programs. Organizations around the world rate and compare motor vehicles in NCAPs to provide consumers and businesses with additional information about the safety of new vehicles. NCAPs use crash tests and other evaluations that are different than what is required by applicable regulations, and use stars to rate vehicle safety, with five stars awarded for the highest rating and one for the lowest. Achieving high NCAP ratings, which may vary by country or region, can add complexity and cost to vehicles. Similarly, environmental rating systems exist in various regions, e.g., Green NCAP in Europe. In China, C-NCAP has a stringent rating structure to decrease the number of five-star ratings. Further, the China Insurance Auto Safety Index (similar to IIHS) has been implemented, with higher standards for passenger and pedestrian protection and driver assistance technologies.

HUMAN CAPITAL RESOURCES

People Strategy and Governance

Caring for each other through valuing diversity, embracing inclusion, celebrating success, encouraging new thinking, supporting each other through change, and winning as a team is a key element of our plan to drive long-term business success. Ford maintains an Executive People Forum consisting of the CEO and top leadership team that meets multiple times a month with a specific focus on people and organizational topics that will enable and accelerate delivery of the business plan. Key topic areas include our Enterprise People Strategy, Diversity & Inclusion, Organizational Fitness and Workforce Planning, and Leadership Development and Culture.

Our Board of Directors and Board committees provide important oversight on certain human capital matters, including items discussed at the Executive People Forum. The Compensation Committee maintains responsibility to review, discuss, and set strategic direction for various people-related business strategies, including our compensation and benefit programs, leadership succession planning, culture, diversity and inclusion, and talent development programs. The Sustainability and Innovation Committee is responsible for discussing and advising management on maintaining and improving sustainability strategies, the implementation of which create value consistent with the long-term preservation and enhancement of shareholder value and social well-being, including human rights, working conditions, and responsible sourcing. The collective recommendations to the Board and its committees are how we proactively manage our human capital and care for our employees in a manner that is consistent with our Ford values.

Diversity, Equity, and Inclusion

At Ford, we believe that creating a Culture of Belonging for all our employees is foundational to our success and morally the right thing to do. Ford offers 11 Employee Resource Groups (“ERGs”) that represent various dimensions of our employee population, including racial, ethnic, gender, religious, sexual orientation and gender identity, ability, and generational communities with chapters throughout the world, in addition to Diversity and Inclusion (“D&I”) Councils in every region. Our ERGs and D&I Councils are instrumental in providing a voice to our globally diverse workforce and to help us better understand the employee experience.

In 2020, we conducted a comprehensive Diversity, Equity, and Inclusion (“DEI”) Audit in the United States with plans for a global rollout in 2021. The purpose of the audit, which included qualitative data, quantitative data, and deep ethnography, is to accelerate our efforts to improve the employee experience and cultivate a culture of belonging. As a result of this effort, we have taken several concrete steps, including initiating a monthly CEO DEI Forum with top leadership and embedding DEI into our corporate strategy and governance with clear objectives for progress established for every senior leader. Several additional actions are planned for the first half of 2021 that will demonstrate our commitment to transparency, inclusion, and the important role that our People Leaders will play in further enhancing our culture of belonging. Our diversity statistics include the following as of December 31, 2020 (based on self-reporting at the date of hire): 27.7% of our salaried employees worldwide are females (excludes certain employees in Europe in accordance with the European Union’s General Data Protection Regulation); 25.1% of our total salaried and hourly employees in the United States are females; and 34.4% of our total salaried and hourly employees in the United States are minorities.

Talent Attraction, Growth, and Capability Assessment

In an environment where many employees are no longer bound to physical locations, where and how we source our talent is evolving. From a growth perspective, we are focusing on several key segments vital to our success (e.g., software, electrification, and data science). We have added a substantial number of employees to our salaried workforce since January 2020 to support these emerging areas of the business. From a capability perspective, we are leveraging best practices in assessments and talent management to strengthen our current capabilities and future pipeline while reinforcing a culture of belonging, empowerment, and innovation. Further, we are also creating targeted learning experiences, democratizing learning and career development opportunities across the organization, and empowering employees to design their own career paths with skill development targeted for the roles of today and the future. Finally, the extent to which our People Leaders are equipped to care for, inspire, and empower our people plays a vital role in our strategy, and we are committed to helping our leaders strengthen these capabilities with dedicated learning paths and non-traditional learning opportunities.

Employee Health and Safety

Nothing is more important than the health, safety, and well-being of our people, and we work hard to achieve world-class levels of safety year-over-year, through the application of policies and best practices. We maintain a robust safety culture to reduce workplace injuries, supported by effective communication, reporting, and external benchmarking. We hold regular talks and events on key safety issues, including reporting all injuries, hazards, and near-misses, to prevent recurrences. We also participate in multi-industry groups, within and outside the automotive sector, to share safety best practices and collaborate to address common issues.

Our Safety Record

Any loss of life or serious injury in the workplace is unacceptable and deeply regretted. We did not have any fatal incidents at any of our facilities in 2020. Another key safety indicator, our global lost-time case rate ("LTCR"), decreased from 0.39 in 2019 to 0.31 in 2020. LTCR is defined as the number of cases where one or more working days is lost due to work-related injury/illness per 200,000 hours worked.

Ford Motor Company also embarked on a complex journey to address the people and business implications of the COVID-19 pandemic, including how we support and protect our employees, the communities where we operate, and our Company assets. After idling our manufacturing facilities, our priority was to create the COVID-19 Business Resumption Plan, i.e., "The Return-To-Work Playbook." The Return-To-Work Playbook is our corporate guideline and aligns with recommendations from the World Health Organization, the Centers for Disease Control and Prevention, and country and local health departments. The Playbook's core objective is to protect our employees and provide a safe work environment. The main elements of the Playbook include:

- Guidelines and requirements for completion of a daily health check survey
- Guidelines for temperature scanning prior to entering facilities
- Guidelines for appropriate use and application of Personal Protective Equipment
- Guidelines and recommendations for social distancing inside and outside of workstations
- Cleaning and disinfecting workstations and common areas
- Guidelines supporting handwashing methods and frequency
- Placement strategy for hand sanitizer stations

We will continue to be vigilant and proactive in our efforts to effectively manage the COVID-19 pandemic.

Employee Wellbeing Initiatives

Our global, holistic approach to wellbeing encompasses the financial, social, mental/emotional, physical, and professional needs of our employees. Foundational to our wellbeing philosophy is providing a broad array of resources and solutions to educate employees and build capability and support for meeting individual wellbeing needs and goals. Our wellbeing program is an integral part of our total rewards strategy as we work to address business and employee challenges through a multi-channel approach that provides our diverse populations and global regions flexibility and choice to meet their specific needs.

We use data driven insights gathered through surveys, focus groups and claims data to prioritize our wellbeing programs. Through our wellbeing offerings, e.g., Work from Home support and enhanced childcare and parental resources, we provide employees the resources they need to achieve their own sense of wellbeing and build an environment where employees and People Leaders care for each other as we deliver the business objectives.

Employee Sentiment Strategy

We leverage our ask/listen/observe framework to understand employee sentiment at Ford. This approach is a holistic and consistent methodology that enables us to understand how employees are feeling in real time and act accordingly. Our measurement focuses on several areas that are key to our business: Employee Mental and Emotional Wellbeing, Health & Safety (including our COVID-19 safety protocols), Employee Experience, Culture, Diversity, Equity & Inclusion, Leadership, and Strategic Alignment. Our efforts to drive change in these areas are paying off. We surveyed our employees during 2020 after the onset of the pandemic; 91% of the respondents, which were primarily salaried employees, indicated that Ford's response to the pandemic helped them do what is best for their health and family. A critical element of our measurement program is ensuring that data ends up in the hands of those who are best positioned to drive meaningful change. To this end, leaders at all levels have access to dashboards with data from their teams and organizations, as well as personalized next step recommendations embedded into action planning tools. Our measurement approach is also used to inform our areas of focus as an organization and to evaluate the effectiveness of talent initiatives across the enterprise.

Employment Data

The approximate number of individuals employed by us and entities that we consolidated as of December 31 was as follows (in thousands):

	2019	2020
North America	99	101
South America	10	8
Europe	46	43
China (including Taiwan)	3	4
International Markets Group	15	14
Total Automotive	173	170
Ford Credit	7	6
Mobility	3	2
Corporate and Other	7	8
Total Company	190	186

The reduction in employees in 2020 is primarily a result of our global redesign efforts, partially offset by the addition of employees to increase production in certain facilities and the addition of employees in growth areas, including software, electrification, and data science.

Substantially all of the hourly employees in our Automotive operations are represented by unions and covered by collective bargaining agreements. In the United States, approximately 99% of these unionized hourly employees in our Automotive segment are represented by the International Union, United Automobile, Aerospace and Agricultural Implement Workers of America ("UAW" or "United Auto Workers"). At December 31, 2020, approximately 58,000 hourly employees in the United States were represented by the UAW.

ITEM 1A. Risk Factors.

We have listed below the material risk factors applicable to us grouped into the following categories: Operational Risks; Macroeconomic, Market, and Strategic Risks; Financial Risks; and Legal and Regulatory Risks.

Operational Risks

Ford and Ford Credit's financial condition and results of operations have been and may continue to be adversely affected by public health issues, including epidemics or pandemics such as COVID-19. We face various risks related to public health issues, including epidemics, pandemics, and other outbreaks, including the global outbreak of COVID-19. The impact of COVID-19, including changes in consumer behavior, pandemic fears and market downturns, and restrictions on business and individual activities, has created significant volatility in the global economy and led to reduced economic activity. There have been extraordinary actions taken by international, federal, state, and local public health and governmental authorities to contain and combat the outbreak and spread of COVID-19 in regions throughout the world, including travel bans, quarantines, "stay-at-home" orders, and similar mandates for many individuals to substantially restrict daily activities and for many businesses to curtail or cease normal operations. To the extent cases surge in any locations, stringent limitations on daily activities that may have been eased previously could be reinstated in those areas. Further, if new strains of COVID-19 develop or sufficient amounts of vaccines are not available, not widely administered for a significant period of time, or otherwise prove ineffective, the impact of COVID-19 on the global economy, and, in turn, our financial condition, liquidity, and results of operations could be material.

Consistent with the actions taken by governmental authorities, in late March 2020, we idled our manufacturing operations in regions around the world other than China, where manufacturing operations were suspended in January and February before beginning to resume operations in March. By May 2020, taking a phased approach and after introducing new safety protocols at our plants, we resumed manufacturing operations around the world.

The economic slowdown attributable to COVID-19 led to a global decrease in vehicle sales in markets around the world. As described in more detail below under "*Industry sales volume in any of Ford's key markets can be volatile and could decline if there is a financial crisis, recession, or significant geopolitical event,*" a sustained decline in vehicle sales would have a substantial adverse effect on our financial condition, results of operations, and cash flow.

The predominant share of Ford Credit's business consists of financing Ford and Lincoln vehicles, and the duration or resurgence of COVID-19 or similar public health issues may negatively impact the level of originations at Ford Credit. For example, Ford's suspension of manufacturing operations, a significant decline in dealer showroom traffic, and/or a reduction of operations at dealers may lead to a significant decline in Ford Credit's consumer and non-consumer originations. Moreover, a sustained decline in sales could have a significant adverse effect on dealer profitability and creditworthiness. Further, COVID-19 has had a significant negative impact on many businesses and unemployment rates have increased sharply from pre-COVID-19 levels. Ford Credit expects the economic uncertainty and higher unemployment to result in higher defaults in its consumer portfolio, and prolonged unemployment is expected to have a negative impact on both new and used vehicle demand.

The global economic slowdown and stay-at-home orders enacted across the United States disrupted auction activity in many locations, which adversely impacted and caused delays in realizing the resale value for off-lease and repossessed vehicles. Although auction performance has improved, future or additional restrictions could have a similar adverse impact on Ford Credit. For more information about the impact of higher credit losses and lower residual values on Ford Credit's business, see "*Ford Credit could experience higher-than-expected credit losses, lower-than-anticipated residual values, or higher-than-expected return volumes for leased vehicles*" below.

As described in more detail below under "*Ford and Ford Credit's access to debt, securitization, or derivative markets around the world at competitive rates or in sufficient amounts could be affected by credit rating downgrades, market volatility, market disruption, regulatory requirements, or other factors,*" the volatility created by COVID-19 adversely affected Ford Credit's access to the debt and securitization markets and its cost of funding, and any volatility in the capital markets as a result of a surge in cases of COVID-19, new outbreaks, or for any other reason could have an adverse impact on Ford Credit's access to those markets and its cost of funding.

The full impact of COVID-19 on our financial condition and results of operations will depend on future developments, such as the ultimate duration and scope of the outbreak (including any potential future waves and the success of vaccination programs), its impact on our customers, dealers, and suppliers, how quickly normal economic conditions, operations, and the demand for our products can resume, and any permanent behavioral changes that the pandemic may cause. For example, in the event manufacturing operations are again suspended, fully ramping up our production schedule to prior levels may take longer than the prior resumption and will depend, in part, on whether our suppliers and dealers have resumed normal operations. Our automotive operations generally do not realize revenue while our manufacturing operations are suspended, but we continue to incur operating and non-operating expenses, resulting in a deterioration of our cash flow. Accordingly, any significant future disruption to our production schedule, whether as a result of our own or a supplier's suspension of operations, could have a substantial adverse effect on our financial condition, liquidity, and results of operations. Further, government-sponsored liquidity or stimulus programs in response to COVID-19 may not be available to our customers, suppliers, dealers, or us, and if available, may nevertheless be insufficient to address the impacts of COVID-19. Moreover, our supply and distribution chains may be disrupted by supplier or dealer bankruptcies or their permanent discontinuation of operations.

The COVID-19 pandemic may also exacerbate other risks disclosed in our 2020 Form 10-K Report, including, but not limited to, our competitiveness, demand or market acceptance for our products, and shifting consumer preferences.

Ford is highly dependent on its suppliers to deliver components in accordance with Ford's production schedule, and a shortage of key components, such as semiconductors, can disrupt Ford's production of vehicles. Our products contain components that we source globally from suppliers who, in turn, source components from their suppliers. If there is a shortage of a key component in our supply chain, and the component cannot be easily sourced from a different supplier, the shortage may disrupt our production. For example, the automotive industry is facing a significant shortage of semiconductors. With up to fifty modules on a vehicle, we and our competitors who need integrated circuits are experiencing various levels of semiconductor impact. The semiconductor supply chain is complex, and a constrained wafer capacity is occurring deep in the chain. Global semiconductor makers allocated more capacity to meet surging demand for consumer electronics during the COVID-19 pandemic as automotive OEMs experienced industry-wide plant closures. At the same time, wafer foundries that support chipmakers have not invested enough in recent years to increase capacities to the levels needed to support demand from all of their customers. Wafers have a long lead time for production, in some cases up to 30 weeks, which further exacerbates the shortage. When global automakers resumed vehicle production in 2020 – even more quickly than some expected – semiconductor supplies became further strained. A combination of these factors, including increased demand for consumer electronics, automotive shutdowns due to COVID-19, the rapid recovery of demand for vehicles, and long lead times for wafer production, is contributing to the shortage of semiconductors. A shortage of semiconductors or other key components can cause a significant disruption to our production schedule and have a substantial adverse effect on our financial condition or results of operations.

Ford's long-term competitiveness depends on the successful execution of its Plan. We previously announced our plan for the global redesign of our business, pursuant to which we are working to turn around automotive operations, compete like a challenger, and capitalize on our strengths by allocating more capital, more resources, and more talent to our strongest business and vehicle franchises. We plan to do so by becoming more customer centric, embracing technology, and adopting processes that emphasize simplicity, speed and agility, efficiency, and accountability. The restructurings involved in turning around our automotive operations have resulted in charges that have had an adverse impact on our financial condition and results of operations, and we expect to incur additional charges in the future. Moreover, such restructuring actions may subject us to potential claims from employees, suppliers, dealers, or governmental authorities or harm our reputation. In addition, to further improve our business and overall competitiveness, we are attempting to leverage relationships with third parties, including various alliances and joint ventures as discussed below under *"Ford may not realize the anticipated benefits of existing or pending strategic alliances, joint ventures, acquisitions, divestitures, or new business strategies."* Further, significant changes to our long-term business model in various regions may be necessary should they prove to be unviable. If we are not successful in executing the Plan or are delayed for reasons outside of our control, we may not be able to materially lower costs in the near term, improve our competitiveness in the long term, or realize the full benefits of our global redesign actions, which could have an adverse effect on our financial condition or results of operations.

Ford's vehicles could be affected by defects that result in delays in new model launches, recall campaigns, or increased warranty costs. Government safety standards require manufacturers to remedy defects related to vehicle safety through safety recall campaigns, and a manufacturer is obligated to recall vehicles if it determines that the vehicles do not comply with a safety standard. NHTSA's enforcement strategy has shifted to a significant increase in civil penalties levied and the use of consent orders requiring direct oversight by NHTSA of certain manufacturers' safety processes, a trend that could continue. Should we or government safety regulators determine that a safety or other defect or a noncompliance exists with respect to certain of our vehicles prior to the start of production, the launch of such vehicle could be delayed until such defect is remedied. The cost of recall and customer satisfaction actions to remedy defects in vehicles that have been sold could be substantial, particularly if the actions relate to global platforms or involve defects that are identified years after production. For example, NHTSA and the automotive industry are currently engaged in a study of the safety of approximately 56 million Takata desiccated airbag inflators in the United States. Of these, approximately three and a half million of the inflators are in our vehicles. Should NHTSA determine that the inflators contain a safety defect, Ford and other manufacturers could potentially face significant incremental recall costs. Our recent experience recalling about three million Takata airbag inflators with a different design resulted in us incurring a charge of \$610 million in our fourth quarter 2020 results. Further, to the extent recall and customer satisfaction actions relate to defective components we receive from suppliers, our ability to recover from the suppliers may be limited by the suppliers' financial condition. We accrue the estimated cost of both base warranty coverages and field service actions at the time a vehicle is sold, and we reevaluate the adequacy of our accruals on a regular basis. In addition, from time to time, we issue extended warranties at our expense, the estimated cost of which is accrued at the time of issuance. For additional information regarding warranty and field service action costs, including our process for establishing our reserves, see "Critical Accounting Estimates" in Item 7 and Note 25 of the Notes to the Financial Statements. If warranty costs are greater than anticipated as a result of increased vehicle and component complexity, the adoption of new technologies, or otherwise, such costs could have an adverse effect on our financial condition or results of operations. Furthermore, launch delays, recall actions, and increased warranty costs could adversely affect our reputation or market acceptance of our products as discussed below under *"Ford's new and existing products and mobility services are subject to market acceptance and face significant competition from existing and new entrants in the automotive and mobility industries."*

Ford may not realize the anticipated benefits of existing or pending strategic alliances, joint ventures, acquisitions, divestitures, or new business strategies. We have invested in, formed strategic alliances with, and announced or formed joint ventures with a number of companies, and we may expand those relationships or enter into similar relationships with additional companies. These initiatives typically involve enormous complexity and we may not be able to complete anticipated transactions, the anticipated benefits of these transactions may not be realized, or the benefits may be delayed. For example, we may not successfully integrate an alliance or joint venture with our operations, including the implementation of our controls, systems, procedures, and policies, or unforeseen expenses or liabilities may arise that were not discovered during due diligence prior to an investment or entry into a strategic alliance, or a misalignment of interests may develop between us and the other party. Further, to the extent we share ownership, control, or management with another party in a joint venture, our ability to influence the joint venture may be limited, and we may be unable to prevent misconduct or implement our compliance or internal control systems. In addition, implementation of a new business strategy may lead to the disruption of our existing business operations, including distracting management from current operations. Results of operations from new activities may be lower than our existing activities, and, if a strategy is unsuccessful, we may not recoup our investments in that strategy. Failure to successfully and timely realize the anticipated benefits of these transactions or strategies could have an adverse effect on our financial condition or results of operations.

Operational systems, security systems, and vehicles could be affected by cyber incidents and other disruptions. We rely on information technology networks and systems, including in-vehicle systems and mobile devices, some of which are managed by suppliers, to process, transmit, and store electronic information that is important to the operation of our business and our vehicles. Despite security measures, we are at risk for interruptions, outages, and compromises of: (i) operational systems (including business, financial, accounting, product development, consumer receivables, data processing, or manufacturing processes); (ii) facility security systems; and/or (iii) in-vehicle systems or mobile devices, whether caused by a cyber attack, security breach, or other reasons, e.g., a natural disaster, fire, or overburdened infrastructure system. Such incidents could materially disrupt operational systems; result in loss of trade secrets or other proprietary or competitively sensitive information; compromise the privacy of personal information of consumers, employees, or others; jeopardize the security of our facilities; affect the performance of in-vehicle systems; and/or impact the safety of our vehicles. This risk exposure rises as we continue to develop and produce vehicles with increased connectivity. Moreover, we, our suppliers, and our dealers have been the target of cyber attacks in the past, and such attacks will continue and evolve in the future, which may cause cyber incidents to be more difficult to detect for periods of time. Our networks and in-vehicle systems, sharing similar architectures, could also be impacted by the negligence or misconduct of insiders or third parties who have access to our networks and systems. We continually employ capabilities, processes, and other security measures designed to reduce and mitigate the risk of cyber attacks; however, such preventative measures cannot provide absolute security and may not be sufficient in all circumstances or mitigate all potential risks. Moreover, a cyber incident could harm our reputation and/or subject us to regulatory actions or litigation, and a cyber incident involving us or one of our suppliers could impact production.

Ford's production, as well as Ford's suppliers' production, could be disrupted by labor issues, natural or man-made disasters, financial distress, production difficulties, or other factors. A work stoppage or other limitation on production could occur at Ford's or its suppliers' facilities for any number of reasons, including as a result of labor issues, including disputes under existing collective bargaining agreements with labor unions or in connection with negotiation of new collective bargaining agreements, absenteeism, public health issues (e.g., COVID-19), stay-at-home orders, or in response to potential restructuring actions (e.g., plant closures); as a result of supplier financial distress or other production constraints, such as limited quantities of components, including but not limited to semiconductors, or raw materials, quality issues, or other difficulties; as a result of a natural disaster (including climate-related physical risk); or for other reasons. Many components used in our vehicles are available only from a single or limited number of suppliers and, therefore, cannot be re-sourced quickly or inexpensively to another supplier (due to long lead times, new contractual commitments that may be required by another supplier before ramping up to provide the components or materials, etc.). Such suppliers also could threaten to disrupt our production as leverage in negotiations. In addition, when we undertake a model changeover, significant downtime at one or more of our production facilities may be required, and our ability to return to full production may be delayed if we experience production difficulties at one of our facilities or a supplier's facility. Moreover, as vehicles, components, and their integration become more complex, we may face an increased risk of a delay in production of new vehicles. Regardless of the cause, our ability to recoup lost production volume may be limited. Accordingly, a significant disruption to our production schedule could have a substantial adverse effect on our financial condition or results of operations and may impact our strategy to comply with fuel economy standards as discussed below under *"Ford may need to substantially modify its product plans to comply with safety, emissions, fuel economy, autonomous vehicle, and other regulations."*

Ford's ability to maintain a competitive cost structure could be affected by labor or other constraints. Substantially all of the hourly employees in our Automotive operations in the United States and Canada are represented by unions and covered by collective bargaining agreements. These agreements provide guaranteed wage and benefit levels throughout the contract term and some degree of income security, subject to certain conditions. These agreements may restrict our ability to close plants and divest businesses. A substantial number of our employees in other regions are represented by unions or government councils, and legislation or custom promoting retention of manufacturing or other employment in the state, country, or region may constrain as a practical matter our ability to sell or close manufacturing or other facilities.

Ford's ability to attract and retain talented, diverse, and highly skilled employees is critical to its success and competitiveness. Our success depends on our ability to continue to recruit and retain talented and diverse employees who are highly skilled in engineering, software, technology (including digital capabilities and connectivity), and marketing and sales, among other areas. Competition for such employees is intense, and the loss of existing employees or our inability to recruit new employees, particularly with the introduction of new technologies, could have a substantial adverse effect on our business.

Macroeconomic, Market, and Strategic Risks

Ford's new and existing products and mobility services are subject to market acceptance and face significant competition from existing and new entrants in the automotive and mobility industries. Although we conduct extensive market research before launching new or refreshed vehicles and introducing new services, many factors both within and outside our control affect the success of new or existing products and services in the marketplace, and we may not be able to accurately predict trends or the success of new products or services in the market. It takes years to design and develop a new vehicle or change an existing vehicle. Because customers' preferences may change quickly, our new and existing products may not generate sales in sufficient quantities and at costs low enough to be profitable. Offering vehicles and services that customers want and value can mitigate the risks of increasing price competition and declining demand, but products and services that are perceived to be less desirable (whether in terms of price, quality, styling, safety, overall value, fuel efficiency, or other attributes) can exacerbate these risks. For example, if we are unable to differentiate our products from those of our competitors or sufficiently tailor our products to customers in markets like China, there could be insufficient demand for our products, which could have an adverse impact on our financial condition or results of operations.

With increased consumer interconnectedness through the internet, social media, and other media, mere allegations relating to quality, safety, fuel efficiency, corporate social responsibility, or other key attributes can negatively impact our reputation or market acceptance of our products or services, even where such allegations prove to be inaccurate or unfounded. Further, our ability to successfully grow through investments in the areas of mobility and electrification depends on many factors, including advancements in technology, regulatory changes, and other factors that are difficult to predict, that may significantly affect the future of autonomous vehicles and mobility services. The automotive and mobility businesses are very competitive and are undergoing rapid changes. Traditional competitors are expanding their offerings, and new types of competitors (particularly in our areas of strength, e.g., pick-up trucks and utilities) that may possess superior technology, may have business models with certain aspects that are more efficient, and are not subject to the same level of fixed costs as us, are entering the market. This level of competition increases the importance that we are able to anticipate, develop, and deliver products and services that customers desire on a timely basis, in quantities in line with demand, and at costs low enough to be profitable.

We have announced our intent to continue making multi-billion dollar investments in electrification and mobility. Our plans include offering electrified versions of many of our vehicles, including the F-150. If the market for electrified vehicles does not develop at the rate we expect, even if the regulatory framework encourages a rapid adoption of electrified vehicles, or if consumers prefer our competitors' vehicles, there could be an adverse impact on our financial condition or results of operations. Further, as discussed below under "*Ford may need to substantially modify its product plans to comply with safety, emissions, fuel economy, autonomous vehicle, and other regulations,*" lower than planned market acceptance of our vehicles may impact our strategy to comply with fuel economy standards. Moreover, new offerings, including those related to autonomous vehicles, may present technological challenges that could be costly to implement and overcome and may subject us to customer claims if they do not operate as anticipated. In addition, since new technologies are subject to market acceptance, a malfunction involving any manufacturer's autonomous vehicle may negatively impact the perception of autonomous vehicles and erode customer trust.

Ford's results are dependent on sales of larger, more profitable vehicles, particularly in the United States. A shift in consumer preferences away from larger, more profitable vehicles (including trucks and utilities), whether because of spiking fuel prices, a decline in the construction industry, government actions or incentives, or other reasons, could result in an immediate and substantial adverse effect on our financial condition or results of operations. Moreover, our ability to develop and sell these vehicles may be limited for the reasons discussed below under "*Ford may need to substantially modify its product plans to comply with safety, emissions, fuel economy, autonomous vehicle, and other regulations.*"

With a global footprint, Ford's results could be adversely affected by economic, geopolitical, protectionist trade policies, or other events, including tariffs. With the increasing interconnectedness of the global economy, a financial crisis, economic downturn or recession, natural disaster, geopolitical crisis, or other significant event in one area of the world can have an immediate and material adverse impact on markets around the world. Changes in international trade policy can also have a substantial adverse effect on our financial condition or results of operations. For example, steps taken by the U.S. government to apply or consider applying tariffs on automobiles, parts, and other products and materials have the potential to disrupt existing supply chains, impose additional costs on our business, affect the demand for our products, and make us less competitive. Further, other countries attempting to retaliate by imposing tariffs would increase the cost for us to import our vehicles into such countries. In addition, changes to and withdrawals from existing trade agreements and the entry into new trade agreements between governments may impact our results of operations.

China, in particular, presents unique risks to automakers due to its unique competitive and regulatory landscape. For example, we have established joint ventures in China, and, as discussed above under “*Ford may not realize the anticipated benefits of existing or pending strategic alliances, joint ventures, acquisitions, divestitures, or new business strategies,*” we do not have the ability to control or operate those joint ventures for our sole benefit. Changes in the Chinese economy, and the automotive market in particular, are driving significant changes to our business model for operating in China. While the change in the U.S. administration is expected to reduce volatility in U.S.-China relations, early signals from the incoming administration indicate a continuity in China policy that may impact our business model for operating in China.

We have operations in various markets with volatile economic or political environments and are pursuing growth opportunities in a number of newly developed and emerging markets. These investments may expose us to heightened risks of economic, geopolitical, or other events, including governmental takeover (i.e., nationalization) of our manufacturing facilities or intellectual property, restrictive exchange or import controls, disruption of operations as a result of systemic political or economic instability, outbreak of war or expansion of hostilities, and acts of terrorism, each of which could have a substantial adverse effect on our financial condition or results of operations. Further, the U.S. government, other governments, and international organizations could impose additional sanctions that could restrict us from doing business directly or indirectly in or with certain countries or parties, which could include affiliates.

Industry sales volume in any of Ford's key markets can be volatile and could decline if there is a financial crisis, recession, or significant geopolitical event. Because we, like other manufacturers, have a high proportion of relatively fixed structural costs, relatively small changes in industry sales volume can have a substantial effect on our cash flow and results of operations. Industry vehicle sales are affected by overall economic and market conditions. If industry vehicle sales were to decline to levels significantly below our planning assumption for key markets including the United States, Europe, or China, the decline could have a substantial adverse effect on our financial condition, results of operations, and cash flow. For a discussion of economic trends, see Item 7.

Ford may face increased price competition or a reduction in demand for its products resulting from industry excess capacity, currency fluctuations, competitive actions, or other factors. The global automotive industry is intensely competitive, with manufacturing capacity generally far exceeding current demand (the recent capacity constraints as a result of the impacts of COVID-19 being a temporary exception). Industry overcapacity has resulted in many manufacturers offering marketing incentives on vehicles in an attempt to maintain and grow market share; these incentives historically have included a combination of subsidized financing or leasing programs, price rebates, and other incentives. As a result, we are not necessarily able to set our prices to offset higher marketing incentives, commodity or other cost increases, tariffs, or the impact of adverse currency fluctuations, including cost advantages foreign competitors may have because of their weaker home market currencies, which may, in turn, enable those competitors to offer their products at lower prices. Continuation of or increased excess capacity, particularly for trucks and utilities, could have a substantial adverse effect on our financial condition or results of operations.

Fluctuations in commodity prices, foreign currency exchange rates, interest rates, and market value of Ford or Ford Credit's investments can have a significant effect on results. We are exposed to a variety of market risks, including the effects of changes in commodity prices, foreign currency exchange rates, and interest rates. We monitor and manage these exposures as an integral part of our overall risk management program, which recognizes the unpredictability of markets and seeks to reduce potentially adverse effects on our business. Changes in commodity prices (from tariffs, as discussed above under “*With a global footprint, Ford's results could be adversely affected by economic, geopolitical, protectionist trade policies, or other events, including tariffs,*” or otherwise), currency exchange rates, and interest rates cannot always be predicted, hedged, or offset with price increases to eliminate earnings volatility. As a result, significant changes in commodity prices, foreign currency exchange rates, or interest rates could have a substantial adverse effect on our financial condition or results of operations. See Item 7 and Item 7A for additional discussion of currency, commodity price, and interest rate risks. In addition, our results are impacted by fluctuations in the market value of our investments.

Financial Risks

Ford and Ford Credit's access to debt, securitization, or derivative markets around the world at competitive rates or in sufficient amounts could be affected by credit rating downgrades, market volatility, market disruption, regulatory requirements, or other factors. Ford and Ford Credit's ability to obtain unsecured funding at a reasonable cost is dependent on their credit ratings or their perceived creditworthiness. Further, Ford Credit's ability to obtain securitized funding under its committed asset-backed liquidity programs and certain other asset-backed securitization transactions is subject to having a sufficient amount of assets eligible for these programs, as well as Ford Credit's ability to obtain appropriate credit ratings and, for certain committed programs, derivatives to manage the interest rate risk. Over time, and particularly in the event of credit rating downgrades, market volatility, market disruption, or other factors, Ford Credit may reduce the amount of receivables it purchases or originates because of funding constraints. As a result of LIBOR reform, the potential discontinuance of LIBOR is one such risk that could cause market volatility or disruption. It is difficult to predict the effect of these changes, other reforms, or the adoption of alternative reference rates, but the discontinuance of LIBOR could adversely affect Ford Credit's access to the debt, securitization, or derivative markets and its cost of funding and hedging. In addition, Ford Credit may reduce the amount of receivables it purchases or originates if there is a significant decline in the demand for the types of securities it offers or Ford Credit is unable to obtain derivatives to manage the interest rate risk associated with its securitization transactions. A significant reduction in the amount of receivables Ford Credit purchases or originates would significantly reduce its ongoing results of operations and could adversely affect its ability to support the sale of Ford vehicles.

Ford's receipt of government incentives could be subject to reduction, termination, or clawback. We receive economic benefits from national, state, and local governments in various regions of the world in the form of incentives designed to encourage manufacturers to establish, maintain, or increase investment, workforce, or production. These incentives may take various forms, including grants, loan subsidies, or tax abatements or credits. The impact of these incentives can be significant in a particular market during a reporting period. A decrease in, expiration without renewal of, or other cessation or clawback of government incentives for any of our business units, as a result of administrative decision or otherwise, could have a substantial adverse impact on our financial condition or results of operations. Until 2021, most of our manufacturing facilities in South America were located in Brazil, where the state or federal governments historically offered significant incentives to manufacturers to encourage capital investment, increase manufacturing production, and create jobs. As a result, the performance of our South American operations had been impacted favorably by government incentives to a substantial extent. The federal government in Brazil has levied assessments against us concerning the federal incentives we previously received, and certain states have challenged the grant to us of tax incentives by the State of Bahia. See Note 2 of the Notes to the Financial Statements for discussion of our accounting for government incentives, and "Item 3. Legal Proceedings" for a discussion of tax proceedings in Brazil and the potential requirement for us to post collateral.

Ford Credit could experience higher-than-expected credit losses, lower-than-anticipated residual values, or higher-than-expected return volumes for leased vehicles. Credit risk is the possibility of loss from a customer's or dealer's failure to make payments according to contract terms. Credit risk (which is heavily dependent upon economic factors including unemployment, consumer debt service burden, personal income growth, dealer profitability, and used car prices) has a significant impact on Ford Credit's business. The level of credit losses Ford Credit may experience could exceed its expectations and adversely affect its financial condition or results of operations. In addition, Ford Credit projects expected residual values (including residual value support payments from Ford) and return volumes for the vehicles it leases. Actual proceeds realized by Ford Credit upon the sale of returned leased vehicles at lease termination may be lower than the amount projected, which would reduce Ford Credit's return on the lease transaction. Among the factors that can affect the value of returned lease vehicles are the volume and mix of vehicles returned, economic conditions, marketing programs, and quality or perceived quality, safety, fuel efficiency, or reliability of the vehicles, or changes in propulsion technology and related legislative changes. Actual return volumes may be influenced by these factors, as well as by contractual lease-end values relative to auction values. Each of these factors, alone or in combination, has the potential to adversely affect Ford Credit's results of operations if actual results were to differ significantly from Ford Credit's projections. See "Critical Accounting Estimates" in Item 7 for additional discussion.

Economic and demographic experience for pension and other postretirement benefit plans (e.g., discount rates or investment returns) could be worse than Ford has assumed. The measurement of our obligations, costs, and liabilities associated with benefits pursuant to our pension and other postretirement benefit plans requires that we estimate the present value of projected future payments to all participants. We use many assumptions in calculating these estimates, including assumptions related to discount rates, investment returns on designated plan assets, and demographic experience (e.g., mortality and retirement rates). We generally remeasure these estimates at each year end and recognize any gains or losses associated with changes to our plan assets and liabilities in the year incurred. To the extent actual results are less favorable than our assumptions, we may recognize a remeasurement loss in our results, which could be substantial. For additional information regarding our assumptions, see “Critical Accounting Estimates” in Item 7 and Note 17 of the Notes to the Financial Statements.

Pension and other postretirement liabilities could adversely affect Ford’s liquidity and financial condition. We have defined benefit retirement plans in the United States that cover many of our hourly and salaried employees. We also provide pension benefits to non-U.S. employees and retirees, primarily in Europe. In addition, we sponsor plans to provide other postretirement benefits (“OPEB”) for retired employees (primarily health care and life insurance benefits). See Note 17 of the Notes to the Financial Statements for more information about these plans. These benefit plans impose significant liabilities on us and could require us to make additional cash contributions, which could impair our liquidity. If our cash flows and capital resources are insufficient to meet any pension or OPEB obligations, we could be forced to reduce or delay investments and capital expenditures, suspend dividend payments, seek additional capital, or restructure or refinance our indebtedness.

Legal and Regulatory Risks

Ford could experience unusual or significant litigation, governmental investigations, or adverse publicity arising out of alleged defects in products, perceived environmental impacts, or otherwise. We spend substantial resources ensuring that we comply with governmental safety regulations, mobile and stationary source emissions regulations, and other standards, but we cannot ensure that employees or other individuals affiliated with us will not violate such laws or regulations. In addition, as discussed below under “Ford may need to substantially modify its product plans to comply with safety, emissions, fuel economy, autonomous vehicle, and other regulations,” regulatory standards and interpretations may change on short notice and impact our compliance status. Moreover, compliance with governmental standards does not necessarily prevent individual or class action lawsuits, which can entail significant cost and risk. In certain circumstances, courts may permit tort claims even where our vehicles comply with federal and/or other applicable law. Furthermore, simply responding to actual or threatened litigation or government investigations of our compliance with regulatory standards, whether related to our products or business or commercial relationships, requires significant expenditures of time and other resources. Litigation also is inherently uncertain, and we could experience significant adverse results, which could have an adverse effect on our financial condition or results of operations. In addition, adverse publicity surrounding an allegation may cause significant reputational harm that could have a significant adverse effect on our sales.

Ford may need to substantially modify its product plans to comply with safety, emissions, fuel economy, autonomous vehicle, and other regulations. The automotive industry is subject to regulations worldwide that govern product characteristics and that differ by global region, country, and sometimes within national boundaries. Further, additional and new regulations continue to be proposed to address concerns regarding the environment (including concerns about global climate change and its impact), vehicle safety, and energy independence, and the regulatory landscape can change on short notice. In the United States, legal and policy debates are continuing, with a primary focus on reducing GHG emissions and increasing vehicle electrification. The Trump administration rolled back aggressive Obama administration GHG standards and blocked California’s authority to adopt its own regulations as well as other states’ authority to opt in to California’s standards. States, environmental groups, and others are challenging both of those Trump administration actions in court. The Trump administration’s actions also are subject to reconsideration and revision by the Biden administration. California has an ambitious plan to reduce overall GHG emissions to 40% below 1990 levels by 2030. Court rulings and actions by federal, California, and other state regulators create regulatory uncertainty and the potential for applicable regulatory standards to change quickly. In addition, many governments regulate local product content and/or impose import requirements with the aim of creating jobs, protecting domestic producers, and influencing the balance of payments.

We are continuing to make changes to our product cycle plan to improve the fuel economy of our petroleum-powered vehicles and to offer more propulsion choices, such as electrified vehicles, with lower GHG emissions. There are limits on our ability to achieve fuel economy improvements over a given time frame, however, primarily relating to the cost and effectiveness of available technologies, consumer acceptance of new technologies and changes in vehicle mix (as described in more detail above under “*Ford’s new and existing products and mobility services are subject to market acceptance and face significant competition from existing and new entrants in the automotive and mobility industries*”), willingness of consumers to absorb the additional costs of new technologies, the appropriateness (or lack thereof) of certain technologies for use in particular vehicles, the widespread availability (or lack thereof) of supporting infrastructure for new technologies, and the human, engineering, and financial resources necessary to deploy new technologies across a wide range of products and powertrains in a short time. If fuel prices remain relatively low and market conditions do not drive consumers to purchase electric vehicles and other highly fuel-efficient vehicles in large numbers, it may be difficult to meet applicable environmental standards without compromising results. Moreover, a production disruption, stop ship, lower than planned market acceptance of our vehicles, or other intervening events may cause us to modify our product plans, or, in some cases, purchase credits, in order to comply with fuel economy standards, which could have an adverse effect on our financial condition or results of operations and/or cause reputational harm.

Increased scrutiny of automaker emission testing by regulators around the world has led to new regulations, more stringent enforcement programs, requests for field actions, demands for reporting on the field performance of emissions components and higher scrutiny of field data, and/or delays in regulatory approvals. The cost to comply with existing government regulations (in addition to the cost of any field service actions that may result from regulatory actions) is substantial and additional regulations, changes in regulatory interpretations, or changes in consumer preferences that affect vehicle mix could have a substantial adverse impact on our financial condition or results of operations. In addition, a number of governments, as well as NGOs, publicly assess vehicles to their own protocols. The protocols could change, and any negative perception regarding the performance of our vehicles subjected to such tests could reduce future sales. Court decisions arising out of consumer and investor litigation could give rise to *de facto* changes in the interpretation of existing emission laws and regulations, thereby imposing new burdens on manufacturers. For more discussion of the impact of standards on our global business, see the “Governmental Standards” discussion in “Item 1. Business” above.

We and other companies continue to develop autonomous vehicle technologies, and the U.S. and foreign governments are continuing to develop the regulatory framework that will govern autonomous vehicles. The evolution of the regulatory framework for autonomous vehicles, and the pace of the development of such regulatory framework, may subject us to increased costs and uncertainty, and may ultimately impact our ability to deliver autonomous vehicles and related services that customers want.

Ford and Ford Credit could be affected by the continued development of more stringent privacy, data use, and data protection laws and regulations as well as consumers’ heightened expectations to safeguard their personal information. We are subject to laws, rules, guidelines from privacy regulators, and regulations in the United States and other countries (such as the European Union’s General Data Protection Regulation and the California Consumer Privacy Act) relating to the collection, use, cross-border data transfer, and security of personal information of consumers, employees, or others, including laws that may require us to notify regulators and affected individuals of a data security incident. Existing and newly developed laws and regulations may contain broad definitions of personal information, are subject to change and uncertain interpretations by courts and regulators, and may be inconsistent from state to state or country to country. Accordingly, complying with such laws and regulations may lead to a decline in consumer engagement or cause us to incur substantial costs to modify our operations or business practices. Moreover, regulatory actions seeking to impose significant financial penalties for noncompliance and/or legal actions (including pursuant to laws providing for private rights of action by consumers) could be brought against us in the event of a data compromise, misuse of consumer information, or perceived or actual non-compliance with data protection or privacy requirements. Further, any unauthorized release of personal information could harm our reputation, disrupt our business, cause us to expend significant resources, and lead to a loss of consumer confidence resulting in an adverse impact on our business and/or consumers deciding to withhold or withdraw consent for our collection or use of data.

Ford Credit could be subject to new or increased credit regulations, consumer protection regulations, or other regulations. As a finance company, Ford Credit is highly regulated by governmental authorities in the locations in which it operates, which can impose significant additional costs and/or restrictions on its business. In the United States, for example, Ford Credit's operations are subject to regulation and supervision under various federal, state, and local laws, including the federal Truth-in-Lending Act, Consumer Leasing Act, Equal Credit Opportunity Act, and Fair Credit Reporting Act.

The Dodd-Frank Act directs federal agencies to adopt rules to regulate the finance industry and the capital markets and gives the Consumer Financial Protection Bureau ("CFPB") broad rule-making and enforcement authority for a wide range of consumer financial protection laws that regulate consumer finance businesses, such as Ford Credit's automotive financing business. Exercise of these powers by the CFPB may increase the costs of, impose additional restrictions on, or otherwise adversely affect companies in the automotive finance business. The CFPB has authority to supervise and examine the largest nonbank automotive finance companies, such as Ford Credit, for compliance with consumer financial protection laws.

Failure to comply with applicable laws and regulations could subject Ford Credit to regulatory enforcement actions, including consent orders or similar orders where Ford Credit may be required to revise practices, remunerate customers, or pay fines. An enforcement action against Ford Credit could harm Ford Credit's reputation or lead to further litigation.

ITEM 1B. Unresolved Staff Comments.

None.

ITEM 2. *Properties.*

Our principal properties include manufacturing and assembly facilities, distribution centers, warehouses, sales or administrative offices, and engineering centers.

We own substantially all of our U.S. manufacturing and assembly facilities. Our facilities are situated in various sections of the country and include assembly plants, engine plants, casting plants, metal stamping plants, transmission plants, and other component plants. Most of our distribution centers are leased (we own approximately 35% of the total square footage, and lease the balance). The majority of the warehouses that we operate are leased, although many of our manufacturing and assembly facilities contain some warehousing space. Substantially all of our sales offices are leased space. Approximately 93% of the total square footage of our engineering centers and our supplementary research and development space is owned by us.

In addition, we maintain and operate manufacturing plants, assembly facilities, parts distribution centers, and engineering centers outside of the United States. We own substantially all of our non-U.S. manufacturing plants, assembly facilities, and engineering centers. The majority of our parts distribution centers outside of the United States are either leased or provided by vendors under service contracts.

We and the entities that we consolidated as of December 31, 2020 use eight regional engineering, research, and development centers, and 54 manufacturing and assembly plants, which includes plants that are operated by us or our consolidated joint ventures that support our Automotive segment.

The significant consolidated joint ventures and the number of plants each owns are as follows:

- *Ford Lio Ho Motor Company Ltd. ("FLH")* — a joint venture in Taiwan among Ford (70% partner), the Lio Ho Group (25% partner), and individual shareholders (5% ownership in aggregate) that assembles a variety of Ford vehicles sourced from Ford. In addition to domestic assembly, FLH imports Ford brand built-up vehicles from Asia Pacific, Europe, and the United States. The joint venture operates one plant in Taiwan.
- *Ford Vietnam Limited* — a joint venture between Ford (75% partner) and Diesel Song Cong One Member Limited Liability Company (a subsidiary of the Vietnam Engine and Agricultural Machinery Corporation, which in turn is majority owned (87.43%) by the State of Vietnam represented by the Ministry of Industry and Trade) (25% partner). Ford Vietnam Limited assembles and distributes a variety of Ford passenger and commercial vehicle models. The joint venture operates one plant in Vietnam.

In addition to the plants that we operate directly or that are operated by our consolidated joint ventures, additional plants that support our Automotive segment are operated by unconsolidated joint ventures of which we are a partner. The most significant of our Automotive and Mobility segment unconsolidated joint ventures are as follows:

- *Argo AI, LLC* — Argo AI is a self-driving technology platform company with offices in Pittsburgh, PA, Palo Alto, CA, Allen Park, MI, Cranbury, NJ, and Munich, Germany. Ford and Volkswagen each hold 42% of the ownership interests in Argo AI, with the remaining interests consisting of incentive units and founders' equity.
- *AutoAlliance (Thailand) Co., Ltd. ("AAT")* — a 50/50 joint venture between Ford and Mazda that owns and operates a manufacturing plant in Rayong, Thailand. AAT produces Ford and Mazda products for domestic and export sales.
- *Changan Ford Automobile Corporation, Ltd. ("CAF")* — a 50/50 joint venture between Ford and Chongqing Changan Automobile Co., Ltd. ("Changan"). CAF operates five assembly plants, an engine plant, and a transmission plant in China where it produces and distributes a variety of Ford passenger vehicle models.
- *Ford Otomotiv Sanayi Anonim Sirketi ("Ford Otosan")* — a joint venture in Turkey among Ford (41% partner), the Koc Group of Turkey (41% partner), and public investors (18%) that is the sole supplier to us of the Transit, Transit Custom, and Transit Courier commercial vehicles for Europe and is our sole distributor of Ford vehicles in Turkey. Ford Otosan also manufactures Ford heavy trucks for markets in Europe, the Middle East, and Africa. The joint venture owns three plants, a parts distribution depot, and a research and development center in Turkey.

Item 2. Properties (Continued)

- *Ford Sollers Netherlands B.V. ("Ford Sollers")* — a joint venture between Ford (49% shareholder) and Sollers PJSC ("Sollers") (51% shareholder). The joint venture is primarily engaged in manufacturing light commercial vehicles for sale in Russia, and has an exclusive right to manufacture, assemble, and distribute light commercial Ford vehicles in Russia through the licensing of certain trademarks and intellectual property rights. The joint venture operates one manufacturing facility in Russia.
- *Getrag Ford Transmissions GmbH ("GFT")* — a 50/50 joint venture with Magna PT International GmbH (formerly Getrag International GmbH), a German company owned by Magna Powertrain GmbH. GFT operates plants in Halewood, England; Cologne, Germany; and Bordeaux, France and produces, among other things, manual transmissions for our Europe business unit.
- *JMC* — a publicly-traded company in China with Ford (32% shareholder) and Nanchang Jiangling Investment Co., Ltd. (41% shareholder) as its controlling shareholders. Nanchang Jiangling Investment Co., Ltd. is a 50/50 joint venture between Changan and Jiangling Motors Company Group. The public investors in JMC own 27% of its total outstanding shares. JMC assembles Ford Transit, a series of Ford SUVs, Ford engines, and non-Ford vehicles and engines for distribution in China and in other export markets. JMC operates two assembly plants and one engine plant in Nanchang. JMC also operates a plant in Taiyuan that assembles heavy duty trucks and engines.

The facilities described above are, in the opinion of management, suitable and adequate for the manufacture and assembly of our and our joint ventures' products.

The furniture, equipment, and other physical property owned by our Ford Credit operations are not material in relation to the operations' total assets.

ITEM 3. Legal Proceedings.

The litigation process is subject to many uncertainties, and the outcome of individual matters is not predictable with assurance. See Note 25 of the Notes to the Financial Statements for a discussion of loss contingencies. Following is a discussion of our significant pending legal proceedings:

PRODUCT LIABILITY MATTERS

We are a defendant in numerous actions in state and federal courts within and outside of the United States alleging damages from injuries resulting from (or aggravated by) alleged defects in our vehicles. In many actions, no monetary amount of damages is specified or the specific amount alleged is the jurisdictional minimum. Our experience with litigation alleging a specific amount of damages suggests that such amounts, on average, bear little relation to the actual amount of damages, if any, that we will pay in resolving such matters.

In addition to pending actions, we assess the likelihood of incidents that likely have occurred but not yet been reported to us. We also take into consideration specific matters that have been raised as claims but have not yet proceeded to litigation. Individual product liability matters which, if resolved unfavorably to the Company, likely would involve a significant cost would be described herein. Currently there are no such matters to report.

ASBESTOS MATTERS

Asbestos was used in some brakes, clutches, and other automotive components from the early 1900s. Along with other vehicle manufacturers, we have been the target of asbestos litigation and, as a result, are a defendant in various actions for injuries claimed to have resulted from alleged exposure to Ford parts and other products containing asbestos. Plaintiffs in these personal injury cases allege various health problems as a result of asbestos exposure, either from component parts found in older vehicles, insulation or other asbestos products in our facilities, or asbestos aboard our former maritime fleet. We believe that we are targeted more aggressively in asbestos suits because many previously targeted companies have filed for bankruptcy or emerged from bankruptcy relieved of liability for such claims.

Most of the asbestos litigation we face involves individuals who claim to have worked on the brakes of our vehicles. We are prepared to defend these cases and believe that the scientific evidence confirms our long-standing position that there is no increased risk of asbestos-related disease as a result of exposure to the type of asbestos formerly used in the brakes on our vehicles. The extent of our financial exposure to asbestos litigation remains very difficult to estimate and could include both compensatory and punitive damage awards. The majority of our asbestos cases do not specify a dollar amount for damages; in many of the other cases the dollar amount specified is the jurisdictional minimum, and the vast majority of these cases involve multiple defendants, sometimes more than one hundred. Many of these cases also involve multiple plaintiffs, and often we are unable to tell from the pleadings which plaintiffs are making claims against us (as opposed to other defendants). Annual payout and defense costs may become significant in the future. Our accrual for asbestos matters includes probable losses for both asserted and unasserted claims.

CONSUMER MATTERS

We provide warranties on the vehicles we sell. Warranties are offered for specific periods of time and/or mileage and vary depending upon the type of product and the geographic location of its sale. Pursuant to these warranties, we will repair, replace, or adjust all parts on a vehicle that are defective in factory-supplied materials or workmanship during the specified warranty period. We are a defendant in numerous actions in state and federal courts alleging damages based on state and federal consumer protection laws and breach of warranty obligations. Remedies under these statutes may include vehicle repurchase, civil penalties, and plaintiff's attorney fees. In some cases, plaintiffs also include an allegation of fraud. Remedies for a fraud claim may include contract rescission, vehicle repurchase, and punitive damages.

The cost of these matters is included in our warranty costs. We accrue obligations for warranty costs at the time of sale using a patterned estimation model that includes historical information regarding the nature, frequency, and average cost of claims for each vehicle line by model year. We reevaluate the adequacy of our accruals on a regular basis.

We are currently a defendant in a significant number of litigation matters relating to the performance of vehicles, including those equipped with DPS6 transmissions.

ENVIRONMENTAL MATTERS

We have received notices under various federal and state environmental laws that we (along with others) are or may be a potentially responsible party for the costs associated with remediating numerous hazardous substance storage, recycling, or disposal sites in many states and, in some instances, for natural resource damages. We also may have been a generator of hazardous substances at a number of other sites. The amount of any such costs or damages for which we may be held responsible could be significant. At this time, we have no legal proceedings arising under any federal, state, or local provisions that have been enacted or adopted regulating the discharge of materials into the environment or primarily for the purpose of protecting the environment, in which (i) a governmental authority is a party, and (ii) we believe there is the possibility of monetary sanctions (exclusive of interest and costs) in excess of \$1,000,000.

CLASS ACTIONS

In light of the fact that very few of the purported class actions filed against us in the past have ever been certified by the courts as class actions, in general we list those actions that (i) have been certified as a class action by a court of competent jurisdiction (and any additional purported class actions that raise allegations substantially similar to an existing and certified class), and (ii) likely would involve a significant cost if resolved unfavorably to the Company. At this time, we have no such class actions filed against us.

OTHER MATTERS

Brazilian Tax Matters. One Brazilian state (São Paulo) and the Brazilian federal tax authority currently have outstanding substantial tax assessments against Ford Motor Company Brasil Ltda. (“Ford Brazil”) related to state and federal tax incentives Ford Brazil received for its operations in the Brazilian state of Bahia. The state assessments are part of a broader conflict among various states in Brazil. The federal legislature enacted laws designed to encourage the states to end that conflict, and in 2017 the states reached an agreement on a framework for resolution. Ford Brazil continues to pursue a resolution under the framework and expects the amount of any remaining assessments by the states to be resolved under that framework. The federal assessments are outside the scope of the legislation.

All of the assessments have been appealed to the relevant administrative court of each jurisdiction. In the State of Minas Gerais, one case that had been pending at the administrative level was dismissed on April 1, 2020, and on July 13, 2020, the other two cases that were on appeal to the judicial court were dismissed. Our appeals with the State of São Paulo and the federal tax authority remain at the administrative level. To proceed with an appeal within the judicial court system, an appellant may be required to post collateral. To date, we have not been required to post any collateral. If we are required to post collateral, which could be in excess of \$1 billion, we expect it to be in the form of fixed assets, surety bonds, and/or letters of credit, but we may be required to post cash collateral. Although the ultimate resolution of these matters may take many years, we consider our overall risk of loss to be remote.

European Competition Law Matter. On October 5, 2018, FCE Bank plc (“FCE”) received a notice from the Italian Competition Authority (the “ICA”) concerning an alleged violation of Article 101 of the Treaty on the Functioning of the European Union. The ICA alleged that FCE and other parties engaged in anti-competitive practices in relation to the automotive finance market in Italy. On January 9, 2019, FCE received a decision from the ICA, which included an assessment of a fine against FCE in the amount of €42 million. On March 8, 2019, FCE appealed the decision and the fine to the Italian administrative court, and on November 24, 2020, the Italian administrative court ruled in favor of FCE. On December 23, 2020, the ICA filed an appeal of the Italian administrative court’s decision to the Italian Council of State.

Emissions Certification. Beginning in 2018 and continuing into 2020, the Company investigated a potential concern involving its U.S. emissions certification process. The matter focused on issues related to road load estimations, including analytical modeling and coastdown testing. The potential concern did not involve the use of defeat devices (see Item 1, Governmental Standards for a definition of defeat devices). We voluntarily disclosed this matter to the U.S. Environmental Protection Agency (“EPA”) and the California Air Resources Board (“CARB”) on February 18, 2019 and February 21, 2019, respectively. Subsequently, the U.S. Department of Justice (“DOJ”) opened a criminal investigation into the matter. In addition, we notified a number of other state and federal agencies. We cooperated fully with these government agencies. We received notifications from CARB and DOJ that these agencies have closed their inquiries into the matter referenced above and do not intend to take any further action. Reviews opened by EPA and Environment and Climate Change Canada remain open.

ITEM 4. Mine Safety Disclosures.

Not applicable.

ITEM 4A. Executive Officers of Ford.

Our executive officers are as follows, along with each executive officer's position and age at February 1, 2021:

Name	Position	Position Held Since	Age
William Clay Ford, Jr. (a)	Executive Chairman and Chairman of the Board	September 2006	63
James D. Farley, Jr. (b)	President and Chief Executive Officer	October 2020	58
John Lawler	Chief Financial Officer	October 2020	54
Hau Thai-Tang	Chief Product Platform and Operations Officer	October 2020	54
Kiersten Robinson	Chief People and Employee Experience Officer	October 2020	50
Anning Chen	President and Chief Executive Officer, Ford of China	December 2018	59
Kumar Galhotra	President, Americas and International Markets Group	April 2020	56
Stuart Rowley	President, Ford of Europe	April 2019	53
John F. Mellen	General Counsel	August 2020	65
Cathy O'Callaghan	Controller	June 2018	52

(a) Also a Director, Chair of the Office of the Chairman and Chief Executive, Chair of the Finance Committee, and a member of the Sustainability Committee of the Board of Directors.

(b) Also a Director and member of the Office of the Chairman and Chief Executive.

Except as noted below, each of the officers listed above has been employed by Ford or its subsidiaries in one or more capacities during the past five years. Prior to becoming President and Chief Executive Officer, Ford of China, from 2010 to 2018, Anning Chen held several leadership roles in Chery Automobile LTD, China including: Chief Executive Officer; Executive Vice President and Chief Operating Officer; and Vice President of Products and Engineering. He also held the positions of Chairman of the Board of Directors, Chery Jaguar Land Rover Automotive, China; and Chairman of the Board, Qoros Automotive, China.

Under our by-laws, executive officers are elected by the Board of Directors at an annual meeting of the Board held for this purpose or by a resolution to fill a vacancy. Each officer is elected to hold office until a successor is chosen or as otherwise provided in the by-laws.

PART II.

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

Market for Registrant's Stock

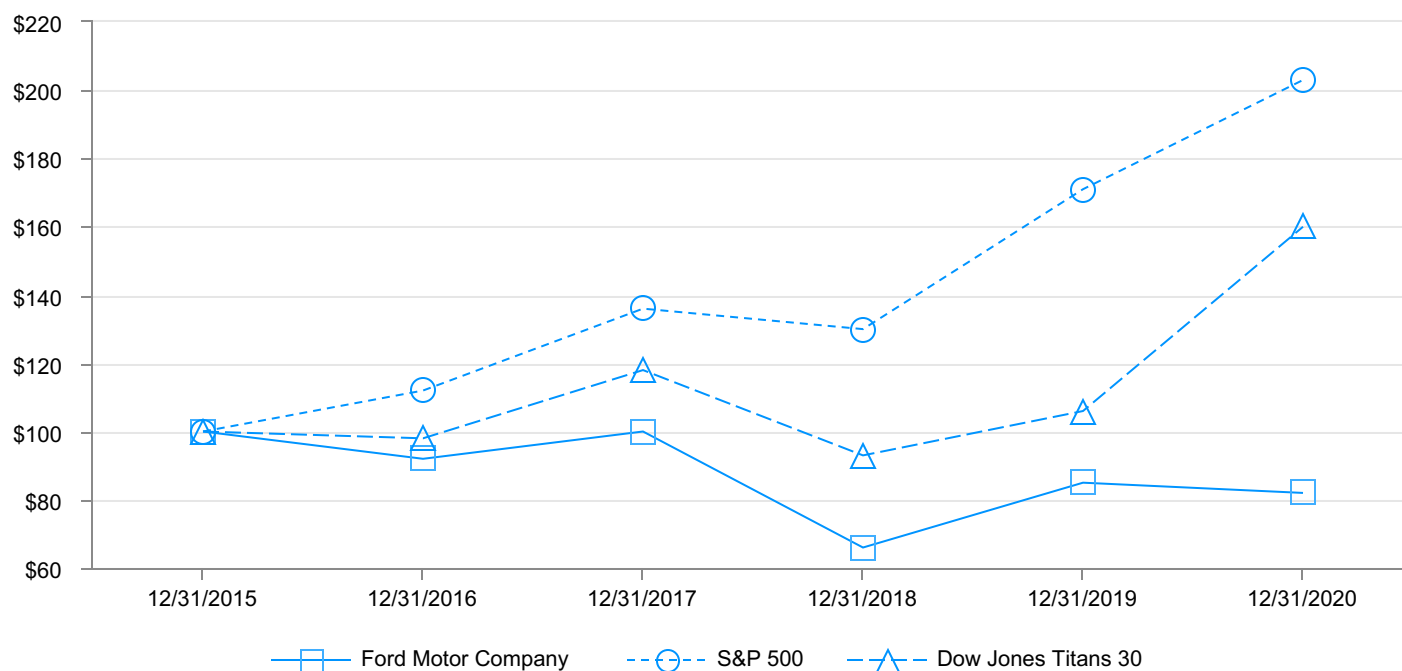
Our Common Stock is listed on the New York Stock Exchange in the United States under the symbol F. As of January 29, 2021, stockholders of record of Ford included approximately 110,702 holders of Common Stock and 3 holders of Class B Stock. We believe that the number of beneficial owners is substantially greater than the number of record holders because a large portion of our Common Stock is held in "street name" by brokers.

Stock Performance Graph

The information contained in this Stock Performance Graph section shall not be deemed to be "soliciting material" or "filed" or incorporated by reference in future filings with the SEC, or subject to the liabilities of Section 18 of the Exchange Act, except to the extent that we specifically incorporate it by reference into a document filed under the Securities Act or the Exchange Act.

The following graph compares the cumulative total shareholder return on our Common Stock with the total return on the S&P 500 Index and the Dow Jones Automobiles & Parts Titans 30 Index for the five year period ended December 31, 2020. It shows the growth of a \$100 investment on December 31, 2015, including the reinvestment of all dividends.

COMPARISON OF CUMULATIVE FIVE-YEAR TOTAL RETURN



Company/Index	Base Period		Years Ending				
	2015	2016	2017	2018	2019	2020	
Ford Motor Company	100	92	100	66	85	82	
S&P 500	100	112	136	130	171	203	
Dow Jones Automobiles & Parts Titans 30	100	98	118	93	106	160	

Issuer Purchases of Securities

We completed no share repurchases during the fourth quarter of 2020.

Dividends

The table below shows the dividends we paid per share of Common and Class B Stock for each quarterly period in 2019 and 2020:

	2019				2020			
	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
Dividends per share of Ford Common and Class B Stock	\$ 0.15	\$ 0.15	\$ 0.15	\$ 0.15	\$ 0.15	\$ 0.00	\$ 0.00	\$ 0.00

To ensure we maintained sufficient cash reserves during the COVID-19 pandemic, suspension of the regular quarterly dividend was announced on March 19, 2020. The declaration and payment of future dividends is at the sole discretion of our Board of Directors after taking into account various factors, including our financial condition, operating results, available cash, and current and anticipated cash needs.

ITEM 6. Selected Financial Data.

The following table sets forth selected financial data for each of the last five years (dollar amounts in millions, except for per share amounts):

SUMMARY OF INCOME/(LOSS)	2016	2017	2018	2019	2020
Total revenues	\$ 151,800	\$ 156,776	\$ 160,338	\$ 155,900	\$ 127,144
Income/(Loss) before income taxes	\$ 6,784	\$ 8,159	\$ 4,345	\$ (640)	\$ (1,116)
Provision for/(Benefit from) income taxes	2,184	402	650	(724)	160
Net income/(loss)	4,600	7,757	3,695	84	(1,276)
Less: Income/(Loss) attributable to noncontrolling interests	11	26	18	37	3
Net income/(loss) attributable to Ford Motor Company	<u>\$ 4,589</u>	<u>\$ 7,731</u>	<u>\$ 3,677</u>	<u>\$ 47</u>	<u>\$ (1,279)</u>

Earnings/(Loss) Per Share Attributable to Ford Motor Company Common and Class B Stock

Average number of shares of Ford Common and Class B Stock outstanding (in millions)	3,973	3,975	3,974	3,972	3,973
Basic income/(loss)	\$ 1.16	\$ 1.94	\$ 0.93	\$ 0.01	\$ (0.32)
Diluted income/(loss)	1.15	1.93	0.92	0.01	(0.32)
Cash dividends declared	0.85	0.65	0.73	0.60	0.15

BALANCE SHEET DATA AT YEAR END

Total assets	\$ 238,510	\$ 258,496	\$ 256,540	\$ 258,537	\$ 267,261
Automotive debt	\$ 15,907	\$ 15,931	\$ 13,547	\$ 14,678	\$ 23,536
Ford Credit debt	126,464	137,757	140,066	140,029	137,677
Other debt	599	599	600	600	471
Total equity	\$ 29,746	\$ 35,606	\$ 35,966	\$ 33,230	\$ 30,811

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

Key Trends and Economic Factors Affecting Ford and the Automotive Industry

COVID-19. The impact of COVID-19, including changes in consumer behavior, pandemic fears and market downturns, and restrictions on business and individual activities, has created significant volatility in the global economy and led to reduced economic activity. There have been extraordinary actions taken by international, federal, state, and local public health and governmental authorities to contain and combat the outbreak and spread of COVID-19 in regions throughout the world, including travel bans, quarantines, “stay-at-home” orders, and similar mandates for many individuals to substantially restrict daily activities and for many businesses to curtail or cease normal operations. Although restrictions have been eased in many locations, some areas that had previously eased restrictions have reverted to more stringent limitations on daily activities. Further, if new strains of COVID-19 develop or sufficient amounts of vaccines are not available, not widely administered for a significant period of time, or otherwise prove ineffective, the impact of COVID-19 on the global economy, and, in turn, on Ford, could be material.

Consistent with the actions taken by governmental authorities, in late March 2020, we idled our manufacturing operations in regions around the world other than China, where manufacturing operations were suspended in January and February before beginning to resume operations in March. A successful phased restart of our manufacturing plants, supply network, and other dependent functions occurred in the second quarter of 2020.

The remote work arrangements that we implemented in 2020 remain in place in most locations. Our remote work arrangements have been designed to allow for continued operation of non-production business-critical functions, including financial reporting systems and internal control. Our controls and procedures have incorporated remote work arrangements using appropriate digital tools.

When we returned to work, we established new protocols to help protect the health and safety of our workforce. Those measures remain in place today, including a daily, online health self-certification, a no-touch temperature scan upon entering our facilities, a policy requiring the use of face masks in our facilities, and measures to provide additional personal protective equipment, including face shields, when employees' jobs do not allow them to socially distance. We have also enhanced our cleaning protocols and adjusted our operating patterns and breaks to reduce potential employee interaction where possible.

We continue to produce medical masks for our employees and dealers. To date, we have produced more than 50 million medical-grade face masks, and we are more than halfway to reaching our goal of donating 100 million masks to communities in need across the United States.

The full impact of COVID-19 on future results depends on future developments, such as the ultimate duration and scope of the outbreak (including any potential future waves and the success of vaccination programs) and its impact on our customers, dealers, and suppliers. Despite the successful restart of our manufacturing operations in 2020, we continue to experience higher than normal levels of absenteeism at our manufacturing facilities and intermittent COVID-19-related disruptions in our supply chain. Moreover, new restrictions could have an adverse effect on production, supply chains, distribution, and demand for vehicles. For additional information on the impact and potential impact of COVID-19 on us, please see Item 1A. Risk Factors on page [15](#).

Supplier Disruptions. The automotive industry has a complex supply network with each manufacturers' products containing components sourced from suppliers who, in turn, source components from their suppliers. When there is a shortage of a key component in our supply chain, and the component cannot be easily sourced from a different supplier, the shortage may disrupt our production. In 2020, although we resumed production at our plants around the world following the COVID-19-related suspension, we continued to experience disruptions due to suppliers who had production difficulties. In 2021, the automotive industry is facing a significant shortage of semiconductors. With up to fifty modules on a vehicle, we and our competitors who need integrated circuits are experiencing various levels of semiconductor impact. The semiconductor supply chain is complex, and a constrained wafer capacity is occurring deep in the chain. Global semiconductor makers allocated more capacity to meet surging demand for consumer electronics during the COVID-19 pandemic as automotive OEMs experienced industry-wide plant closures. At the same time, wafer foundries that support chipmakers have not invested enough in recent years to increase capacities to the levels needed to support demand from all of their customers. Wafers have a long lead time for production, in some cases up to 30 weeks, which further exacerbates the shortage. When global automakers resumed vehicle production in 2020 – even more quickly than some expected – semiconductor supplies became further strained. A combination of these factors, including increased demand for consumer electronics, automotive shutdowns due to COVID-19, the rapid recovery of demand for vehicles, and long lead times for wafer production, is contributing to the shortage of semiconductors. We have already experienced production disruptions at certain locations as a result of the semiconductor shortage. For additional information on the impact of the semiconductor shortage, see the Outlook section on page 67.

Global Redesign. We previously announced our plan for the global redesign of our business, pursuant to which we are working to turn around automotive operations, compete like a challenger, and capitalize on our strengths by allocating more capital, more resources, and more talent to our strongest business and vehicle franchises. Pursuant to the plan, we expect to incur about \$11 billion of EBIT charges and about \$7 billion of cash effects related to our global redesign. During the 2018 through 2021 period, we expect to have incurred about \$10 billion of EBIT charges and about \$5 billion of cash effects related to our global redesign, and sold or closed ten manufacturing sites.

In December 2020, Ford Motor Company Brasil Ltda. ("Ford Brazil"), our subsidiary in Brazil, committed to a plan to exit manufacturing operations in Brazil, which will result in the closure of facilities in Camaçari, Taubaté, and Troller in 2021 as South America moves to an asset-light business model. Production in Camaçari and Taubaté to support new vehicle sales ceased in January 2021, with a limited amount of parts production continuing for a few months to support inventories for aftermarket sales. The Troller plant will cease operations in the fourth quarter of 2021. In connection with this announcement, the Company currently expects to record pre-tax special item charges of about \$4.1 billion, including \$2.4 billion in 2020 and about \$1.7 billion in 2021. The charges will include about \$1.6 billion of non-cash charges related to writing-off certain tax receivables and for accelerated depreciation and amortization. The remaining charges of about \$2.5 billion will be paid in cash primarily in 2021 and are attributable to separation, termination, settlement, and other payments.

Currency Exchange Rate Volatility. The U.S. Federal Reserve lowered its policy interest rate twice in March 2020, by a total of one and one half percentage points, in response to the market risks emanating from the global pandemic. This returned the rate to its recent historical low of zero to one quarter of a percentage point and was combined with asset purchases and other emergency funding mechanisms to maintain the flow of credit throughout the economy. Central banks in other developed markets took similarly aggressive actions to maintain market functioning in the face of an unprecedented, synchronized global shock. The related shifts in capital flows have contributed to increased volatility for both developed and emerging market currencies globally. Emerging markets also face differing inflation backdrops and, in some cases, exposure to commodity prices and political instability, contributing to unpredictable movements in the value of their exchange rates. In addition to direct impacts on the financial flows of global automotive companies, currency movements can also impact pricing of vehicles exported to overseas markets, most notably in the case of the Japanese yen and Korean won. In most markets, exchange rates are market-determined, and all are impacted by many different macroeconomic and policy factors, and thus likely to remain volatile. However, in some markets, exchange rates are heavily influenced or controlled by governments.

Excess Capacity. According to IHS Automotive, an automotive research firm, the estimated automotive industry global production capacity for light vehicles of about 123 million units exceeded global production by about 49 million units in 2020. Even though global production capacity was reduced by about 7 million units in 2020 compared with 2019, excess capacity rose by nearly 8 million units, including increases in North America, Europe, and South America. In North America and Europe, two regions where a significant share of industry revenue is earned, excess capacity as a percent of production in 2020 increased to 58% and 70%, respectively, though a significant portion of these increases are expected to be temporary due to demand and supply disruptions in 2020 related to the global pandemic. In China, the auto industry witnessed excess capacity at a lower rate compared with the prior year, at 50% in 2020, as capacity was more rapidly taken out of commission. According to production capacity data projected by IHS Automotive, global excess capacity conditions could decline materially, to 40 million units in 2021, and average about 35 million units in the following five years from 2022 to 2026.

Pricing Pressure. Excess capacity, with recent capacity constraints as a result of the impacts of COVID-19 being a temporary exception, coupled with a proliferation of new products being introduced in key segments, will keep pressure on manufacturers' ability to set prices. In North America, the industry restructuring of the past few years has allowed manufacturers to better match production with demand, although Japanese and Korean manufacturers also have capacity located outside of the region directed to North America. In the future, Chinese and Indian manufacturers are expected to enter U.S. and European markets, further intensifying competition. Over the long term, intense competition and excess capacity will continue to put downward pressure on inflation-adjusted prices for similarly-contented vehicles in the United States and contribute to a challenging pricing environment for the automotive industry. In Europe, the excess capacity situation has been exacerbated by the nominal reductions in existing capacity, such that negative pricing pressure is expected to continue for the foreseeable future.

Commodity and Energy Price Changes. Changes in market expectations for global demand, notably weaker growth in China, along with geopolitical tensions have generated volatility in energy prices, though they remain at a relatively low level compared with historical performance. Oil prices are expected to remain volatile, and on a lower long-term trend than in prior commodity cycles. Prices for other commodities have also been volatile, as fluctuating global demand and differences in sectoral performance due to the pandemic have generated divergence in price movements across different commodities.

Vehicle Profitability. Our financial results depend on the profitability of the vehicles we sell, which may vary significantly by vehicle line. In general, larger vehicles tend to command higher prices and be more profitable than smaller vehicles, both across and within vehicle segments. For example, in North America, our larger, more profitable vehicles had an average contribution margin that was 125% of our total average contribution margin across all vehicles, whereas our smaller vehicles had significantly lower contribution margins. In addition, government regulations aimed at reducing emissions and increasing fuel efficiency (e.g., ZEV mandates and low emission zones), and other factors that accelerate the transition to electrified vehicles, may increase the cost of vehicles by more than the perceived benefit to consumers and dampen margins.

Trade Policy. To the extent governments in various regions erect or intensify barriers to imports, or implement currency policy that advantages local exporters selling into the global marketplace, there can be a significant negative impact on manufacturers based in other markets. While we believe the long-term trend will support the growth of free trade, we have noted with concern recent developments in a number of regions. In Asia Pacific, a weak yen significantly reduces the cost of exports into the United States, Europe, and other global markets by Japanese manufacturers, and, over a period of time, contribute to other countries pursuing weak currency policies by intervening in the exchange rate markets. This is particularly likely in other Asian countries, such as South Korea. We believe the primary focus of the Biden administration will be addressing the COVID-19 pandemic and moving ahead with economic stimulus. We will continue to monitor and address developing issues.

Other Economic Factors. Interest rates, notably mature market government bond yields, and inflation have remained lower than expected. At the same time, government deficits and debt remain at high levels in many major markets. The eventual implications of higher government deficits and debt, with potentially higher long-term interest rates, may drive a higher cost of capital over our planning period. Higher interest rates and/or taxes to address the higher deficits also may impede real growth in gross domestic product and, therefore, vehicle sales over our planning period.

Regulatory Matters. Many governmental standards and regulations relating to safety, fuel economy, and emissions control, among others, are applicable to the automotive industry, and we spend substantial resources ensuring that we comply with such regulations. Government safety standards require manufacturers to remedy defects related to vehicle safety through safety recall campaigns, and a manufacturer is obligated to recall vehicles if it determines that the vehicles do not comply with a safety standard. The cost of recall and customer satisfaction actions to remedy defects in vehicles that have been sold could be substantial, particularly if the actions relate to global platforms or involve defects that are identified years after production. For example, on January 21, 2021, we announced we will be conducting a field service action to replace Takata airbag inflators in certain model year 2006 through 2012 vehicles, the costs of which is estimated to be \$610 million and is reflected in our fourth quarter 2020 results. In addition, NHTSA and the automotive industry are currently engaged in a study of the safety of approximately 56 million Takata desiccated airbag inflators in the United States. Of these, approximately three and a half million of the inflators are in our vehicles. Should NHTSA determine that the inflators contain a safety defect, Ford and other manufacturers could potentially face significant incremental recall costs.

Revenue

Our Automotive segment revenue is generated primarily by sales of vehicles, parts, and accessories. Revenue is recorded when control is transferred to our customers (generally, our dealers and distributors). For the majority of sales, this occurs when products are shipped from our manufacturing facilities. This is not the case, however, with respect to vehicles produced for sale to daily rental car companies with an obligation to repurchase the vehicle for a guaranteed amount, exercisable at the option of the customer. These contracts are accounted for as operating leases, with lease revenue and profits recognized over the term of the lease. Proceeds from the sale of vehicles at auction are recognized in revenue upon transfer of control of the vehicle to the buyer.

Most of the vehicles sold by us to our dealers and distributors are financed at wholesale by Ford Credit. Upon Ford Credit originating the wholesale receivable related to a dealer's purchase of a vehicle, Ford Credit pays cash to the relevant Automotive legal entity in payment of the dealer's obligation for the purchase price of the vehicle. The dealer then pays the wholesale finance receivable to Ford Credit when it sells the vehicle to a retail customer.

Our Ford Credit segment revenue is generated primarily from interest on finance receivables, net of certain deferred origination costs that are included as a reduction of financing revenue, and such revenue is recognized over the term of the receivable using the interest method. Also, revenue from operating leases is recognized on a straight-line basis over the term of the lease. Income is generated to the extent revenues exceed expenses, most of which are interest, depreciation, and operating expenses.

Transactions between our Automotive and Ford Credit segments occur in the ordinary course of business. For example, we offer special retail financing and lease incentives to dealers' customers who choose to finance or lease our vehicles from Ford Credit. The cost for these incentives is included in our estimate of variable consideration at the date the related vehicle sales to our dealers are recorded. In order to compensate Ford Credit for the lower interest or lease payments offered to the retail customer, we pay the discounted value of the incentive directly to Ford Credit when it originates the retail finance or lease contract with the dealer's customer. Ford Credit recognizes the incentive amount over the life of retail finance contracts as an element of financing revenue and over the life of lease contracts as a reduction to depreciation. See Note 1 of the Notes to the Financial Statements for a more detailed discussion of transactions between our Automotive and Ford Credit segments.

Costs and Expenses

Our income statement classifies our Company excluding Ford Credit total costs and expenses into two categories: (i) cost of sales, and (ii) selling, administrative, and other expenses. We include within cost of sales those costs related to the development, production, and distribution of our vehicles, parts, accessories, and services. Specifically, we include in cost of sales each of the following: material costs (including commodity costs); freight costs; warranty, including product recall costs; labor and other costs related to the development and production of our vehicles, parts, accessories, and services; depreciation and amortization; and other associated costs. We include within selling, administrative, and other expenses labor and other costs not directly related to the development and production of our vehicles, parts, accessories, and services, including such expenses as advertising and sales promotion costs.

Certain of our costs, such as material costs, generally vary directly with changes in volume and mix of production. In our industry, production volume often varies significantly from quarter to quarter and year to year. Quarterly production volumes experience seasonal shifts throughout the year (including peak retail sales seasons and the impact on production of model changeover and new product launches). Annual production volumes are heavily impacted by external economic factors, including the pace of economic growth and factors such as the availability of consumer credit and cost of fuel.

As a result, we analyze the profit impact of certain cost changes holding constant present-year volume and mix and currency exchange, in order to evaluate our cost trends absent the impact of varying production and currency exchange levels. We analyze these cost changes in the following categories:

- *Contribution Costs* – these costs typically vary with production volume. These costs include material (including commodity), warranty, and freight and duty costs.
- *Structural Costs* – these costs typically do not have a directly proportionate relationship to production volume. These costs include manufacturing, engineering, spending-related, advertising and sales promotion, administrative and selling, and pension and OPEB costs.

While contribution costs generally vary directly in proportion to production volume, elements within our structural costs category are impacted to differing degrees by changes in production volume. We also have varying degrees of discretion when it comes to controlling the different elements within our structural costs. For example, depreciation and amortization expense largely is associated with prior capital spending decisions. On the other hand, while labor costs do not vary directly with production volume, manufacturing labor costs may be impacted by changes in volume, for example when we increase overtime, add a production shift, or add personnel to support volume increases. Other structural costs, such as advertising or engineering costs, do not necessarily have a directly proportionate relationship to production volume. Our structural costs generally are within our discretion, although to varying degrees, and can be adjusted over time in response to external factors.

We consider certain structural costs to be a direct investment in future growth and revenue. For example, structural costs are necessary to grow our business and improve profitability, invest in new products and technologies, respond to increasing industry sales volume, and grow our market share.

Cost of sales and Selling, administrative, and other expenses for full year 2020 were \$122.9 billion. Our Automotive segment's material and commodity costs make up the largest portion of these costs and expenses, followed by structural costs. Although material costs are our largest absolute cost, our margins can be affected significantly by changes in any category of costs.

RESULTS OF OPERATIONS - 2020

The net loss attributable to Ford Motor Company was \$1,279 million in 2020. Company adjusted EBIT was \$2,779 million.

Net income/(loss) includes certain items ("special items") that are excluded from Company adjusted EBIT. These items are discussed in more detail in Note 26 of the Notes to the Financial Statements. We report special items separately to allow investors analyzing our results to identify certain infrequent significant items that they may wish to exclude when considering the trend of ongoing operating results. Our pre-tax and tax special items were as follows (in millions):

	2019	2020
Global Redesign		
Europe excl. Russia	\$ (1,246)	\$ (727)
India	(804)	(23)
South America	(566)	(2,486)
Russia	(357)	18
China	(101)	(56)
Separations and Other (not included above)	(107)	(94)
Subtotal Global Redesign	\$ (3,181)	\$ (3,368)
Other Items		
Gain on transaction with Argo AI and VW	\$ —	\$ 3,454
Takata field service action	—	(610)
Other incl. Focus cancellation, Transit Connect customs ruling, North America hourly buyouts, and Chariot	(273)	(226)
Subtotal Other Items	\$ (273)	\$ 2,618
Pension and OPEB Gain/(Loss)		
Pension and OPEB remeasurement	\$ (2,500)	\$ (1,435)
Pension settlements and curtailments	(45)	(61)
Subtotal Pension and OPEB Gain/(Loss)	\$ (2,545)	\$ (1,496)
Total EBIT Special Items	\$ (5,999)	\$ (2,246)
Cash effect of Global Redesign (incl. separations)	\$ (911)	\$ (503)
Provision for/(Benefit from) tax special items (a)	\$ (1,323)	\$ 670

(a) Includes related tax effect on special items and tax special items.

We recorded \$2.2 billion of pre-tax special item charges in 2020, primarily reflecting Global Redesign actions in South America and Europe, mark-to-market adjustments for our global pension and OPEB plans, and the field service action for Takata airbag inflators, partially offset by the gain on our investment in Argo AI as a result of the transaction with Argo AI and Volkswagen in the second quarter of 2020.

In Note 26 of the Notes to the Financial Statements, special items are reflected as a separate reconciling item, as opposed to being allocated among the Automotive, Mobility, and Ford Credit segments. This reflects the fact that management excludes these items from its review of operating segment results for purposes of measuring segment profitability and allocating resources.

COMPANY KEY METRICS

The table below shows our full year 2020 key metrics for the Company compared to a year ago.

	2019	2020	H / (L)
GAAP Financial Measures			
Cash Flows from Operating Activities (\$B)	\$ 17.6	\$ 24.3	\$ 6.6
Revenue (\$M)	155,900	127,144	(18)%
Net Income/(Loss) (\$M)	47	(1,279)	\$ (1,326)
Net Income/(Loss) Margin (%)	0.0%	(1.0)%	(1.0) pts
EPS (Diluted)	\$ 0.01	\$ (0.32)	\$ (0.33)
Non-GAAP Financial Measures (a)			
Company Adj. Free Cash Flow (\$B)	\$ 2.8	\$ 0.7	\$ (2.1)
Company Adj. EBIT (\$M)	6,379	2,779	(3,600)
Company Adj. EBIT Margin (%)	4.1%	2.2%	(1.9) pts
Adjusted EPS (Diluted)	\$ 1.19	\$ 0.41	\$ (0.78)
Adjusted ROIC (Trailing Four Qtrs)	7.8%	1.0%	(6.8) pts

(a) See *Non-GAAP Financial Measure Reconciliations* section for reconciliation to GAAP.

For full year 2020, revenue was down 18 percent to \$127.1 billion.

In 2020, our diluted earnings per share of Common and Class B Stock was a loss of \$0.32 and our diluted adjusted earnings per share was \$0.41.

Net income/(loss) margin was negative 1.0 percent in 2020, down from 0.0 percent a year ago. Company adjusted EBIT margin was 2.2 percent in 2020, down from 4.1 percent a year ago.

The table below shows our full year 2020 net income/(loss) attributable to Ford and Company adjusted EBIT by segment (in millions).

	2019	2020	H / (L)
Automotive	\$ 4,926	\$ 1,633	\$ (3,293)
Mobility	(1,186)	(1,274)	(88)
Ford Credit	2,998	2,608	(390)
Corporate Other	(359)	(188)	171
Company Adjusted EBIT (a)	6,379	2,779	(3,600)
Interest on Debt	(1,020)	(1,649)	629
Special Items	(5,999)	(2,246)	(3,753)
Taxes / Noncontrolling Interests	687	(163)	850
Net Income/(Loss)	\$ 47	\$ (1,279)	\$ (1,326)

(a) See *Non-GAAP Financial Measure Reconciliations* section for reconciliation to GAAP.

The year-over-year declines of \$1.3 billion in net income/(loss) and \$3.6 billion in Company adjusted EBIT in 2020 were driven by decreases in Automotive EBIT and Ford Credit EBT, primarily reflecting the impact of COVID-19. Our net loss in 2020 includes the effect of special items, including Global Redesign actions in South America and Europe, mark-to-market adjustments for our global pension and OPEB plans, and the field service action for Takata airbag inflators, partially offset by the gain on our investment in Argo AI.

Automotive Segment

The table below shows our full year 2020 Automotive segment EBIT by business unit (in millions).

	2019	2020	H / (L)
North America	\$ 6,612	\$ 3,625	\$ (2,987)
South America	(704)	(491)	213
Europe	123	(834)	(957)
China (including Taiwan)	(771)	(501)	270
International Markets Group	(334)	(166)	168
Automotive Segment	<u>\$ 4,926</u>	<u>\$ 1,633</u>	<u>\$ (3,293)</u>

The tables below and on the following pages provide full year 2020 key metrics and the change in full year 2020 EBIT compared with full year 2019 by causal factor for our Automotive segment and its regional business units. For a description of these causal factors, see *Definitions and Information Regarding Automotive Causal Factors*.

	2019	2020	H / (L)
Key Metrics			
Market Share (%)	6.0 %	5.8 %	(0.2) ppts
Wholesale Units (000)	5,386	4,187	(1,199)
Revenue (\$M)	\$ 143,599	\$ 115,885	\$ (27,714)
EBIT (\$M)	4,926	1,633	(3,293)
EBIT Margin (%)	3.4 %	1.4 %	(2.0) ppts

Change in EBIT by Causal Factor (in millions)

2019 Full Year EBIT	\$ 4,926
Volume / Mix	(9,417)
Net Pricing	4,985
Cost	904
Exchange	(312)
Other	547
2020 Full Year EBIT	<u>\$ 1,633</u>

In 2020, wholesales in our Automotive segment declined 22 percent from a year ago, reflecting a decrease in each business unit other than China. Full year 2020 Automotive revenue decreased 19 percent from a year ago.

Our full year 2020 Automotive segment EBIT decreased \$3.3 billion from a year ago with an EBIT margin of 1.4 percent. Higher net pricing and favorable mix were more than offset by the impact of COVID-related lower industry volume and the changeover to the all-new F-150. Structural costs were significantly lower, primarily reflecting the impact of our suspension of production earlier in the year due to COVID-19.

North America

	2019	2020	H / (L)
Key Metrics			
Market Share (%)	13.2 %	13.2 %	— pts
Wholesale Units (000)	2,765	2,081	(684)
Revenue (\$M)	\$ 98,053	\$ 80,035	\$ (18,018)
EBIT (\$M)	6,612	3,625	(2,987)
EBIT Margin (%)	6.7 %	4.5 %	(2.2) pts
Change in EBIT by Causal Factor (in millions)			
2019 Full Year EBIT			\$ 6,612
Volume / Mix			(6,776)
Net Pricing			3,041
Cost			366
Exchange			(64)
Other			446
2020 Full Year EBIT			\$ 3,625

In North America, 2020 wholesales declined 25 percent from a year ago, driven by COVID-related lower industry volume and the changeover to the all-new F-150. Full year 2020 revenue decreased 18 percent year over year, driven by lower volume, partially offset by higher net pricing and favorable series and option mix.

North America's 2020 EBIT decreased \$3 billion from a year ago with an EBIT margin of 4.5 percent. The lower EBIT was driven by lower volume, higher material cost, and higher warranty expense. Higher net pricing, favorable mix, and lower structural costs were partial offsets.

South America

	2019	2020	H / (L)
Key Metrics			
Market Share (%)	7.2%	6.2%	(1.0) pts
Wholesale Units (000)	295	185	(111)
Revenue (\$M)	\$ 3,893	\$ 2,463	\$ (1,430)
EBIT (\$M)	(704)	(491)	213
EBIT Margin (%)	(18.1)%	(19.9)%	(1.8) pts
Change in EBIT by Causal Factor (in millions)			
2019 Full Year EBIT			\$ (704)
Volume / Mix			(143)
Net Pricing			513
Cost			89
Exchange			(232)
Other			(14)
2020 Full Year EBIT			\$ (491)

In South America, 2020 wholesales declined 38 percent from a year ago, driven by COVID-related lower industry volume. Full year 2020 revenue declined 37 percent year over year, driven by lower volume and weaker currencies, partially offset by higher net pricing and favorable vehicle mix.

South America's 2020 EBIT loss improved \$213 million from a year ago with an EBIT margin of negative 19.9%. The EBIT improvement was driven by higher net pricing and cost reductions.

Europe

	2019	2020	H / (L)
Key Metrics			
Market Share (%)	7.3%	7.2%	(0.1) pts
Wholesale Units (000) (a)	1,390	1,020	(370)
Revenue (\$M)	\$ 28,150	\$ 22,644	\$ (5,506)
EBIT (\$M)	123	(834)	(957)
EBIT Margin (%)	0.4%	(3.7)%	(4.1) pts

(a) Includes Ford brand vehicles produced and sold by our unconsolidated affiliate in Turkey (about 34,000 units in 2019 and 72,000 units in 2020); revenue does not include these sales.

Change in EBIT by Causal Factor (in millions)

2019 Full Year EBIT	\$	123
Volume / Mix		(1,973)
Net Pricing		1,354
Cost		(190)
Exchange		74
Other		(222)
2020 Full Year EBIT	\$	(834)

In Europe, 2020 wholesales declined 27 percent from a year ago, driven by COVID-19 related lower industry volume. Full year 2020 revenue declined 20 percent year over year, driven by lower volume, partially offset by higher net pricing and favorable series and option mix.

Europe's 2020 EBIT decreased \$957 million from a year ago with an EBIT margin of negative 3.7 percent. The lower EBIT was more than explained by COVID-19 related lower industry volume and the Kuga PHEV recall in the third quarter of 2020.

China (Including Taiwan)

	2019	2020	H / (L)
Key Metrics			
Market Share (%)	2.2%	2.4%	0.2 pts
Wholesale Units (000) (a)	535	617	83
Revenue (\$M)	\$ 3,615	\$ 3,202	\$ (413)
EBIT (\$M)	(771)	(501)	270
EBIT Margin (%)	(21.3)%	(15.6)%	5.7 pts

China Unconsolidated Affiliates

Wholesale Units (000)	462	564	102
Ford Equity Income/(Loss) (\$M)	\$ (161)	\$ 49	\$ 210

(a) Includes Ford brand and JMC brand vehicles produced and sold in China by our unconsolidated affiliates. Revenue does not include these sales.

Change in EBIT by Causal Factor (in millions)

2019 Full Year EBIT	\$ (771)
Volume / Mix	(137)
Net Pricing	(15)
Cost	193
Exchange	(113)
Other	342
2020 Full Year EBIT	\$ (501)

In China, 2020 wholesales increased 16 percent from a year ago, driven by higher joint venture volumes. Full year 2020 consolidated revenue declined 11 percent year over year, driven by lower volume, partially offset by higher component sales to our joint ventures in China and favorable series and option mix.

China's 2020 EBIT loss improved \$270 million from a year ago with an EBIT margin of negative 15.6 percent. The improved EBIT was driven by higher joint venture profits and royalties and lower structural costs.

International Markets Group

	2019	2020	H / (L)
Key Metrics			
Market Share (%)	1.9%	1.7%	(0.2) pts
Wholesale Units (000) (a)	401	284	(117)
Revenue (\$M)	\$ 9,888	\$ 7,541	\$ (2,347)
EBIT (\$M)	(334)	(166)	168
EBIT Margin (%)	(3.4)%	(2.2)%	1.2 pts

(a) Includes Ford brand vehicles produced and sold by our unconsolidated affiliate in Russia (about 28,000 units in 2019 and 14,000 units in 2020). Revenue after Q2 2019 does not include these sales.

Change in EBIT by Causal Factor (in millions)

2019 Full Year EBIT	\$	(334)
Volume / Mix		(388)
Net Pricing		91
Cost		446
Exchange		22
Other		(3)
2020 Full Year EBIT	\$	(166)

In our International Markets Group, 2020 wholesales declined 29 percent from a year ago, driven by COVID-related lower industry volume. Full year 2020 revenue declined 24 percent year over year, driven by lower volume and weaker currencies, partially offset by higher net pricing and favorable series and option mix.

Our International Market Group's 2020 EBIT loss improved \$168 million from a year ago with an EBIT margin of negative 2.2 percent. The improved EBIT was driven by cost reductions, higher net pricing, and favorable mix, partially offset by lower volume.

Definitions and Information Regarding Automotive Causal Factors

In general, we measure year-over-year change in Automotive segment EBIT using the causal factors listed below, with net pricing and cost variances calculated at present-year volume and mix and exchange:

- *Market Factors* (exclude the impact of unconsolidated affiliate wholesale units):
 - *Volume and Mix* – primarily measures EBIT variance from changes in wholesale unit volumes (at prior-year average contribution margin per unit) driven by changes in industry volume, market share, and dealer stocks, as well as the EBIT variance resulting from changes in product mix, including mix among vehicle lines and mix of trim levels and options within a vehicle line
 - *Net Pricing* – primarily measures EBIT variance driven by changes in wholesale unit prices to dealers and marketing incentive programs such as rebate programs, low-rate financing offers, special lease offers, and stock adjustments on dealer inventory
- *Cost:*
 - *Contribution Costs* – primarily measures EBIT variance driven by per-unit changes in cost categories that typically vary with volume, such as material costs (including commodity and component costs), warranty expense, and freight and duty costs
 - *Structural Costs* – primarily measures EBIT variance driven by absolute change in cost categories that typically do not have a directly proportionate relationship to production volume. Structural costs include the following cost categories:
 - *Manufacturing, Including Volume-Related* - consists primarily of costs for hourly and salaried manufacturing personnel, plant overhead (such as utilities and taxes), and new product launch expense. These costs could be affected by volume for operating pattern actions such as overtime, line-speed, and shift schedules
 - *Engineering* – consists primarily of costs for engineering personnel, prototype materials, testing, and outside engineering services
 - *Spending-Related* – consists primarily of depreciation and amortization of our manufacturing and engineering assets, but also includes asset retirements and operating leases
 - *Advertising and Sales Promotions* – includes costs for advertising, marketing programs, brand promotions, customer mailings and promotional events, and auto shows
 - *Administrative and Selling* – includes primarily costs for salaried personnel and purchased services related to our staff activities and selling functions, as well as associated information technology costs
 - *Pension and OPEB* – consists primarily of past service pension costs and other postretirement employee benefit costs
- *Exchange* – primarily measures EBIT variance driven by one or more of the following: (i) transactions denominated in currencies other than the functional currencies of the relevant entities, (ii) effects of converting functional currency income to U.S. dollars, (iii) effects of remeasuring monetary assets and liabilities of the relevant entities in currencies other than their functional currency, or (iv) results of our foreign currency hedging
- *Other* – includes a variety of items, such as parts and services earnings, royalties, government incentives, and compensation-related changes

In addition, definitions and calculations used in this report include:

- *Wholesales and Revenue* – wholesale unit volumes include all Ford and Lincoln badged units (whether produced by Ford or by an unconsolidated affiliate) that are sold to dealerships, units manufactured by Ford that are sold to other manufacturers, units distributed by Ford for other manufacturers, and local brand units produced by our China joint venture, Jiangling Motors Corporation, Ltd. ("JMC"), that are sold to dealerships. Vehicles sold to daily rental car companies that are subject to a guaranteed repurchase option (i.e., rental repurchase), as well as other sales of finished vehicles for which the recognition of revenue is deferred (e.g., consignments), also are included in wholesale unit volumes. Revenue from certain vehicles in wholesale unit volumes (specifically, Ford badged vehicles produced and distributed by our unconsolidated affiliates, as well as JMC brand vehicles) are not included in our revenue
- *Industry Volume and Market Share* – based, in part, on estimated vehicle registrations; includes medium and heavy duty trucks
- *SAAR* – seasonally adjusted annual rate

Mobility Segment

The Mobility segment primarily includes development costs for Ford's autonomous vehicles and related businesses, Ford's equity ownership in Argo AI (a developer of autonomous driving systems), and other mobility businesses and investments (including Spin, a micro-mobility service provider).

In our Mobility segment, our 2020 EBIT decreased \$88 million from a year ago. The \$1.3 billion EBIT loss reflects our strategic investments in 2020 as we continued to expand our capabilities in autonomous vehicles and mobility businesses.

Ford Credit Segment

The tables below provide full year 2020 key metrics and the change in full year 2020 EBT compared with full year 2019 by causal factor for the Ford Credit segment. For a description of these causal factors, see *Definitions and Information Regarding Ford Credit Causal Factors*.

	2019	2020	H / (L)
GAAP Financial Measures			
Total Net Receivables (\$B)	\$ 142	\$ 132	(7)%
Loss-to-Receivables (bps) (a)	52	36	(16)
Auction Values (b)	\$ 19,305	\$ 19,950	3%
EBT (\$M)	2,998	2,608	\$ (390)
ROE (%)	15%	14%	(1) ppt
Other Balance Sheet Metrics			
Debt (\$B)	\$ 140	\$ 138	(1)%
Net Liquidity (\$B)	33	35	(6)%
Financial Statement Leverage (to 1)	9.8	9.8	—

(a) U.S. retail financing only.

(b) U.S. 36-month off-lease auction values at full year 2020 mix.

	2019	2020	H / (L)
Non-GAAP Financial Measures			
Managed Receivables (\$B) (a)	\$ 152	\$ 141	(7)%
Managed Leverage (to 1) (b)	8.9	8.3	(0.6)

(a) See *Non-GAAP Financial Measure Reconciliations* section for reconciliation to GAAP.

(b) See *Liquidity and Capital Resources - Ford Credit Segment* section for reconciliation to GAAP.

Change in EBT by Causal Factor (in millions)

2019 Full Year EBT	\$ 2,998
Volume / Mix	(173)
Financing Margin	20
Credit Loss	(539)
Lease Residual	304
Exchange	(9)
Other	7
2020 Full Year EBT	\$ 2,608

Ford Credit's loss metrics reflected healthy and stable consumer credit conditions, and auction values for off-lease vehicles were 3 percent higher than a year ago. We are planning for full year 2021 auction values to be lower than 2020. Receivables at December 31, 2020 were lower year over year.

Ford Credit's 2020 EBT decreased \$390 million from a year ago, primarily driven by an increase to the credit loss reserve due to COVID-19 and unfavorable volume and mix due to lower receivables, partially offset by favorable lease residual performance due to improved auction values.

Definitions and Information Regarding Ford Credit Causal Factors.

In general, we measure year-over-year changes in Ford Credit's EBT using the causal factors listed below:

- *Volume and Mix:*
 - Volume primarily measures changes in net financing margin driven by changes in average managed receivables at prior period financing margin yield (defined below in financing margin) at prior period exchange rates. Volume changes are primarily driven by the volume of new and used vehicles sold and leased, the extent to which Ford Credit purchases retail financing and operating lease contracts, the extent to which Ford Credit provides wholesale financing, the sales price of the vehicles financed, the level of dealer inventories, Ford-sponsored special financing programs available exclusively through Ford Credit, and the availability of cost-effective funding
 - Mix primarily measures changes in net financing margin driven by period-over-period changes in the composition of Ford Credit's average managed receivables by product within each region
- *Financing Margin:*
 - Financing margin variance is the period-to-period change in financing margin yield multiplied by the present period average managed receivables at prior period exchange rates. This calculation is performed at the product and country level and then aggregated. Financing margin yield equals revenue, less interest expense and scheduled depreciation for the period, divided by average managed receivables for the same period
 - Financing margin changes are driven by changes in revenue and interest expense. Changes in revenue are primarily driven by the level of market interest rates, cost assumptions in pricing, mix of business, and competitive environment. Changes in interest expense are primarily driven by the level of market interest rates, borrowing spreads, and asset-liability management
- *Credit Loss:*
 - Credit loss is the change in the provision for credit losses at prior period exchange rates. For analysis purposes, management splits the provision for credit losses into net charge-offs and the change in the allowance for credit losses
 - Net charge-off changes are primarily driven by the number of repossessions, severity per repossession, and recoveries. Changes in the allowance for credit losses are primarily driven by changes in historical trends in credit losses and recoveries, changes in the composition and size of Ford Credit's present portfolio, changes in trends in historical used vehicle values, and changes in forward looking macroeconomic conditions. For additional information, refer to the "Critical Accounting Estimates - Allowance for Credit Losses" section of Item 7 of Part II of our 2020 Form 10-K Report
- *Lease Residual:*
 - Lease residual measures changes to residual performance at prior period exchange rates. For analysis purposes, management splits residual performance primarily into residual gains and losses, and the change in accumulated supplemental depreciation
 - Residual gain and loss changes are primarily driven by the number of vehicles returned to Ford Credit and sold, and the difference between the auction value and the depreciated value (which includes both base and accumulated supplemental depreciation) of the vehicles sold. Changes in accumulated supplemental depreciation are primarily driven by changes in Ford Credit's estimate of the expected auction value at the end of the lease term, and changes in Ford Credit's estimate of the number of vehicles that will be returned to it and sold. For additional information, refer to the "Critical Accounting Estimates - Accumulated Depreciation on Vehicles Subject to Operating Leases" section of Item 7 of Part II of our 2020 Form 10-K Report
- *Exchange:*
 - Reflects changes in EBT driven by the effects of converting functional currency income to U.S. dollars
- *Other:*
 - Primarily includes operating expenses, other revenue, insurance expenses, and other income at prior period exchange rates
 - Changes in operating expenses are primarily driven by salaried personnel costs, facilities costs, and costs associated with the origination and servicing of customer contracts
 - In general, other income changes are primarily driven by changes in earnings related to market valuation adjustments to derivatives (primarily related to movements in interest rates) and other miscellaneous items

In addition, the following definitions and calculations apply to Ford Credit when used in this Report:

- *Cash* (as shown in the Funding and Liquidity and Leverage sections) – Cash, cash equivalents, and marketable securities, excluding amounts related to insurance activities
- *Debt* (as shown in the Key Metrics and Leverage tables) – Debt on Ford Credit's balance sheets. Includes debt issued in securitizations and payable only out of collections on the underlying securitized assets and related enhancements. Ford Credit holds the right to receive the excess cash flows not needed to pay the debt issued by, and other obligations of, the securitization entities that are parties to those securitization transactions
- *Earnings Before Taxes (EBT)* – Reflects Ford Credit's income before income taxes
- *Return on Equity (ROE)* (as shown in the Key Metrics table) – Reflects return on equity calculated by annualizing net income for the period and dividing by monthly average equity for the period
- *Securitization and Restricted Cash* (as shown in the Liquidity table) – Securitization cash held for the benefit of the securitization investors (for example, a reserve fund). Restricted cash primarily includes cash held to meet certain local governmental and regulatory reserve requirements and cash held under the terms of certain contractual agreements
- *Securitizations* (as shown in the Public Term Funding Plan table) – Public securitization transactions, Rule 144A offerings sponsored by Ford Credit, and widely distributed offerings by Ford Credit Canada
- *Term Asset-Backed Securities* (as shown in the Funding Structure table) – Obligations issued in securitization transactions that are payable only out of collections on the underlying securitized assets and related enhancements
- *Total Net Receivables* (as shown in the Key Metrics and Ford Credit Net Receivables Reconciliation To Managed Receivables tables) – Includes finance receivables (retail financing and wholesale) sold for legal purposes and net investment in operating leases included in securitization transactions that do not satisfy the requirements for accounting sale treatment. These receivables and operating leases are reported on Ford Credit's balance sheet and are available only for payment of the debt issued by, and other obligations of, the securitization entities that are parties to those securitization transactions; they are not available to pay the other obligations of Ford Credit or the claims of Ford Credit's other creditors

Corporate Other

Corporate Other primarily includes corporate governance expenses, interest income (excluding interest earned on our extended service contract portfolio that is included in our Automotive segment) and gains and losses from our cash, cash equivalents, marketable securities and other investments, and foreign exchange derivatives gains and losses associated with intercompany lending. Corporate governance expenses are primarily administrative, delivering benefit on behalf of the global enterprise, and are not allocated to specific Automotive business units or operating segments. These include expenses related to setting and directing global policy, providing oversight and stewardship, and promoting the Company's interests. For full year 2020, Corporate Other had a \$188 million loss, compared with a \$359 million loss in 2019. The year-over-year improvement was driven by mark-to-market gains on our investments, partially offset by lower interest income.

Interest on Debt

Interest on Debt consists of interest expense on Automotive and Other debt. Our full year 2020 interest expense on Automotive and Other debt was \$1,649 million, \$629 million higher than in 2019, more than explained by higher U.S. debt interest expense.

Taxes

Our *Provision for/(Benefit from) income taxes* for full year 2020 was a \$160 million provision, resulting in an effective tax rate of negative 14.3%. This includes expenses to establish \$1.3 billion of valuation allowances primarily against U.S. tax credits recorded as deferred tax assets.

Our full year 2020 adjusted effective tax rate, which excludes special items, was negative 45.1%.

RESULTS OF OPERATIONS - 2019

Net income attributable to Ford Motor Company was \$47 million in 2019. Company adjusted EBIT was \$6,379 million.

Net income includes certain items ("special items") that are excluded from Company adjusted EBIT. These items are discussed in more detail in Note 26 of the Notes to the Financial Statements. We report special items separately to allow investors analyzing our results to identify certain infrequent significant items that they may wish to exclude when considering the trend of ongoing operating results. Our pre-tax and tax special items were as follows (in millions):

	2018	2019
Global Redesign		
Europe excl. Russia	\$ (309)	\$ (1,246)
India	—	(804)
South America	(65)	(566)
Russia	—	(357)
China	—	(101)
Separations and Other (not included above)	(163)	(107)
Subtotal Global Redesign	\$ (537)	\$ (3,181)
Other Items		
Focus cancellation	\$ (16)	\$ (72)
Other, including Transit Connect customs ruling and Chariot	(40)	(201)
Subtotal Other Items	\$ (56)	\$ (273)
Pension and OPEB Gain/(Loss)		
Pension and OPEB remeasurement	\$ (851)	\$ (2,500)
Pension curtailment	15	(45)
Subtotal Pension and OPEB Gain/(Loss)	\$ (836)	\$ (2,545)
Total EBIT Special Items	<u>\$ (1,429)</u>	<u>\$ (5,999)</u>
Cash effect of Global Redesign (incl. separations)	\$ (196)	\$ (911)
Provision for/(Benefit from) tax special items (a)	\$ 88	\$ (1,323)

(a) Includes related tax effect on special items and tax special items.

We recorded \$6 billion of special item charges in 2019. Actions related to our Global Redesign accounted for \$3.2 billion of the special items, including European restructuring, with cash effects of \$911 million. Special item charges also included \$2.5 billion for pension and OPEB remeasurement losses. The remeasurement loss did not have an impact on our cash in 2019.

In Note 26 of the Notes to the Financial Statements, special items are reflected as a separate reconciling item, as opposed to being allocated among the Automotive, Mobility, and Ford Credit segments. This reflects the fact that management excludes these items from its review of operating segment results for purposes of measuring segment profitability and allocating resources.

COMPANY KEY METRICS

The table below shows our full year 2019 key metrics for the Company compared with full year 2018.

	2018	2019	H / (L)
GAAP Financial Measures			
Cash Flows from Operating Activities (\$B)	\$ 15.0	\$ 17.6	\$ 2.6
Revenue (\$M)	160,338	155,900	(3)%
Net Income (\$M)	3,677	47	\$ (3,630)
Net Income Margin (%)	2.3%	0.0%	(2.3) pts
EPS (Diluted)	\$ 0.92	\$ 0.01	\$ (0.91)
Non-GAAP Financial Measures (a)			
Company Adj. Free Cash Flow (\$B)	\$ 2.8	\$ 2.8	\$ —
Company Adj. EBIT (\$M)	7,002	6,379	(623)
Company Adj. EBIT Margin (%)	4.4%	4.1%	(0.3) pts
Adjusted EPS (Diluted)	\$ 1.30	\$ 1.19	\$ (0.11)
Adjusted ROIC (Trailing Four Qtrs)	7.1%	7.8%	0.7 pts

(a) See Non-GAAP Financial Measure Reconciliations section for reconciliation to GAAP.

For full year 2019, revenue was down 3 percent, or 1 percent excluding the impact of exchange, to \$155.9 billion.

In 2019, our diluted earnings per share of Common and Class B Stock was \$0.01 and our diluted adjusted earnings per share was \$1.19.

Net income margin was 0.0 percent in 2019, down from 2.3 percent in 2018. Company adjusted EBIT margin was 4.1 percent in 2019, down from 4.4 percent in 2018.

The table below shows our full year 2019 net income attributable to Ford and Company adjusted EBIT by segment (in millions).

	2018	2019	H / (L)
Automotive	\$ 5,422	\$ 4,926	\$ (496)
Mobility	(674)	(1,186)	(512)
Ford Credit	2,627	2,998	371
Corporate Other	(373)	(359)	14
Company Adjusted EBIT (a)	7,002	6,379	(623)
Interest on Debt	(1,228)	(1,020)	208
Special Items	(1,429)	(5,999)	(4,570)
Taxes / Noncontrolling Interests	(668)	687	1,355
Net Income/(Loss)	\$ 3,677	\$ 47	\$ (3,630)

(a) See Non-GAAP Financial Measure Reconciliations section for reconciliation to GAAP.

The \$3.6 billion year-over-year decline in net income in 2019 is more than explained by the \$6 billion of special item charges discussed in more detail above under "Results of Operations - 2019."

Company adjusted EBIT decreased about 9 percent in 2019 compared with 2018, driven by higher investments in Mobility and lower Automotive EBIT, offset partially by improved Ford Credit EBT.

Automotive Segment

The table below shows our full year 2019 Automotive segment EBIT by business unit (in millions).

	2018	2019	H / (L)
North America	\$ 7,607	\$ 6,612	\$ (995)
South America	(678)	(704)	(26)
Europe	(210)	123	333
China (including Taiwan)	(1,545)	(771)	774
International Markets Group	248	(334)	(582)
Automotive Segment	<u>\$ 5,422</u>	<u>\$ 4,926</u>	<u>\$ (496)</u>

The tables below and on the following pages provide full year 2019 key metrics and the change in full year 2019 EBIT compared with full year 2018 by causal factor for our Automotive segment and its regional business units. For a description of these causal factors, see *Definitions and Information Regarding Automotive Causal Factors*.

	2018	2019	H / (L)
Key Metrics			
Market Share (%)	6.3 %	6.0 %	(0.3) ppts
Wholesale Units (000)	5,982	5,386	(596)
Revenue (\$M)	\$ 148,294	\$ 143,599	\$ (4,695)
EBIT (\$M)	5,422	4,926	(496)
EBIT Margin (%)	3.7 %	3.4 %	(0.3) ppts

Change in EBIT by Causal Factor (in millions)

2018 Full Year EBIT	\$ 5,422
Volume / Mix	(720)
Net Pricing	3,093
Cost	(1,552)
Exchange	(904)
Other	(413)
2019 Full Year EBIT	<u>\$ 4,926</u>

In 2019, wholesales in our Automotive segment declined 596,000 units year-over-year, reflecting decreases in each business unit, while Automotive revenue was down 3.2 percent from 2018.

Our full year 2019 Automotive segment EBIT was \$4.9 billion, down \$496 million from 2018, and EBIT margin was 3.4 percent. Favorable mix was more than offset by the impact of lower volume, including the effects of new product launches. We had higher net pricing across most business units. Costs were higher, driven by higher material and warranty costs, while structural costs, excluding pension and OPEB, were lower, primarily as a result of improved fitness and global redesign actions. Exchange was unfavorable, and other adverse impacts included UAW contract ratification costs.

North America

	2018	2019	H / (L)
Key Metrics			
Market Share (%)	13.4 %	13.2 %	(0.2) pts
Wholesale Units (000)	2,920	2,765	(155)
Revenue (\$M)	\$ 96,617	\$ 98,053	\$ 1,436
EBIT (\$M)	7,607	6,612	(995)
EBIT Margin (%)	7.9 %	6.7 %	(1.2) pts
Change in EBIT by Causal Factor (in millions)			
2018 Full Year EBIT			\$ 7,607
Volume / Mix			(241)
Net Pricing			1,910
Cost			(1,865)
Exchange			(174)
Other			(625)
2019 Full Year EBIT			\$ 6,612

In North America, 2019 wholesales declined 5 percent from 2018, driven by the impact of major product launches. Full year 2019 revenue increased 1 percent year over year, driven by improved mix and higher net pricing, offset partially by lower volume.

North America's 2019 EBIT decreased 13 percent from 2018 with an EBIT margin of 6.7 percent, driven by UAW contract-related bonuses, higher warranty expenses, and lower wholesales. Higher net pricing and favorable mix were partial offsets.

South America

	2018	2019	H / (L)
Key Metrics			
Market Share (%)	8.3%	7.2%	(1.1) pts
Wholesale Units (000)	365	295	(70)
Revenue (\$M)	\$ 5,288	\$ 3,893	\$ (1,395)
EBIT (\$M)	(678)	(704)	(26)
EBIT Margin (%)	(12.8)%	(18.1)%	(5.2) pts
Change in EBIT by Causal Factor (in millions)			
2018 Full Year EBIT			\$ (678)
Volume / Mix			(180)
Net Pricing			626
Cost			(350)
Exchange			(175)
Other			53
2019 Full Year EBIT			\$ (704)

In South America, 2019 wholesales declined 19 percent from 2018, driven by the discontinuation of heavy trucks, Fiesta, and Focus. Full year 2019 revenue declined 26 percent year over year, driven by lower volume and adverse exchange.

South America's 2019 EBIT loss of \$704 million was 4 percent higher than in 2018, driven by lower wholesales.

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

Europe

	2018	2019	H / (L)
Key Metrics			
Market Share (%)	7.6%	7.3%	(0.3) pts
Wholesale Units (000) (a)	1,482	1,390	(92)
Revenue (\$M)	\$ 30,195	\$ 28,150	\$ (2,045)
EBIT (\$M)	(210)	123	333
EBIT Margin (%)	(0.7)%	0.4%	1.1 pts

(a) Includes Ford brand vehicles produced and sold by our unconsolidated affiliate in Turkey (about 44,000 units in 2018 and 34,000 units in 2019); revenue does not include these sales.

Change in EBIT by Causal Factor (in millions)

2018 Full Year EBIT	\$	(210)
Volume / Mix		(42)
Net Pricing		350
Cost		100
Exchange		(325)
Other		250
2019 Full Year EBIT	\$	123

In Europe, 2019 wholesales declined 6 percent from 2018, driven by lower share from planned actions to drive gross margin and improve EBIT. Full year 2019 revenue declined 7 percent year over year, driven by adverse exchange and planned lower share from our business redesign.

Europe's 2019 EBIT improved \$333 million year over year, driven by higher net pricing and lower structural costs.

China (Including Taiwan)

	2018	2019	H / (L)
Key Metrics			
Market Share (%)	2.9%	2.2%	(0.7) pts
Wholesale Units (000) (a)	732	535	(197)
Revenue (\$M)	\$ 4,619	\$ 3,615	\$ (1,004)
EBIT (\$M)	(1,545)	(771)	774
EBIT Margin (%)	(33.4)%	(21.3)%	12.1 pts

China Unconsolidated Affiliates

Wholesale Units (000)	651	462	(189)
Ford Equity Income/(Loss) (\$M)	\$ (110)	\$ (161)	\$ (51)

(a) Wholesale units include Ford brand and JMC brand vehicles produced and sold in China by our unconsolidated affiliates; revenue does not include these sales.

Change in EBIT by Causal Factor (in millions)

2018 Full Year EBIT	\$	(1,545)
Volume / Mix		7
Net Pricing		61
Cost		612
Exchange		143
Other		(49)
2019 Full Year EBIT	\$	(771)

In China, 2019 wholesales declined 27 percent from 2018, driven by lower joint venture volumes. Full year 2019 consolidated revenue declined 22 percent year over year, driven primarily by lower component sales to our joint ventures in China and lower volume.

China's 2019 EBIT loss narrowed by 50 percent year over year, driven by lower structural costs, favorable exchange, lower tariffs, and higher net pricing.

International Markets Group

	2018	2019	H / (L)
Key Metrics			
Market Share (%)	2.2%	1.9%	(0.3) pts
Wholesale Units* (000)	483	401	(82)
Revenue (\$M)	\$ 11,575	\$ 9,888	\$ (1,687)
EBIT (\$M)	248	(334)	(582)
EBIT Margin (%)	2.1%	(3.4)%	(5.5) pts

(a) Includes Ford brand vehicles produced and sold by our unconsolidated affiliate in Russia (about 51,000 units in 2018 and 28,000 units in 2019). Revenue after Q2 2019 does not include these sales.

Change in EBIT by Causal Factor (in millions)

2018 Full Year EBIT	\$	248
Volume / Mix		(264)
Net Pricing		147
Cost		(49)
Exchange		(373)
Other		(43)
2019 Full Year EBIT	\$	(334)

In our International Markets Group, 2019 wholesales declined 17 percent from 2018, driven by lower share and industry. Full year 2019 revenue declined 15 percent year over year, driven by lower volume and adverse exchange.

Our International Markets Group's 2019 EBIT was \$582 million lower than in 2018, with a \$334 million loss driven by adverse exchange and lower volume and mix, driven by lower industry volume. The adverse exchange was driven by the Australian dollar, South African rand, and Thai baht.

Mobility Segment

In our Mobility segment, our 2019 EBIT loss was \$1.2 billion, a \$512 million higher loss than in 2018. Our strategic investments in Mobility in 2019 increased by more than 75 percent year over year as we continued to expand our capabilities in mobility and autonomous vehicles.

Ford Credit Segment

The tables below provide full year 2019 key metrics and the change in full year 2019 EBT compared with full year 2018 by causal factor for the Ford Credit segment.

	2018	2019	H / (L)
GAAP Financial Measures			
Total Net Receivables (\$B)	\$ 146	\$ 142	(3)%
Loss-to-Receivables (bps) (a)	55	52	(3)
Auction Values (b)	\$ 19,770	\$ 19,305	(2)%
EBT (\$M)	2,627	2,998	\$ 371
ROE (%)	14%	15%	1 ppt

Other Balance Sheet Metrics

Debt (\$B)	\$ 140	\$ 140	—%
Net Liquidity (\$B)	27	33	22%
Financial Statement Leverage (to 1)	9.4	9.8	0.4

(a) U.S. retail financing only.

(b) U.S. 36-month off-lease auction values at full year 2020 mix.

	2018	2019	H / (L)
Non-GAAP Financial Measures			
Managed Receivables (\$B) (a)	\$ 155	\$ 152	(2)%
Managed Leverage (to 1) (b)	8.8	8.9	0.1

(a) See *Non-GAAP Financial Measure Reconciliations* section for reconciliation to GAAP.

(b) See *Liquidity and Capital Resources – Ford Credit Segment* section for reconciliation to GAAP.

Change in EBT by Causal Factor (in millions)

2018 Full Year EBT	\$ 2,627
Volume / Mix	(38)
Financing Margin	(86)
Credit Loss	127
Lease Residual	249
Exchange	(71)
Other	190
2019 Full Year EBT	\$ 2,998

Ford Credit's loss metrics in 2019 reflected healthy and stable consumer credit conditions, and auction values for off-lease vehicles were slightly better than expected. Receivables at December 31, 2019 were lower year over year.

Ford Credit delivered \$3 billion of EBT in 2019, a 14 percent increase from 2018, driven by favorable lease residual, credit loss, and derivatives performance.

Corporate Other

For full year 2019, Corporate Other had a \$359 million loss, compared with a \$373 million loss in 2018. The year-over-year improvement was driven by fair market value adjustments, partially offset by higher interest expense on income taxes.

Interest on Debt

Our full year 2019 interest expense on Automotive and Other debt was \$1,020 million, which was \$208 million lower than in 2018, more than explained by lower foreign debt interest expense, reflecting our repayment of higher-cost affiliate debt and the extinguishment of Ford Sollers debt.

Taxes

Our *Provision for/(Benefit from) income taxes* for full year 2019 was a \$724 million benefit, resulting in an effective tax rate of 113%. This includes a one-time benefit arising from restructuring in our European operations.

Our full year 2019 adjusted effective tax rate, which excludes special items, was 11.2%.

LIQUIDITY AND CAPITAL RESOURCES

COVID-19 has created significant volatility in the global economy, led to reduced economic activity, and adversely affected our operations in the first half of 2020. Moreover, our suspension of production earlier this year put pressure on our Automotive liquidity. By May 2020, we restarted manufacturing operations in a phased manner at locations around the world. Throughout, we were proactive in our response and demonstrated discipline in the management of our balance sheet. We continued to maintain strong liquidity to ensure financial flexibility in these uncertain times by, among other things, drawing, extending the maturity of, and subsequently repaying our corporate and supplemental revolving credit facilities and issuing \$8 billion of unsecured debt. As discussed in more detail below, we ended 2020 with \$46.9 billion of liquidity and \$30.8 billion of cash, both significantly higher than year-end 2019.

We consider our key balance sheet metrics to be: (i) Company cash, which includes cash equivalents, marketable securities, and restricted cash, excluding Ford Credit's cash, cash equivalents, marketable securities, and restricted cash; and (ii) Company liquidity, which includes Company cash, less restricted cash, and total available committed credit lines, excluding Ford Credit's total available committed credit lines.

Company excluding Ford Credit

	December 31, 2019	December 31, 2020
<u>Balance Sheet (\$B)</u>		
Company Cash	\$ 22.3	\$ 30.8
Liquidity	35.4	46.9
Debt	\$ (15.3)	\$ (24.0)
Cash Net of Debt	7.0	6.8
<u>Pension Funded Status (\$B)</u>		
Funded Plans	\$ (0.4)	\$ 0.3
Unfunded Plans	(6.4)	(7.0)
Total Global Pension	<u>\$ (6.8)</u>	<u>\$ (6.7)</u>
Total Funded Status OPEB	\$ (6.1)	\$ (6.6)

Liquidity. One of our key priorities is to maintain a strong balance sheet, while at the same time having resources available to invest in and grow our business. At December 31, 2020, we had Company cash of \$30.8 billion, an increase of \$8.5 billion compared with December 31, 2019, primarily due to our unsecured debt issuance in the second quarter of 2020, with about 90% of Company cash held by consolidated entities domiciled in the United States. To be prepared for an economic downturn, we target an ongoing Company cash balance at or above \$20 billion plus significant additional liquidity above our Company cash target. We expect to have periods when we will be above or below this amount due to: (i) future cash flow expectations, such as for investments in future opportunities, capital investments, debt maturities, pension contributions, or restructuring requirements, (ii) short-term timing differences, and (iii) changes in the global economic environment.

Our Company cash investments primarily include U.S. Department of Treasury obligations, federal agency securities, bank time deposits with investment-grade institutions, investment-grade corporate securities, investment-grade commercial paper, and debt obligations of a select group of non-U.S. governments, non-U.S. governmental agencies, and supranational institutions. The average maturity of these investments is approximately one year and adjusted based on market conditions and liquidity needs. We monitor our Company cash levels and average maturity on a daily basis.

At December 31, 2020, we had \$46.9 billion of Company liquidity, an increase of \$11.5 billion from December 31, 2019, primarily explained by our higher cash balance.

Changes in Company Cash. In managing our business, we classify changes in Company cash into operating and non-operating items. Operating items include: Company adjusted EBIT excluding Ford Credit EBT, capital spending, depreciation and tooling amortization, changes in working capital, Ford Credit distributions, and all other and timing differences. Non-operating items include: Global Redesign (including separation payments), changes in Automotive and Other debt, contributions to funded pension plans, shareholder distributions, and other items (including acquisitions and divestitures and other transactions with Ford Credit).

With respect to "Changes in working capital," in general we carry relatively low Automotive segment trade receivables compared with our trade payables because the majority of our Automotive wholesales are financed (primarily by Ford Credit) immediately upon the sale of vehicles to dealers, which generally occurs shortly after being produced. In contrast, our Automotive trade payables are based primarily on industry-standard production supplier payment terms of generally about 45 days. As a result, our cash flow tends to improve as wholesale volumes increase, but can deteriorate when wholesale volumes sharply decrease. The suspension of production at most of our assembly plants earlier in the year and lower industry volumes due to COVID-19 resulted in a deterioration of our cash flow in the second quarter of 2020, while the subsequent resumption of manufacturing operations and return to pre-COVID-19 production levels at most of our assembly plants resulted in an improvement of our cash flow in the third quarter of 2020. Even in normal economic conditions, however, these working capital balances generally are subject to seasonal changes that can impact cash flow. For example, we typically experience cash flow timing differences associated with inventories and payables due to our annual summer and December shutdown periods when production, and therefore inventories and wholesale volumes, are usually at their lowest levels, while payables continue to come due and be paid. The net impact of this typically results in cash outflows from changes in our working capital balances during these shutdown periods.

A financial institution offers a supply chain finance ("SCF") program that enables our suppliers, at their sole discretion, to sell their Ford receivables (i.e., our payment obligations to the suppliers) to the financial institution on a non-recourse basis in order to be paid earlier than our payment terms provide. Our suppliers' voluntary inclusion of invoices in the SCF program has no bearing on our payment terms, the amounts we pay, or our liquidity. We have no economic interest in a supplier's decision to participate in the SCF program, and we have no direct financial relationship with the SCF financial institution. Moreover, we do not provide any guarantees in connection with the SCF program. As of December 31, 2020, the outstanding amount of Ford receivables that suppliers elected to sell to the SCF financial institution was \$178 million. The amount settled through the SCF program during 2020 was \$530 million.

Changes in Company cash excluding Ford Credit are summarized below (in billions):

	December 31, 2018	December 31, 2019	December 31, 2020
<u>Company Excluding Ford Credit</u>			
Company Adjusted EBIT excluding Ford Credit (a)	\$ 4.4	\$ 3.4	\$ 0.2
Capital spending	\$ (7.7)	\$ (7.6)	\$ (5.7)
Depreciation and tooling amortization	5.4	5.5	5.3
Net spending	\$ (2.4)	\$ (2.1)	\$ (0.4)
Receivables	\$ 0.1	\$ (0.1)	\$ 0.4
Inventory	(0.8)	0.1	0.3
Trade Payables	(0.2)	(0.6)	1.3
Changes in working capital	\$ (0.9)	\$ (0.6)	\$ 2.0
Ford Credit distributions	2.7	2.9	2.4
All other and timing differences	(1.1)	(0.8)	(3.5)
Company adjusted free cash flow (a)	\$ 2.8	\$ 2.8	\$ 0.7
Global Redesign (including separations)	(0.2)	(0.9)	(0.5)
Changes in debt	(1.8)	1.1	8.4
Funded pension contributions	(0.4)	(0.7)	(0.6)
Shareholder distributions	(3.1)	(2.6)	(0.6)
All other (including acquisitions and divestitures)	(0.7)	(0.3)	1.1
Change in cash	\$ (3.4)	\$ (0.8)	\$ 8.5

(a) See *Non-GAAP Financial Measure Reconciliations* section for reconciliation to GAAP.

Note: Numbers may not sum due to rounding.

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

Our full year 2020 *Net cash provided by/(used in) operating activities* was up \$6.6 billion year over year, more than explained by higher Ford Credit operating cash flows. Company adjusted free cash flow was down \$2.1 billion year-over-year, more than explained by lower adjusted EBIT driven by the impact of the COVID-19 pandemic.

Capital spending was \$5.7 billion in 2020, \$1.9 billion lower than a year ago. The year-over-year reduction reflects unavoidable delays due to the global pandemic, austerity measures implemented in response to the business environment, and continued efficiencies. Capital spending to support product development, growth, and infrastructure is expected to be in the range of \$6.0 billion to \$6.5 billion in 2021.

Full year 2020 working capital was \$2.0 billion positive, explained by higher trade payables and lower receivables and inventory than in 2019.

Full year 2020 all other and timing differences were negative \$3.5 billion, reflecting assorted timing differences between accrual-based EBIT and the associated cash flows (e.g., marketing incentive and warranty payments to dealers), interest payments on Automotive and Other debt, and cash taxes.

Shareholder distributions were \$595 million in 2020, all of which were attributable to our regular quarterly dividend in the first quarter.

We previously announced our plan for the global redesign of our business, pursuant to which we are working to turn around automotive operations, compete like a challenger, and capitalize on our strengths by allocating more capital, more resources, and more talent to our strongest business and vehicle franchises. Beginning with the actions we took in 2018, we expect our global redesign to have a potential cash effect of about \$7 billion. The cash effect related to our global redesign activities was \$1.6 billion through December 31, 2020 and is expected to be about \$5 billion through December 31, 2021.

As discussed in the "Key Trends and Economic Factors Affecting Ford and the Automotive Industry" section above, Ford Brazil's decision to exit manufacturing operations is expected to result in charges of about \$2.5 billion that will be paid in cash primarily in 2021. In addition, Ford offers a purchase program in South America pursuant to which members of the program make payments over 84 months to purchase certain Ford vehicles. Each month, two vehicles are allocated to members of each group. For groups that planned to purchase Ford vehicles that will no longer be available due to Ford Brazil exiting manufacturing (e.g., Ford Ka), Ford will reimburse, or offer an alternative product, to the members who have paid into the program and have not received a vehicle. The cash impact in 2021 is expected to be between \$0.2 billion and \$0.3 billion.

Available Credit Lines. Total Company committed credit lines, excluding Ford Credit, at December 31, 2020 were \$18.6 billion, consisting of \$13.5 billion of our corporate credit facility, \$2 billion of our supplemental revolving credit facility, \$1.5 billion of our delayed draw term loan facility, and \$1.6 billion of local credit facilities. In the first quarter of 2020, we submitted borrowing notices to our lenders for the full amounts of both our corporate credit facility and our supplemental revolving credit facility, and by the third quarter of 2020, we repaid the full amounts outstanding under each facility. At December 31, 2020, the utilized portion of the corporate credit facility was \$27 million, representing amounts utilized for letters of credit, and no portion of the supplemental revolving credit facility was utilized. The \$1.5 billion delayed draw term loan facility was drawn in full in 2019 and remains outstanding. In addition, \$0.7 billion of committed Company credit lines, excluding Ford Credit, was available under local credit facilities for our affiliates as of December 31, 2020.

Lenders under our corporate credit facility have \$0.4 billion of commitments maturing on April 30, 2022, \$3 billion of commitments maturing on July 27, 2023, and \$10.1 billion of commitments maturing on April 30, 2024. Lenders under our supplemental revolving credit facility have \$0.2 billion of commitments maturing on April 30, 2022 and \$1.8 billion of commitments maturing on July 27, 2023.

The corporate credit facility is unsecured and free of material adverse change conditions to borrowing, restrictive financial covenants (for example, interest or fixed-charge coverage ratio, debt-to-equity ratio, and minimum net worth requirements), and credit rating triggers that could limit our ability to obtain funding or trigger early repayment. The corporate credit facility contains a liquidity covenant that requires us to maintain a minimum of \$4 billion in aggregate of domestic cash, cash equivalents, and loaned and marketable securities and/or availability under the facility. Further, the terms of the corporate and supplemental revolving credit facilities prohibit share repurchases (with limited exceptions) while any portion of either facility is outstanding and the payment of dividends on our common or Class B stock while more than 50% of the aggregate amount of commitments under the two facilities is utilized. The terms and conditions of the delayed draw term loan (other than the restrictions on share repurchases and dividends) and the supplemental revolving credit facility are consistent with our corporate credit facility.

Each of the corporate credit facility, supplemental revolving credit facility, delayed draw term loan, and our Loan Arrangement and Reimbursement Agreement with the U.S. Department of Energy (the "DOE") include a covenant that requires us to provide guarantees from certain of our subsidiaries in the event that our senior, unsecured, long-term debt does not maintain at least two investment grade ratings from Fitch, Moody's, and S&P. The following subsidiaries have provided unsecured guarantees to the lenders under the credit facilities and to the DOE: Ford Component Sales, LLC; Ford European Holdings LLC; Ford Global Technologies, LLC; Ford Holdings LLC (the parent company of Ford Credit); Ford International Capital LLC; Ford Mexico Holdings LLC; Ford Motor Service Company; Ford Smart Mobility LLC; and Ford Trading Company, LLC.

During 2020, Ford Motor Company Limited, our operating subsidiary in the United Kingdom ("Ford of Britain"), entered into, and drew in full, a £625 million term loan credit facility with a syndicate of banks to support Ford of Britain's general export activities. Accordingly, U.K. Export Finance ("UKEF") provided a £500 million guarantee of the credit facility under its Export Development Guarantee scheme, which supports high value commercial lending to U.K. exporters. We have also guaranteed Ford of Britain's obligations under the credit facility to the lenders. As of December 31, 2020, the full £625 million remained outstanding. This five-year, non-amortizing loan matures on June 30, 2025.

Debt. As shown in Note 19 of the Notes to the Financial Statements, at December 31, 2020, Company debt excluding Ford Credit was \$24 billion, including Automotive debt of \$23.5 billion. These December 31, 2020 balances were \$8.7 billion and \$8.9 billion, respectively, higher than at December 31, 2019, primarily reflecting our \$8 billion unsecured debt issuance in April 2020.

DOE Advanced Technology Vehicle Manufacturer ("ATVM") Incentive Program. See Note 19 of the Notes to the Financial Statements for information regarding the ATVM loan.

Leverage. We manage Company debt (excluding Ford Credit) levels with a leverage framework that targets investment grade credit ratings through a normal business cycle; however, during these uncertain times, we have increased our debt balance and prioritized actions that preserve or improve our cash balance. The leverage framework includes a ratio of total company debt (excluding Ford Credit), underfunded pension liabilities, operating leases, and other adjustments, divided by Company adjusted EBIT (excluding Ford Credit EBT), and further adjusted to exclude depreciation and tooling amortization (excluding Ford Credit).

Ford Credit's leverage is calculated as a separate business as described in the Liquidity - Ford Credit Segment section of Item 7. Ford Credit is self-funding and its debt, which is used to fund its operations, is separate from our Automotive and Other debt.

Ford Credit Segment

Ford Credit ended 2020 with \$35.4 billion of liquidity. During the year, Ford Credit completed \$27 billion of public term funding.

Key elements of Ford Credit's funding strategy include:

- Maintain strong liquidity; continue to renew and expand committed ABS capacity
- Prudently access public markets
- Flexibility to increase ABS mix as needed; preserving assets and committed capacity
- Target managed leverage of 8:1 to 9:1
- Maintain self-liquidating balance sheet

Ford Credit's liquidity profile continues to be diverse, robust, and focused on maintaining liquidity levels that meet its business and funding requirements. Ford Credit regularly stress tests its balance sheet and liquidity to ensure that it can continue to meet its financial obligations through economic cycles.

Funding Sources. Ford Credit's funding sources include primarily unsecured debt and securitization transactions (including other structured financings). Ford Credit issues both short-term and long-term debt that is held by both institutional and retail investors, with long-term debt having an original maturity of more than 12 months. Ford Credit sponsors a number of securitization programs that can be structured to provide both short-term and long-term funding through institutional investors and other financial institutions in the United States and international capital markets.

Ford Credit obtains short-term unsecured funding from the sale of demand notes under its Ford Interest Advantage program and through the retail deposit programs at FCE Bank plc ("FCE") and Ford Bank GmbH ("Ford Bank"). At December 31, 2020, the principal amount outstanding of Ford Interest Advantage notes, which may be redeemed at any time at the option of the holders thereof without restriction, and FCE and Ford Bank deposits was \$6 billion. Ford Credit maintains multiple sources of readily available liquidity to fund the payment of its unsecured short-term debt obligations.

The following table shows funding for Ford Credit's managed receivables (in billions):

	December 31, 2018	December 31, 2019	December 31, 2020
Funding Structure			
Term Debt (incl. Bank Borrowings)	\$ 70	\$ 73	\$ 77
Term Asset-Backed Securities	60	57	55
Commercial Paper	4	4	—
Ford Interest Advantage / Deposits	6	7	6
Other	10	9	7
Equity	15	14	14
Adjustments for Cash	(10)	(12)	(18)
Total Managed Receivables (a)	<u>\$ 155</u>	<u>\$ 152</u>	<u>\$ 141</u>
Securitized Funding as Percent of Managed Receivables	39 %	38 %	39 %

(a) See *Non-GAAP Financial Measure Reconciliations* section for reconciliation to GAAP.

Managed receivables were \$141 billion at December 31, 2020 and were funded primarily with term debt and term asset-backed securities. Securitized funding as a percent of managed receivables was 39%. The calendarization of the funding plan will result in quarterly fluctuations of the securitized funding percentage.

Public Term Funding Plan. The following table shows Ford Credit's issuances for full year 2018, 2019, and 2020, and planned issuances for full year 2021, excluding short-term funding programs (in billions):

	2018 Actual	2019 Actual	2020 Actual	2021 Forecast
Unsecured	\$ 13	\$ 17	\$ 14	\$ 7 - 11
Securitizations (a)	14	14	13	11 - 14
Total public	<u>\$ 27</u>	<u>\$ 31</u>	<u>\$ 27</u>	<u>\$ 18 - 25</u>

(a) See *Definitions and Information Regarding Ford Credit Causal Factors* section.
Note: Numbers may not sum due to rounding.

In 2020, Ford Credit completed \$27 billion of public term funding. For 2021, Ford Credit projects full year public term funding in the range of \$18 billion to \$25 billion. Through February 3, 2021, Ford Credit has completed \$1 billion of public term issuances.

Liquidity. The following table shows Ford Credit's liquidity sources and utilization (in billions):

	December 31, 2018	December 31, 2019	December 31, 2020
Liquidity Sources (a)			
Cash	\$ 10.2	\$ 11.7	\$ 18.5
Committed asset-backed facilities	35.4	36.6	38.1
Other unsecured credit facilities	3.0	3.0	2.5
Ford corporate credit facility allocation	3.0	3.0	—
Total liquidity sources	\$ 51.6	\$ 54.3	\$ 59.1
Utilization of Liquidity (a)			
Securitization cash and restricted cash	\$ (3.1)	\$ (3.6)	\$ (3.9)
Committed asset-backed facilities	(20.7)	(17.3)	(16.7)
Other unsecured credit facilities	(0.7)	(0.8)	(0.5)
Ford corporate credit facility allocation	—	—	—
Total utilization of liquidity	\$ (24.5)	\$ (21.7)	\$ (21.1)
Gross liquidity	\$ 27.1	\$ 32.6	\$ 38.0
Asset-backed capacity in excess of eligible receivables and other adjustments	0.1	0.4	(2.6)
Net liquidity available for use	\$ 27.2	\$ 33.0	\$ 35.4

(a) See *Definitions and Information Regarding Ford Credit Causal Factors* section.

Ford Credit's net liquidity available for use will fluctuate quarterly based on factors including near-term debt maturities, receivable growth, and timing of funding transactions. At December 31, 2020, Ford Credit's net liquidity available for use was \$35.4 billion, \$2.4 billion higher than year-end 2019. Ford Credit's sources of liquidity include cash, committed asset-backed facilities, and unsecured credit facilities. At December 31, 2020, Ford Credit's liquidity sources totaled \$59.1 billion, up \$4.8 billion from year-end 2019.

Balance Sheet Liquidity Profile. Ford Credit defines its balance sheet liquidity profile as the cumulative maturities, including the impact of expected prepayments and allowance for credit losses, of its finance receivables, investment in operating leases, and cash, less the cumulative debt maturities over upcoming annual periods. Ford Credit's balance sheet is inherently liquid because of the short-term nature of its finance receivables, investment in operating leases, and cash. Ford Credit ensures its cumulative debt maturities have a longer tenor than its cumulative asset maturities. This positive maturity profile is intended to provide Ford Credit with additional liquidity after all of its assets have been funded and is in addition to its liquidity stress test.

The following table shows Ford Credit's cumulative maturities for assets and total debt for the periods presented and unsecured long-term debt maturities in the individual periods presented (in billions):

	2021	2022	2023	2024 and Beyond
Balance Sheet Liquidity Profile				
Assets (a)	\$ 80	\$ 111	\$ 135	\$ 157
Total debt (b)	60	86	103	136
Memo: Unsecured long-term debt maturities	17	14	11	29

(a) Includes gross finance receivables less the allowance for credit losses (including certain finance receivables that are reclassified in consolidation to *Trade and other receivables*), investment in operating leases net of accumulated depreciation, cash and cash equivalents, and marketable securities (excluding amounts related to insurance activities). Amounts shown include the impact of expected prepayments.

(b) Excludes unamortized debt (discount)/premium, unamortized issuance costs, and fair value adjustments.

Maturities of investment in operating leases consist primarily of the portion of rental payments attributable to depreciation over the remaining life of the lease and the expected residual value at lease termination. Maturities of finance receivables and investment in operating leases in the table above include expected prepayments for Ford Credit's retail installment sale contracts and investment in operating leases. The table above also reflects adjustments to debt maturities to match the asset-backed debt maturities with the underlying asset maturities.

All wholesale securitization transactions and wholesale receivables are shown maturing in the next 12 months, even if the maturities extend beyond 2021. The retail securitization transactions under certain committed asset-backed facilities are assumed to amortize immediately rather than amortizing after the expiration of the commitment period. As of December 31, 2020, Ford Credit had \$157 billion of assets, \$81 billion of which were unencumbered.

Funding and Liquidity Risks. Ford Credit's funding plan is subject to risks and uncertainties, many of which are beyond its control, including disruption in the capital markets (such as from the impact of COVID-19) that could impact both unsecured debt and asset-backed securities and the effects of regulatory changes on the financial markets.

Despite Ford Credit's diverse sources of funding and liquidity, its ability to maintain liquidity may be affected by, among others, the following factors (not necessarily listed in order of importance or probability of occurrence):

- Prolonged disruption of the debt and securitization markets;
- Global capital market volatility;
- Credit ratings assigned to Ford and Ford Credit;
- Market capacity for Ford- and Ford Credit-sponsored investments;
- General demand for the type of securities Ford Credit offers;
- Ford Credit's ability to continue funding through asset-backed financing structures;
- Performance of the underlying assets within Ford Credit's asset-backed financing structures;
- Inability to obtain hedging instruments;
- Accounting and regulatory changes (including LIBOR); and
- Ford Credit's ability to maintain credit facilities and committed asset-backed facilities.

Stress Tests. Ford Credit regularly conducts stress testing on its funding and liquidity sources to ensure it can continue to meet financial obligations and support the sale of Ford and Lincoln vehicles during firm-specific and market-wide stress events. Stress tests are intended to quantify the potential impact of various adverse scenarios on the balance sheet and liquidity. These scenarios include assumptions on access to unsecured and secured debt markets, runoff of short-term funding, and ability to renew expiring liquidity commitments and are measured over various time periods, including 30 days, 90 days, and longer term. Ford Credit's stress test does not assume any additional funding, liquidity, or capital support from Ford. Ford Credit routinely develops contingency funding plans as part of its liquidity stress testing.

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

Leverage. Ford Credit uses leverage, or the debt-to-equity ratio, to make various business decisions, including evaluating and establishing pricing for finance receivable and operating lease financing, and assessing its capital structure.

The table below shows the calculation of Ford Credit's financial statement leverage and managed leverage (in billions):

	December 31, 2018	December 31, 2019	December 31, 2020
Leverage Calculation			
Debt	\$ 140.1	\$ 140.0	\$ 137.7
Adjustments for cash	(10.2)	(11.7)	(18.5)
Adjustments for derivative accounting (a)	0.2	(0.5)	(1.5)
Total adjusted debt	<u>\$ 130.1</u>	<u>\$ 127.8</u>	<u>\$ 117.7</u>
Equity (b)	\$ 15.0	\$ 14.3	\$ 14.0
Adjustments for derivative accounting (a)	(0.2)	—	0.1
Total adjusted equity	<u>\$ 14.8</u>	<u>\$ 14.3</u>	<u>\$ 14.1</u>
Financial statement leverage (to 1) (GAAP)	9.4	9.8	9.8
Managed leverage (to 1) (Non-GAAP)	8.8	8.9	8.3

(a) Related primarily to market valuation adjustments to derivatives due to movements in interest rates. Adjustments to debt are related to hedging activity and adjustments to equity are related to retained earnings.

(b) Total shareholder's interest reported on Ford Credit's balance sheets.

Ford Credit plans its managed leverage by considering market conditions and the risk characteristics of its business. At December 31, 2019 and 2020, Ford Credit's financial statement leverage was 9.8:1 and 9.8:1, respectively, and managed leverage was 8.9:1 and 8.3:1, respectively. Managed leverage decreased relative to financial statement leverage primarily due to the higher cash balance at year-end 2020. Ford Credit targets managed leverage in the range of 8:1 to 9:1.

Total Company

Pension Plan Contributions and Strategy. Our strategy is to reduce the risk of our funded defined benefit pension plans, including minimizing the volatility of the value of our pension assets relative to pension liabilities and the need for unplanned use of capital resources to fund the plans. The strategy reduces balance sheet, cash flow, and income exposures and, in turn, reduces our risk profile. Going forward, we expect to:

- Limit our pension contributions to offset ongoing service cost or meet regulatory requirements, if any;
- Maintain target asset allocation of about 80% fixed income investments and 20% growth assets, which better matches plan assets to the characteristics of the liabilities, thereby reducing our net exposure; and
- Evaluate strategic actions to reduce pension liabilities, such as plan design changes, curtailments, or settlements

	2019	2020	2020 B / (W) 2019
<u>Pension Funded Status (\$B)</u>			
U.S. Plans	\$ (1.4)	\$ (0.7)	\$ 0.7
Non-U.S. Plans	(5.4)	(6.0)	(0.6)
Total Global Pension	<u>\$ (6.8)</u>	<u>\$ (6.7)</u>	<u>\$ 0.1</u>
<u>Year-End Discount Rate (Weighted Average)</u>			
U.S. Plans	3.32 %	2.56 %	(0.76) ppts
Non-U.S. Plans	1.74 %	1.23 %	(0.51) ppts
<u>Actual Asset Returns</u>			
U.S. Plans	20.43 %	16.44 %	(3.99) ppts
Non-U.S. Plans	10.72 %	10.96 %	0.24 ppts
<u>Pension - Funded Plans Only (\$B)</u>			
Funded Status	\$ (0.4)	\$ 0.3	\$ 0.7
Contributions for Funded Plans	0.7	0.6	0.1

Worldwide, our defined benefit pension plans were underfunded by \$6.7 billion at December 31, 2020, an improvement of \$100 million from December 31, 2019, primarily as a result of asset returns in excess of our assumptions, partially offset by lower discount rates. Of the \$6.7 billion underfunded status at year-end 2020, \$7.0 billion is associated with our unfunded plans. These are “pay as you go,” with benefits paid from Company cash. These unfunded plans primarily include certain plans in Germany, and U.S. defined benefit plans for senior management.

The fixed income mix was 80% in our U.S. plans and 82% in our non-U.S. plans at year-end 2020.

In 2020, we contributed \$570 million to our global funded pension plans, a decrease of \$160 million compared with 2019. During 2021, we expect to contribute between \$600 million and \$800 million of cash to our global funded pension plans. We also expect to make about \$390 million of benefit payments to participants in unfunded plans. Based on current assumptions and regulations, we do not expect to have a legal requirement to fund our major U.S. plans in 2021. Our global funded plans remain fully funded in aggregate, demonstrating the effectiveness of our de-risking strategy and our commitment to a strong balance sheet.

For a detailed discussion of our pension plans, see Note 17 of the Notes to the Financial Statements.

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

Return on Invested Capital ("ROIC"). We analyze total Company performance using an adjusted ROIC financial metric based on an after-tax rolling four quarter average. The following table contains the calculation of our ROIC for the years shown (in billions):

	December 31, 2018	December 31, 2019	December 31, 2020
Adjusted Net Operating Profit After Cash Tax			
Net income/(loss) attributable to Ford	\$ 3.7	\$ —	\$ (1.3)
Add: Noncontrolling interest	—	—	—
Less: Income tax	(0.7)	0.7	(0.2)
Add: Cash tax	(0.8)	(0.6)	(0.4)
Less: Interest on debt	(1.2)	(1.0)	(1.6)
Less: Total pension / OPEB income / (cost)	(0.4)	(2.6)	(1.0)
Add: Pension / OPEB service costs	(1.2)	(1.0)	(1.1)
Net operating profit after cash tax	\$ 4.0	\$ 1.4	\$ 0.1
Less: Special items (excl. pension / OPEB) pre-tax	(0.6)	(3.5)	(0.7)
Adjusted net operating profit after cash tax	\$ 4.6	\$ 4.8	\$ 0.7
Invested Capital			
Equity	\$ 36.0	\$ 33.2	\$ 30.8
Redeemable noncontrolling interest	0.1	—	—
Debt (excl. Ford Credit)	14.1	15.3	24.0
Net pension and OPEB liability	11.9	12.9	13.3
Invested capital (end of period)	\$ 62.1	\$ 61.4	\$ 68.1
Average invested capital	\$ 64.0	\$ 61.7	\$ 70.7
ROIC (a)	6.2 %	2.2 %	0.1 %
Adjusted ROIC (Non-GAAP) (b)	7.1 %	7.8 %	1.0 %

(a) Calculated as the sum of net operating profit after cash tax from the last four quarters, divided by the average invested capital over the last four quarters.

(b) Calculated as the sum of adjusted net operating profit after cash tax from the last four quarters, divided by the average invested capital over the last four quarters.

Note: Numbers may not sum due to rounding.

CREDIT RATINGS

Our short-term and long-term debt is rated by four credit rating agencies designated as nationally recognized statistical rating organizations ("NRSROs") by the U.S. Securities and Exchange Commission: DBRS, Fitch, Moody's, and S&P.

In several markets, locally recognized rating agencies also rate us. A credit rating reflects an assessment by the rating agency of the credit risk associated with a corporate entity or particular securities issued by that entity. Rating agencies' ratings of us are based on information provided by us and other sources. Credit ratings are not recommendations to buy, sell, or hold securities and are subject to revision or withdrawal at any time by the assigning rating agency. Each rating agency may have different criteria for evaluating company risk and, therefore, ratings should be evaluated independently for each rating agency.

There have been no rating actions taken by these NRSROs since the filing of our Quarterly Report on Form 10-Q for the quarter ended September 30, 2020.

The following table summarizes certain of the credit ratings and outlook presently assigned by these four NRSROs:

	NRSRO RATINGS						
	Ford			Ford Credit			NRSROs
	Issuer Default / Corporate / Issuer Rating	Long-Term Senior Unsecured	Outlook / Trend	Long-Term Senior Unsecured	Short-Term Unsecured	Outlook / Trend	Minimum Long-Term Investment Grade Rating
DBRS	BB (high)	BB (high)	Negative	BB (high)	R-4	Negative	BBB (low)
Fitch	BB+	BB+	Negative	BB+	B	Negative	BBB-
Moody's	N/A	Ba2	Negative	Ba2	NP	Negative	Baa3
S&P	BB+	BB+	Negative	BB+	B	Negative	BBB-

OUTLOOK

We provided 2021 Company guidance in our earnings release furnished on Form 8-K dated February 4, 2021. The guidance is based on our expectations as of February 4, 2021, and (i) excludes the impact of the semi-conductor shortage (see below for a discussion of the shortage); (ii) includes a non-cash gain of about \$900 million in the first quarter of 2021 on our investment in Rivian; and (iii) assumes no material change in the current economic environment, including foreign exchange and tariffs. Our actual results could differ materially from our guidance due to risks, uncertainties, and other factors, including those set forth in "Risk Factors" in Item 1A of Part I.

	2021 Guidance
Total Company	
Adjusted EBIT (a)	\$8.0 - \$9.0 billion
Adjusted Free Cash Flow (a)	\$3.5 - \$4.5 billion
Capital spending	\$6.0 - \$6.5 billion
Pension contributions	\$0.6 - \$0.8 billion
Global Redesign EBIT charges	\$2.2 - \$2.7 billion
Global Redesign cash effects	\$3.0 - \$3.5 billion
Ford Credit	
EBT	Improved compared to 2020
Ford Credit auction values (b)	Lower

(a) When we provide guidance for Adjusted EBIT and Adjusted Free Cash Flow, we do not provide guidance for the most comparable GAAP measures because, as described in more detail below in "Non-GAAP Measures That Supplement GAAP Measures," they include items that are difficult to predict with reasonable certainty.

(b) On average compared with full year 2020 at constant mix.

The global semiconductor shortage is creating uncertainty across multiple industries, including the automotive industry, and will influence our operating results this year. The situation is fluid and we believe it is premature to quantify the full year impact on our adjusted EBIT and adjusted free cash flow. At present, though, current estimates from suppliers support a scenario where we could lose 10% to 20% of our planned first quarter production. If that scenario is extended through the first half of the year, the impact could adversely affect our full year adjusted EBIT by between \$1.0 billion and \$2.5 billion, net of reasonable cost recoveries and some production make-up in the second half of the year. Full year EBIT and cash effects due to the shortage would be about equal, with quarterly cash implications more volatile given the mechanics of our working capital.

Cautionary Note on Forward-Looking Statements

Statements included or incorporated by reference herein may constitute "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements are based on expectations, forecasts, and assumptions by our management and involve a number of risks, uncertainties, and other factors that could cause actual results to differ materially from those stated, including, without limitation:

- Ford and Ford Credit's financial condition and results of operations have been and may continue to be adversely affected by public health issues, including epidemics or pandemics such as COVID-19;
- Ford is highly dependent on its suppliers to deliver components in accordance with Ford's production schedule, and a shortage of key components, such as semiconductors, can disrupt Ford's production of vehicles;
- Ford's long-term competitiveness depends on the successful execution of its Plan;
- Ford's vehicles could be affected by defects that result in delays in new model launches, recall campaigns, or increased warranty costs;
- Ford may not realize the anticipated benefits of existing or pending strategic alliances, joint ventures, acquisitions, divestitures, or new business strategies;
- Operational systems, security systems, and vehicles could be affected by cyber incidents and other disruptions;
- Ford's production, as well as Ford's suppliers' production, could be disrupted by labor issues, natural or man-made disasters, financial distress, production difficulties, or other factors;
- Ford's ability to maintain a competitive cost structure could be affected by labor or other constraints;
- Ford's ability to attract and retain talented, diverse, and highly skilled employees is critical to its success and competitiveness;
- Ford's new and existing products and mobility services are subject to market acceptance and face significant competition from existing and new entrants in the automotive and mobility industries;
- Ford's results are dependent on sales of larger, more profitable vehicles, particularly in the United States;
- With a global footprint, Ford's results could be adversely affected by economic, geopolitical, protectionist trade policies, or other events, including tariffs;
- Industry sales volume in any of Ford's key markets can be volatile and could decline if there is a financial crisis, recession, or significant geopolitical event;
- Ford may face increased price competition or a reduction in demand for its products resulting from industry excess capacity, currency fluctuations, competitive actions, or other factors;
- Fluctuations in commodity prices, foreign currency exchange rates, interest rates, and market value of Ford or Ford Credit's investments can have a significant effect on results;
- Ford and Ford Credit's access to debt, securitization, or derivative markets around the world at competitive rates or in sufficient amounts could be affected by credit rating downgrades, market volatility, market disruption, regulatory requirements, or other factors;
- Ford's receipt of government incentives could be subject to reduction, termination, or clawback;
- Ford Credit could experience higher-than-expected credit losses, lower-than-anticipated residual values, or higher-than-expected return volumes for leased vehicles;
- Economic and demographic experience for pension and other postretirement benefit plans (e.g., discount rates or investment returns) could be worse than Ford has assumed;
- Pension and other postretirement liabilities could adversely affect Ford's liquidity and financial condition;
- Ford could experience unusual or significant litigation, governmental investigations, or adverse publicity arising out of alleged defects in products, perceived environmental impacts, or otherwise;
- Ford may need to substantially modify its product plans to comply with safety, emissions, fuel economy, autonomous vehicle, and other regulations;
- Ford and Ford Credit could be affected by the continued development of more stringent privacy, data use, and data protection laws and regulations as well as consumers' heightened expectations to safeguard their personal information; and
- Ford Credit could be subject to new or increased credit regulations, consumer protection regulations, or other regulations.

We cannot be certain that any expectation, forecast, or assumption made in preparing forward-looking statements will prove accurate, or that any projection will be realized. It is to be expected that there may be differences between projected and actual results. Our forward-looking statements speak only as of the date of their initial issuance, and we do not undertake any obligation to update or revise publicly any forward-looking statement, whether as a result of new information, future events, or otherwise. For additional discussion, see "Item 1A. Risk Factors" above.

NON-GAAP FINANCIAL MEASURES THAT SUPPLEMENT GAAP MEASURES

We use both generally accepted accounting principles ("GAAP") and non-GAAP financial measures for operational and financial decision making, and to assess Company and segment business performance. The non-GAAP measures listed below are intended to be considered by users as supplemental information to their equivalent GAAP measures, to aid investors in better understanding our financial results. We believe that these non-GAAP measures provide useful perspective on underlying business results and trends, and a means to assess our period-over-period results. These non-GAAP measures should not be considered as a substitute for, or superior to, measures of financial performance prepared in accordance with GAAP. These non-GAAP measures may not be the same as similarly titled measures used by other companies due to possible differences in method and in items or events being adjusted.

- *Company Adjusted EBIT (Most Comparable GAAP Measure: Net Income/(Loss) Attributable to Ford)* – Earnings before interest and taxes (EBIT) excludes interest on debt (excl. Ford Credit Debt), taxes, and pre-tax special items. This non-GAAP measure is useful to management and investors because it allows users to evaluate our operating results aligned with industry reporting. Our management ordinarily excludes special items from its review of the results of the operating segments for purposes of measuring segment profitability and allocating resources. Our categories of pre-tax special items and the applicable significance guideline for each item (which may consist of a group of items related to a single event or action) are as follows:

Pre-Tax Special Item

- Pension and OPEB remeasurement gains and losses
- Personnel expenses, dealer-related costs, and facility-related charges stemming from our efforts to match production capacity and cost structure to market demand and changing model mix
- Other items that we do not necessarily consider to be indicative of earnings from ongoing operating activities

Significance Guideline

- No minimum
- Generally \$100 million or more
- \$500 million or more for individual field service actions; generally \$100 million or more for other items

When we provide guidance for adjusted EBIT, we do not provide guidance on a net income basis because the GAAP measure will include potentially significant special items that have not yet occurred and are difficult to predict with reasonable certainty prior to year-end, including pension and OPEB remeasurement gains and losses.

- *Company Adjusted EBIT Margin (Most Comparable GAAP Measure: Company Net Income/(Loss) Margin)* – Company Adjusted EBIT margin is Company adjusted EBIT divided by Company revenue. This non-GAAP measure is useful to management and investors because it allows users to evaluate our operating results aligned with industry reporting.
- *Adjusted Earnings/(Loss) Per Share (Most Comparable GAAP Measure: Earnings/(Loss) Per Share)* – Measure of Company's diluted net earnings/(loss) per share adjusted for impact of pre-tax special items (described above), tax special items, and restructuring impacts in noncontrolling interests. The measure provides investors with useful information to evaluate performance of our business excluding items not indicative of the underlying run rate of our business. When we provide guidance for adjusted earnings/(loss) per share, we do not provide guidance on an earnings/(loss) per share basis because the GAAP measure will include potentially significant special items that have not yet occurred and are difficult to predict with reasonable certainty prior to year-end, including pension and OPEB remeasurement gains and losses.
- *Adjusted Effective Tax Rate (Most Comparable GAAP Measure: Effective Tax Rate)* – Measure of Company's tax rate excluding pre-tax special items (described above) and tax special items. The measure provides an ongoing effective rate which investors find useful for historical comparisons and for forecasting. When we provide guidance for adjusted effective tax rate, we do not provide guidance on an effective tax rate basis because the GAAP measure will include potentially significant special items that have not yet occurred and are difficult to predict with reasonable certainty prior to year-end, including pension and OPEB remeasurement gains and losses.

- *Company Adjusted Free Cash Flow (Most Comparable GAAP Measure: Net Cash Provided By/(Used In) Operating Activities)* – Measure of Company's operating cash flow excluding Ford Credit's operating cash flows. The measure contains elements management considers operating activities, including Automotive and Mobility capital spending, Ford Credit distributions to its parent, and settlement of derivatives. The measure excludes cash outflows for funded pension contributions, global redesign (including separations), and other items that are considered operating cash flows under U.S. GAAP. This measure is useful to management and investors because it is consistent with management's assessment of the Company's operating cash flow performance. When we provide guidance for Company adjusted free cash flow, we do not provide guidance for net cash provided by/(used in) operating activities because the GAAP measure will include items that are difficult to quantify or predict with reasonable certainty, including cash flows related to the Company's exposures to foreign currency exchange rates and certain commodity prices (separate from any related hedges), Ford Credit's operating cash flows, and cash flows related to special items, including separation payments, each of which individually or in the aggregate could have a significant impact to our net cash provided by/(used in) our operating activities.
- *Adjusted ROIC* – Calculated as the sum of adjusted net operating profit after cash tax from the last four quarters, divided by the average invested capital over the last four quarters. Adjusted Return on Invested Capital ("Adjusted ROIC") provides management and investors with useful information to evaluate the Company's after-cash tax operating return on its invested capital for the period presented. Adjusted net operating profit after cash tax measures operating results less special items, interest on debt (excl. Ford Credit Debt), and certain pension/OPEB costs. Average invested capital is the sum of average balance sheet equity, debt (excl. Ford Credit Debt), and net pension/OPEB liability.
- *Ford Credit Managed Receivables (Most Comparable GAAP Measure: Net Finance Receivables plus Net Investment in Operating Leases)* – Measure of Ford Credit's total net receivables, excluding unearned interest supplements and residual support, allowance for credit losses, and other (primarily accumulated supplemental depreciation). The measure is useful to management and investors as it closely approximates the customer's outstanding balance on the receivables, which is the basis for earning revenue.
- *Ford Credit Managed Leverage (Most Comparable GAAP Measure: Financial Statement Leverage)* – Ford Credit's debt-to-equity ratio adjusted (i) to exclude cash, cash equivalents, and marketable securities (other than amounts related to insurance activities), and (ii) for derivative accounting. The measure is useful to investors because it reflects the way Ford Credit manages its business. Cash, cash equivalents, and marketable securities are deducted because they generally correspond to excess debt beyond the amount required to support operations and on-balance sheet securitization transactions. Derivative accounting adjustments are made to asset, debt, and equity positions to reflect the impact of interest rate instruments used with Ford Credit's term-debt issuances and securitization transactions. Ford Credit generally repays its debt obligations as they mature, so the interim effects of changes in market interest rates are excluded in the calculation of managed leverage.

NON-GAAP FINANCIAL MEASURE RECONCILIATIONS

The following tables show our Non-GAAP financial measure reconciliations. The GAAP reconciliation for Ford Credit Managed Leverage can be found in the Ford Credit Segment section of "Liquidity and Capital Resources."

Net Income/(Loss) Reconciliation to Adjusted EBIT (\$M)

	2018	2019	2020
Net income/(loss) attributable to Ford (GAAP)	\$ 3,677	\$ 47	\$ (1,279)
Income/(Loss) attributable to noncontrolling interests	18	37	3
Net income/(loss)	\$ 3,695	\$ 84	\$ (1,276)
Less: (Provision for)/Benefit from income taxes	(650)	724	(160)
Income/(Loss) before income taxes	\$ 4,345	\$ (640)	\$ (1,116)
Less: Special items pre-tax	(1,429)	(5,999)	(2,246)
Income/(Loss) before special items pre-tax	\$ 5,774	\$ 5,359	\$ 1,130
Less: Interest on debt	(1,228)	(1,020)	(1,649)
Adjusted EBIT (Non-GAAP)	<u>\$ 7,002</u>	<u>\$ 6,379</u>	<u>\$ 2,779</u>

Memo:

Revenue (\$B)	\$ 160.3	\$ 155.9	\$ 127.1
Net income/(loss) margin (%)	2.3%	0.0%	(1.0)%
Adjusted EBIT margin (%)	4.4%	4.1%	2.2%

Earnings/(Loss) per Share Reconciliation to Adjusted Earnings/(Loss) per Share

	2018	2019	2020
<u>Diluted After-Tax Results (\$M)</u>			
Diluted after-tax results (GAAP)	\$ 3,677	\$ 47	\$ (1,279)
Less: Impact of pre-tax and tax special items	(1,517)	(4,676)	(2,916)
Less: Noncontrolling interests impact of Russia restructuring	—	(35)	—
Adjusted net income - Diluted (Non-GAAP)	<u>\$ 5,194</u>	<u>\$ 4,758</u>	<u>\$ 1,637</u>
<u>Basic and Diluted Shares (M)</u>			
Basic shares (average shares outstanding)	3,974	3,972	3,973
Net dilutive options, unvested restricted stock units, and restricted stock	24	32	29
Diluted shares	<u>3,998</u>	<u>4,004</u>	<u>4,002</u>
Earnings/(Loss) per share - diluted (GAAP) (a)	\$ 0.92	\$ 0.01	\$ (0.32)
Less: Net impact of adjustments	(0.38)	(1.18)	(0.73)
Adjusted earnings per share - diluted (Non-GAAP)	<u>\$ 1.30</u>	<u>\$ 1.19</u>	<u>\$ 0.41</u>

(a) The 2020 calculation excludes the 29 million shares of net dilutive options, unvested restricted stock units, and restricted stock due to their antidilutive effect.

Effective Tax Rate Reconciliation to Adjusted Effective Tax Rate

	2018	2019	2020
<u>Pre-Tax Results (\$M)</u>			
Income/(Loss) before income taxes (GAAP)	\$ 4,345	\$ (640)	\$ (1,116)
Less: Impact of special items	(1,429)	(5,999)	(2,246)
Adjusted earnings before taxes (Non-GAAP)	<u>\$ 5,774</u>	<u>\$ 5,359</u>	<u>\$ 1,130</u>
<u>Taxes (\$M)</u>			
(Provision for)/Benefit from income taxes (GAAP)	\$ (650)	\$ 724	\$ (160)
Less: Impact of special items (a)	(88)	1,323	(670)
Adjusted (provision for)/benefit from income taxes (Non-GAAP)	<u>\$ (562)</u>	<u>\$ (599)</u>	<u>\$ 510</u>
<u>Tax Rate (%)</u>			
Effective tax rate (GAAP)	15.0%	113.1%	(14.3)%
Adjusted effective tax rate (Non-GAAP)	9.7%	11.2%	(45.1)%

(a) 2020 includes \$(1.3) billion related to the establishment of valuation allowances against primarily U.S. tax credits.

Net Cash Provided by/(Used in) Operating Activities Reconciliation to Company Adjusted Free Cash Flow (\$M)

	2018	2019	2020
Net cash provided by/(used in) operating activities (GAAP)	\$ 15,022	\$ 17,639	\$ 24,269
Less: Items not included in Company Adjusted Free Cash Flows			
Ford Credit operating cash flows	\$ 8,171	\$ 11,531	\$ 20,717
Funded pension contributions	(437)	(730)	(570)
Global Redesign (including separations)	(196)	(911)	(503)
Ford Credit tax payments/(refunds) under tax sharing agreement	—	391	1,352
Other, net	82	(1)	(837)
Add: Items included in Company Adjusted Free Cash Flows			
Automotive and Mobility capital spending	(7,737)	(7,580)	(5,702)
Ford Credit distributions	2,723	2,900	2,415
Settlement of derivatives	132	107	(171)
Pivotal conversion to a marketable security	263	—	—
Company adjusted free cash flow (Non-GAAP)	<u>\$ 2,781</u>	<u>\$ 2,785</u>	<u>\$ 652</u>

Note: Numbers may not sum due to rounding.

Ford Credit Net Receivables Reconciliation to Managed Receivables (\$B)

	2018	2019	2020
Ford Credit finance receivables, net (GAAP) (a)	\$ 109.9	\$ 107.4	\$ 97.7
Net investments in operating leases (GAAP) (a)	27.4	27.6	26.6
Consolidating adjustments (b)	8.9	7.0	7.4
Total net receivables	\$ 146.2	\$ 142.0	\$ 131.7
Held-for-sale receivables (GAAP)	—	1.5	—
Ford Credit unearned interest supplements and residual support	6.8	6.7	6.5
Allowance for credit losses	0.6	0.5	1.3
Other, primarily accumulated supplemental depreciation	1.2	1.0	1.0
Total managed receivables (Non-GAAP)	\$ 154.9	\$ 151.7	\$ 140.5

(a) Includes finance receivables (retail and wholesale) sold for legal purposes and net investment in operating leases included in securitization transactions that do not satisfy the requirements for accounting sale treatment. These receivables and operating leases are reported on Ford Credit's balance sheets and are available only for payment of the debt issued by, and other obligations of, the securitization entities that are parties to those securitization transactions; they are not available to pay the other obligations of Ford Credit or the claims of Ford Credit's other creditors.

(b) Primarily includes Automotive segment receivables purchased by Ford Credit which are classified to *Trade and other receivables* on our consolidated balance sheets. Also includes eliminations of intersegment transactions.

Note: Numbers may not sum due to rounding.

2020 SUPPLEMENTAL INFORMATION

The tables below provide supplemental consolidating financial information and other financial information. Company excluding Ford Credit includes our Automotive and Mobility reportable segments, Corporate Other, Interest on Debt, and Special Items. Eliminations, where presented, primarily represent eliminations of intersegment transactions and deferred tax netting.

Selected Cash Flow Information. The following tables provide supplemental cash flow information (in millions):

For the Year Ended December 31, 2020				
Cash flows from operating activities	Company excluding Ford Credit	Ford Credit	Eliminations	Consolidated
Net income/(loss)	\$ (3,200)	\$ 1,924	\$ —	\$ (1,276)
Depreciation and tooling amortization	5,482	3,269	—	8,751
Other amortization	95	(1,389)	—	(1,294)
Held-for-sale impairment charges	23	—	—	23
Brazil manufacturing exit non-cash charges (excluding accelerated depreciation of \$145)	1,159	—	—	1,159
Provision for credit and insurance losses	19	910	—	929
Pension and OPEB expense/(income)	1,027	—	—	1,027
Equity investment dividends received in excess of (earnings)/losses	136	(6)	—	130
Foreign currency adjustments	(354)	(66)	—	(420)
Net (gain)/loss on changes in investments in affiliates	(3,474)	28	—	(3,446)
Stock compensation	193	6	—	199
Provision for deferred income taxes	(648)	379	—	(269)
Decrease/(Increase) in finance receivables (wholesale and other)	—	12,104	—	12,104
Decrease/(Increase) in intersegment receivables/payables	578	(578)	—	—
Decrease/(Increase) in accounts receivable and other assets	(65)	2	—	(63)
Decrease/(Increase) in inventory	148	—	—	148
Increase/(Decrease) in accounts payable and accrued and other liabilities	6,790	19	—	6,809
Other	(165)	(77)	—	(242)
Interest supplements and residual value support to Ford Credit	(4,192)	4,192	—	—
Net cash provided by/(used in) operating activities	<u>\$ 3,552</u>	<u>\$ 20,717</u>	<u>\$ —</u>	<u>\$ 24,269</u>
Cash flows from investing activities				
Capital spending	\$ (5,702)	\$ (40)	\$ —	\$ (5,742)
Acquisitions of finance receivables and operating leases	—	(55,901)	—	(55,901)
Collections of finance receivables and operating leases	—	48,746	—	48,746
Proceeds from sale of business	—	1,340	—	1,340
Purchases of marketable securities and other investments	(28,648)	(10,976)	—	(39,624)
Sales and maturities of marketable securities and other investments	22,959	9,436	—	32,395
Settlements of derivatives	(171)	(152)	—	(323)
Other	494	—	—	494
Investing activity (to)/from other segments	2,415	110	(2,525)	—
Net cash provided by/(used in) investing activities	<u>\$ (8,653)</u>	<u>\$ (7,437)</u>	<u>\$ (2,525)</u>	<u>\$ (18,615)</u>
Cash flows from financing activities				
Cash payments for dividends and dividend equivalents	\$ (596)	\$ —	\$ —	\$ (596)
Purchases of common stock	—	—	—	—
Net changes in short-term debt	204	(2,495)	—	(2,291)
Proceeds from issuance of long-term debt	24,157	41,743	—	65,900
Principal payments on long-term debt	(15,956)	(44,558)	—	(60,514)
Other	(78)	(106)	—	(184)
Financing activity to/(from) other segments	(110)	(2,415)	2,525	—
Net cash provided by/(used in) financing activities	<u>\$ 7,621</u>	<u>\$ (7,831)</u>	<u>\$ 2,525</u>	<u>\$ 2,315</u>
Effect of exchange rate changes on cash, cash equivalents, and restricted cash	\$ (54)	\$ 279	\$ —	\$ 225

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

Selected Income Statement Information. The following table provides supplemental income statement information (in millions):

For the Year Ended December 31, 2020						
	Company excluding Ford Credit				Ford Credit	Consolidated
	Automotive	Mobility	Other (a)	Subtotal		
Revenues	\$ 115,885	\$ 56	\$ —	\$ 115,941	\$ 11,203	\$ 127,144
Total costs and expenses	117,122	1,329	4,494	122,945	8,607	131,552
Operating income/(loss)	(1,237)	(1,273)	(4,494)	(7,004)	2,596	(4,408)
Interest expense on Automotive debt	—	—	1,603	1,603	—	1,603
Interest expense on Other debt	—	—	46	46	—	46
Other income/(loss), net	2,570	131	2,206	4,907	(8)	4,899
Equity in net income/(loss) of affiliated companies	300	(132)	(146)	22	20	42
Income/(Loss) before income taxes	1,633	(1,274)	(4,083)	(3,724)	2,608	(1,116)
Provision for/(Benefit from) income taxes	(448)	(306)	230	(524)	684	160
Net income/(loss)	2,081	(968)	(4,313)	(3,200)	1,924	(1,276)
Less: Income attributable to noncontrolling interests	3	—	—	3	—	3
Net income/(loss) attributable to Ford Motor Company	<u>\$ 2,078</u>	<u>\$ (968)</u>	<u>\$ (4,313)</u>	<u>\$ (3,203)</u>	<u>\$ 1,924</u>	<u>\$ (1,279)</u>

(a) Other includes Corporate Other, Interest on Debt, and Special Items

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

Selected Balance Sheet Information. The following tables provide supplemental balance sheet information (in millions):

December 31, 2020				
Assets	Company excluding Ford Credit	Ford Credit	Eliminations	Consolidated
Cash and cash equivalents	\$ 10,894	\$ 14,349	\$ —	\$ 25,243
Marketable securities	19,858	4,860	—	24,718
Ford Credit finance receivables, net	—	42,401	—	42,401
Trade and other receivables, net	3,422	6,571	—	9,993
Inventories	10,808	—	—	10,808
Assets held for sale	11	36	—	47
Other assets	1,987	1,547	—	3,534
Receivable from other segments	—	2,718	(2,718)	—
Total current assets	46,980	72,482	(2,718)	116,744
Ford Credit finance receivables, net	—	55,277	—	55,277
Net investment in operating leases	1,304	26,647	—	27,951
Net property	36,864	219	—	37,083
Equity in net assets of affiliated companies	4,778	123	—	4,901
Deferred income taxes	14,757	165	(2,499)	12,423
Other assets	9,293	3,589	—	12,882
Receivable from other segments	10	22	(32)	—
Total assets	\$ 113,986	\$ 158,524	\$ (5,249)	\$ 267,261
Liabilities				
Payables	\$ 21,125	\$ 1,079	\$ —	\$ 22,204
Other liabilities and deferred revenue	21,942	1,703	—	23,645
Automotive debt payable within one year	1,194	—	—	1,194
Ford Credit debt payable within one year	—	49,969	—	49,969
Other debt payable within one year	180	—	—	180
Liabilities held for sale	—	—	—	—
Payable to other segments	2,718	—	(2,718)	—
Total current liabilities	47,159	52,751	(2,718)	97,192
Other liabilities and deferred revenue	27,246	1,133	—	28,379
Automotive long-term debt	22,342	—	—	22,342
Ford Credit long-term debt	—	87,708	—	87,708
Other long-term debt	291	—	—	291
Deferred income taxes	130	2,907	(2,499)	538
Payable to other segments	32	—	(32)	—
Total liabilities	\$ 97,200	\$ 144,499	\$ (5,249)	\$ 236,450

Selected Other Information.

Equity. At December 31, 2019, total equity attributable to Ford was \$33.2 billion, a decrease of \$2.7 billion compared with December 31, 2018. At December 31, 2020, total equity attributable to Ford was \$30.7 billion, a decrease of \$2.5 billion compared with December 31, 2019. The detail for the changes is shown below (in billions):

	2019 vs 2018 Increase/ (Decrease)	2020 vs 2019 Increase/ (Decrease)
Net income/(loss)	\$ —	\$ (1.3)
Shareholder distributions	(2.6)	(0.6)
Other comprehensive income/(loss)	(0.3)	(0.5)
Adoption of accounting standards	—	(0.2)
Common stock issued (including share-based compensation impacts)	0.2	0.1
Total	<u>\$ (2.7)</u>	<u>\$ (2.5)</u>

CRITICAL ACCOUNTING ESTIMATES

We consider an accounting estimate to be critical if: (1) the accounting estimate requires us to make assumptions about matters that were highly uncertain at the time the accounting estimate was made, and (2) changes in the estimate that are reasonably likely to occur from period to period, or use of different estimates that we reasonably could have used in the current period, would have a material impact on our financial condition or results of operations.

Management has discussed the development and selection of these critical accounting estimates with the Audit Committee of our Board of Directors. In addition, there are other items within our financial statements that require estimation, but are not deemed critical as defined above. Changes in estimates used in these and other items could have a material impact on our financial statements.

Warranties and Field Service Actions

Nature of Estimates Required. We provide base warranties on the products we sell for specific periods of time and/or mileage, which vary depending upon the type of product and the geographic location of its sale. Separately, we also periodically perform field service actions related to safety recalls, emission recalls, and other product campaigns. Pursuant to these warranties and field service actions, we will repair, replace, or adjust all parts on a vehicle that are defective in factory-supplied materials or workmanship. We accrue the estimated cost of both base warranty coverages and field service actions at the time of sale. In addition, from time to time, we issue extended warranties at our expense, the estimated cost of which is accrued at the time of issuance.

Assumptions and Approach Used. We establish our estimate of base warranty obligations using a patterned estimation model. We use historical information regarding the nature, frequency, and average cost of claims for each vehicle line by model year. We reevaluate our estimate of base warranty obligations on a regular basis. Experience has shown that initial data for any given model year may be volatile; therefore, our process relies on long-term historical averages until sufficient data are available. As actual experience becomes available, we use the data to update the historical averages. We then compare the resulting accruals with present spending rates to assess whether the balances are adequate to meet expected future obligations. Based on this data, we update our estimates as necessary.

Field service actions are distinguishable from warranties in that they may occur in periods beyond the base warranty coverage period. We establish our estimates of field service action obligations using a patterned estimation model. We use historical information regarding the nature, frequency, severity, and average cost of claims for each model year. We assess our obligation for field service actions on a regular basis using actual claims experience and update our estimates as necessary.

Due to the uncertainty and potential volatility of the factors used in establishing our estimates, changes in our assumptions could materially affect our financial condition and results of operations. See Note 25 of the Notes to the Financial Statements for information regarding warranty and field service action costs.

Pensions and Other Postretirement Employee Benefits

Nature of Estimates Required. The estimation of our defined benefit pension and OPEB plan obligations and expenses requires that we make use of estimates of the present value of the projected future payments to all participants, taking into consideration the likelihood of potential future events, such as demographic experience and health care cost increases. Plan obligations and expenses are based on existing retirement plan provisions. No assumption is made regarding any potential future changes to benefit provisions beyond those to which we are presently committed (e.g., in existing labor contracts).

Assumptions and Approach Used. The assumptions used in developing the required estimates include the following key factors:

- *Discount rates.* Our discount rate assumptions are based primarily on the results of cash flow matching analyses, which match the future cash outflows for each major plan to a yield curve based on high-quality bonds specific to the country of the plan. Benefit payments are discounted at the rates on the curve to determine the year-end obligations.
- *Expected long-term rate of return on plan assets.* Our expected long-term rate of return considers inputs from a range of advisors for capital market returns, inflation, bond yields, and other variables, adjusted for specific aspects of our investment strategy by plan. Historical returns also are considered when appropriate. The assumption is based on consideration of all inputs, with a focus on long-term trends to avoid short-term market influences.
- *Salary growth.* Our salary growth assumption reflects our actual experience, long-term outlook, and assumed inflation.
- *Inflation.* Our inflation assumption is based on an evaluation of external market indicators, including real gross domestic product growth and central bank inflation targets.
- *Expected contributions.* Our expected amount and timing of contributions are based on an assessment of minimum requirements, cash availability, and other considerations (e.g., funded status, avoidance of regulatory premiums and levies, and tax efficiency).
- *Retirement rates.* Retirement rates are developed to reflect actual and projected plan experience.
- *Mortality rates.* Mortality rates are developed to reflect actual and projected plan experience.
- *Health care cost trends.* Our health care cost trend assumptions are developed based on historical cost data, the near-term outlook, and an assessment of likely long-term trends.

Assumptions are set at each year-end and are generally not changed during the year unless there is a major plan event, such as a curtailment or settlement that would trigger a plan remeasurement.

See Note 17 of the Notes to the Financial Statements for more information regarding pension and OPEB costs and assumptions.

Pension Plans

Effect of Actual Results. The year-end 2020 weighted average discount rate was 2.56% for U.S. plans and 1.23% for non-U.S. plans, reflecting decreases of 76 and 51 basis points, respectively, compared with year-end 2019. In 2020, the U.S. actual return on assets was 16.44%, which was higher than the expected long-term rate of return of 6.50%. Non-U.S. actual return on assets was 10.96%, which was higher than the expected long-term rate of return of 3.67%. In total, these differences, in addition to demographic and other updates, resulted in a net remeasurement loss of \$876 million, which has been recognized within net periodic benefit cost and reported as a special item.

For 2021, the expected long-term rate of return on assets is 6.00% for U.S. plans, down 50 basis points from 2020, and 3.42% for non-U.S. plans, down 25 basis points compared with a year ago, reflecting a lower consensus on capital market return expectations from advisors.

De-risking Strategy. We employ a broad de-risking strategy for our global funded plans that increases the matching characteristics of our assets relative to our obligation as 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 our pension obligation and fixed income asset portfolio. Our de-risking strategy has increased the allocation to fixed income investments and reduced our funded status sensitivity to changes in interest rates. Changes in interest rates should result in offsetting effects in the value of our pension obligation and the value of the fixed income asset portfolio.

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

Sensitivity Analysis. The December 31, 2020 pension funded status and 2021 expense are affected by year-end 2020 assumptions. Sensitivities to these assumptions may be asymmetric and are specific to the time periods noted. The effects of changes in the factors that generally have the largest impact on year-end funded status and pension expense are discussed below.

Discount rates and interest rates have the largest impact on our obligations and fixed income assets. The table below estimates the effect on our funded status of an increase/decrease in discount rates and interest rates (in millions):

Factor	Basis Point Change	Increase/(Decrease) in December 31, 2020 Funded Status	
		U.S. Plans	Non-U.S. Plans
Discount rate - obligation	+/- 100 bps	\$5,200/\$(6,400)	\$6,100/\$(8,000)
Interest rate - fixed income assets	+/- 100	(5,000)/6,100	(4,400)/5,700
Net impact on funded status		\$200/\$(300)	\$1,700/\$(2,300)

The fixed income asset sensitivity shown excludes other fixed income return components (e.g., changes in credit spreads, bond coupon and active management excess returns), and growth asset returns. Other factors that affect net funded status (e.g., contributions) are not reflected.

Interest rates and the expected long-term rate of return on assets have the largest effect on pension expense. These assumptions are generally set at each year-end for expense recorded throughout the following year. The table below estimates the effect on pension expense of a higher/lower assumption for these factors (in millions):

Factor	Basis Point Change	Increase/(Decrease) in December 31, 2020 Pension Expense	
		U.S. Plans	Non-U.S. Plans
Interest rate - service cost and interest cost	+/- 25 bps	\$60/\$(60)	\$40/\$(40)
Expected long-term rate of return on assets	+/- 25	(120)/120	(80)/80

The effect of changing multiple factors simultaneously cannot be calculated by combining the individual sensitivities. The sensitivity of pension expense to an increase in discount rates assumptions may not be linear.

Other Postretirement Employee Benefits

Effect of Actual Results. The weighted average discount rate used to determine the benefit obligation for worldwide OPEB plans at December 31, 2020 was 2.62%, compared with 3.30% at December 31, 2019, resulting in a worldwide net remeasurement loss of \$556 million, which has been recognized within net periodic benefit cost and reported as a special item.

Sensitivity Analysis. Discount rates and interest rates have the largest effect on our OPEB obligation and expense. The table below estimates the effect on 2021 OPEB expense of higher/lower assumptions for these factors (in millions):

Factor	Basis Point Change	Worldwide OPEB	
		(Increase)/Decrease 2020 YE Obligation	Increase/(Decrease) 2020 Expense
Discount rate - obligation	+/- 100 bps	\$750/\$(950)	N/A
Interest rate - service cost and interest cost	+/- 25	N/A	\$10/\$(10)

Income Taxes

Nature of Estimates Required. We must make estimates and apply judgment in determining the provision for income taxes for financial reporting purposes. We make these estimates and judgments primarily in the following areas: (i) the calculation of tax credits, (ii) the calculation of differences in the timing of recognition of revenue and expense for tax reporting and financial statement purposes, as well as (iii) the calculation of interest and penalties related to uncertain tax positions. Changes in these estimates and judgments may result in a material increase or decrease to our tax provision, which would be recorded in the period in which the change occurs.

Assumptions and Approach Used. We are subject to the income tax laws and regulations of the many jurisdictions in which we operate. These tax laws and regulations are complex and involve uncertainties in the application to our facts and circumstances that may be open to interpretation. We recognize benefits for these uncertain tax positions based upon a process that requires judgment regarding the technical application of the laws, regulations, and various related judicial opinions. If, in our judgment, it is more likely than not (defined as a likelihood of more than 50%) that the uncertain tax position will be settled favorably for us, we estimate an amount that ultimately will be realized. This process is inherently subjective since it requires our assessment of the probability of future outcomes. We evaluate these uncertain tax positions on a quarterly basis, including consideration of changes in facts and circumstances, such as new regulations or recent judicial opinions, as well as the status of audit activities by taxing authorities. Changes to our estimate of the amount to be realized are recorded in our provision for income taxes during the period in which the change occurred.

We must also assess the likelihood that we will be able to recover our deferred tax assets against future sources of taxable income and reduce the carrying amount of deferred tax assets by recording a valuation allowance if, based on all available evidence, it is more likely than not that all or a portion of such assets will not be realized.

This assessment, which is completed on a taxing jurisdiction basis, takes into account various types of evidence, including the following:

- *Nature, frequency, and severity of current and cumulative financial reporting losses.* A pattern of objectively measured recent financial reporting losses is heavily weighted as a source of negative evidence. We generally consider cumulative pre-tax losses in the three-year period ending with the current quarter to be significant negative evidence regarding future profitability. We also consider the strength and trend of earnings, as well as other relevant factors. In certain circumstances, historical information may not be as relevant due to changes in our business operations;
- *Sources of future taxable income.* Future reversals of existing temporary differences are heavily weighted sources of objectively verifiable positive evidence. Projections of future taxable income exclusive of reversing temporary differences are a source of positive evidence only when the projections are combined with a history of recent profits and can be reasonably estimated. Otherwise, these projections are considered inherently subjective and generally will not be sufficient to overcome negative evidence that includes relevant cumulative losses in recent years, particularly if the projected future taxable income is dependent on an anticipated turnaround to profitability that has not yet been achieved. In such cases, we generally give these projections of future taxable income no weight for the purposes of our valuation allowance assessment; and
- *Tax planning strategies.* If necessary and available, tax planning strategies would be implemented to accelerate taxable amounts to utilize expiring carryforwards. These strategies would be a source of additional positive evidence and, depending on their nature, could be heavily weighted.

During 2020, based on all available evidence, we established U.S. valuation allowances of \$1.3 billion primarily against tax credits, as it is more likely than not that these deferred tax assets will not be realized. In assessing the realizability of deferred tax assets, we consider the trade-offs between cash preservation and cash outlays to preserve tax credits. We presently believe that global valuation allowances of \$2 billion are required. We believe that we ultimately will recover the remaining \$11.9 billion of deferred tax assets. However, the ultimate realization of our deferred tax assets is subject to a number of variables, including our future profitability within relevant tax jurisdictions, and future tax planning and the related effects on our cash and liquidity position. Accordingly, our valuation allowances may increase or decrease in future periods.

For additional information regarding income taxes, see Note 7 of the Notes to the Financial Statements.

Impairment of Long-Lived Assets

Nature of Estimates Required - Held-and-Used Long-Lived Assets. We test our long-lived asset groups when changes in circumstances indicate their carrying value may not be recoverable. Events that trigger a test for recoverability include material adverse changes in projected revenues and expenses, present cash flow losses combined with a history of cash flow losses and a forecast that demonstrates significant continuing losses, significant negative industry or economic trends, a current expectation that a long-lived asset group will be disposed of significantly before the end of its useful life, a significant adverse change in the manner in which an asset group is used or in its physical condition, or when there is a change in the asset grouping. When a triggering event occurs, a test for recoverability is performed, comparing projected undiscounted future cash flows to the carrying value of the asset group. If the test for recoverability identifies a possible impairment, the asset group's fair value is measured relying primarily on a discounted cash flow method. To the extent available, we will also consider third-party valuations of our long-lived assets that were prepared for other business purposes. An impairment charge is recognized for the amount by which the carrying value of the asset group exceeds its estimated fair value. When an impairment loss is recognized for assets to be held and used, the adjusted carrying amounts of those assets are depreciated over their remaining useful life.

Nature of Estimates Required - Held-for-Sale Operations. We perform an impairment test on a disposal group to be discontinued, held for sale, or otherwise disposed of when we have committed to an action and the action is expected to be completed within one year. We estimate fair value to approximate the expected proceeds to be received less cost to sell and compare it to the carrying value of the disposal group. An impairment charge is recognized when the carrying value exceeds the estimated fair value. We also assess fair value if circumstances arise that were considered unlikely and, as a result, we decide not to sell a disposal group previously classified as held for sale upon reclassification as held and used. When there is a change to a plan of sale, and the assets are reclassified from held for sale to held and used, the long-lived assets should be reported at the lower of (i) the carrying amount before held for sale designation, adjusted for depreciation that would have been recognized if the assets had not been classified as held for sale or (ii) the fair value at the date the assets no longer satisfy the criteria for classification as held for sale.

Assumptions and Approach Used - Held-and-Used Long-Lived Assets. We measure the fair value of an asset group based on market prices (i.e., the amount for which the asset could be sold to a third party) when available. When market prices are not available, we generally estimate the fair value of the asset group using the income approach and/or the market approach. The income approach uses cash flow projections. Inherent in our development of cash flow projections are assumptions and estimates derived from a review of our operating results, business plan forecasts, expected growth rates, and cost of capital, similar to those a market participant would use to assess fair value. We also make certain assumptions about future economic conditions and other data. Many of the factors used in assessing fair value are outside the control of management, and these assumptions and estimates may change in future periods.

Changes in assumptions or estimates can materially affect the fair value measurement of an asset group and, therefore, can affect the test results. The following are key assumptions we use in making cash flow projections:

- *Business projections.* We make assumptions about the demand for our products in the marketplace. These assumptions drive our planning assumptions for volume, mix, and pricing. We also make assumptions about our cost levels (e.g., capacity utilization, cost performance). These projections are derived using our internal business plan forecasts that are updated at least annually and reviewed by our Board of Directors.
- *Long-term growth rate.* A growth rate is used to calculate the terminal value of the business and is added to the present value of the debt-free interim cash flows. The growth rate is the expected rate at which a business unit's earnings stream is projected to grow beyond the planning period.
- *Discount rate.* When measuring possible impairment, future cash flows are discounted at a rate that is consistent with a weighted-average cost of capital that we anticipate a potential market participant would use. Weighted-average cost of capital is an estimate of the overall risk-adjusted pre-tax rate of return expected by equity and debt holders of a business enterprise.
- *Economic projections.* Assumptions regarding general economic conditions are included in and affect our assumptions regarding industry sales and pricing estimates for our vehicles. These macroeconomic assumptions include, but are not limited to, industry sales volumes, inflation, interest rates, prices of raw materials (e.g., commodities), and foreign currency exchange rates.

During 2020, we experienced triggering events in all of our Automotive asset groups related to the COVID-19 pandemic and in certain asset groups due to our ongoing global redesign. The impact of COVID-19, including changes in consumer behavior, pandemic fears, market downturns, and restrictions on business and individual activities, has created significant volatility in the global economy and led to reduced economic activity. There have been extraordinary actions taken by international, federal, state, and local public health and governmental authorities to contain and combat the outbreak and spread of COVID-19 in regions throughout the world, including travel bans, quarantines, "stay-at-home" orders, and similar mandates for many individuals to substantially restrict daily activities and for many businesses to curtail or cease normal operations. In addition, we have continued to progress our global redesign, which began in 2018, by reassessing our operations and reducing structural costs.

In each situation in which we experienced a triggering event during the year, we tested our long-lived assets for impairment using our internal economic and business projections, as well as third-party valuations of certain long-lived assets, and determined that the carrying value of the long-lived assets in these business units was recoverable. If in future quarters our economic or business projections were to change as a result of our plans or changes in the economic or business environment, there was a significant adverse change in the extent or manner in which a long-lived asset is being used, or there was a current expectation that a long-lived asset group will be disposed of significantly before the end of its useful life, we would undertake additional testing, as appropriate, which could result in an impairment of long-lived assets.

Assumptions and Approach Used - Held-for-Sale Operations. In the third quarter of 2019, we committed to a plan to sell specific net assets in our India Automotive operations. We entered into a definitive agreement to form a joint venture with Mahindra & Mahindra Limited ("Mahindra"), with Mahindra owning a 51 percent controlling stake and Ford owning a 49 percent stake. As a result of fundamental changes in global economic and business conditions in 2020, caused in part by the global pandemic, on December 31, 2020, we and Mahindra determined that we will not complete the joint venture. Accordingly, at December 31, 2020, the assets and liabilities of our India Automotive operations were reclassified and reported as held and used. Because the carrying value of the net assets approximated fair value at December 31, 2020, the pre-tax impairment charges of \$804 million and \$23 million recorded in 2019 and 2020, respectively, which were reported in *Cost of sales*, were not adjusted as a result of the reclassification to held and used. See Note 22 of the Notes to the Financial Statements for more information regarding held-for-sale operations.

Allowance for Credit Losses

The allowance for credit losses represents Ford Credit's estimate of the expected lifetime credit losses inherent in finance receivables as of the balance sheet date. The adequacy of Ford Credit's allowance for credit losses is assessed quarterly, and the assumptions and models used in establishing the allowance are evaluated regularly. Because credit losses can vary substantially over time, estimating credit losses requires a number of assumptions about matters that are uncertain. Changes in assumptions affect *Ford Credit interest, operating, and other expenses* on our consolidated income statements and the allowance for credit losses contained within *Ford Credit finance receivables, net* on our consolidated balance sheets. See Note 10 of the Notes to the Financial Statements for more information regarding allowance for credit losses.

Nature of Estimates Required. Ford Credit estimates the allowance for credit losses for receivables that share similar risk characteristics based on a collective assessment using a combination of measurement models and management judgment. The models consider factors such as historical trends in credit losses, recent portfolio performance, and forward-looking macroeconomic conditions. The models vary by portfolio and receivable type including consumer finance receivables, wholesale loans, and dealer loans. If Ford Credit does not believe the models reflect lifetime expected credit losses for the portfolio, an adjustment is made to reflect management judgment regarding qualitative factors including economic uncertainty, observable changes in portfolio performance, and other relevant factors.

Assumptions Used. Ford Credit's allowance for credit losses is based on its assumptions regarding:

- *Probability of default.* The expected probability of payment and time to default, which include assumptions about macroeconomic factors and recent performance; and
- *Loss given default.* The percentage of the expected balance due at default that is not recoverable. The loss given default takes into account expected collateral value and future recoveries.

Macroeconomic factors used in Ford Credit's models are country specific and include variables such as unemployment rates, housing prices, and gross domestic product.

Sensitivity Analysis. Changes in the probability of default and loss given default assumptions would affect the allowance for credit losses. The effect of the indicated increase/decrease in the assumptions for Ford Credit's U.S. Ford and Lincoln retail financing is as follows (in millions):

Assumption	Basis Point Change	Increase/ (Decrease)
Probability of default (lifetime)	+/- 100 bps	\$200/\$(200)
Loss given default	+/- 100	15/(15)

Accumulated Depreciation on Vehicles Subject to Operating Leases

Accumulated depreciation on vehicles subject to operating leases reduces the value of the leased vehicles in Ford Credit's operating lease portfolio from their original acquisition value to their expected residual value at the end of the lease term.

Ford Credit monitors residual values each month, and it reviews the adequacy of accumulated depreciation on a quarterly basis. If Ford Credit believes that the expected residual values for its vehicles have changed, it revises depreciation to ensure that net investment in operating leases (equal to the acquisition value of the vehicles less accumulated depreciation) will be adjusted to reflect Ford Credit's revised estimate of the expected residual value at the end of the lease term. Adjustments to depreciation expense result in a change in the depreciation rates of the vehicles subject to operating leases and are recorded prospectively on a straight-line basis.

Each lease customer has the option to buy the leased vehicle at the end of the lease or to return the vehicle to the dealer.

Nature of Estimates Required. Each operating lease in Ford Credit's portfolio represents a vehicle it owns that has been leased to a customer. At the time Ford Credit purchases a lease, it establishes an expected residual value for the vehicle. Ford Credit estimates the expected residual value by evaluating recent auction values, return volumes for its leased vehicles, industrywide used vehicle prices, marketing incentive plans, and vehicle quality data.

Assumptions Used. Ford Credit's accumulated depreciation on vehicles subject to operating leases is based on assumptions regarding:

- **Auction value.** Ford Credit's projection of the market value of the vehicles when sold at the end of the lease; and
- **Return volume.** Ford Credit's projection of the number of vehicles that will be returned at lease-end.

See Note 12 of the Notes to the Financial Statements for more information regarding accumulated depreciation on vehicles subject to operating leases.

Sensitivity Analysis. For returned vehicles, Ford Credit faces a risk that the amount it obtains from the vehicle sold at auction will be less than its estimate of the expected residual value for the vehicle. The impact of the change in assumptions on future auction values and return volumes would increase or decrease accumulated supplemental depreciation and depreciation expense over the remaining terms of the operating leases. The effect of the indicated increase/decrease in the assumptions for Ford Credit's U.S. Ford and Lincoln operating lease portfolio is as follows (in millions):

Assumption	Basis Point Change	Increase/ (Decrease)
Future auction values	+/- 100 bps	\$(124)/\$124
Return volumes	+/- 100	13/(13)

Adjustments to the amount of accumulated supplemental depreciation on operating leases are reflected on our balance sheets as *Net investment in operating leases* and on our income statements in *Ford Credit interest, operating, and other expenses*.

ACCOUNTING STANDARDS ISSUED BUT NOT YET ADOPTED

The Financial Accounting Standards Board ("FASB") has issued the following Accounting Standards Updates ("ASU") which are not expected to have a material impact to our financial statements or financial statement disclosures.

ASU		Effective Date (a)
2019-12	Simplifying the Accounting for Income Taxes	January 1, 2021
2020-06	Accounting for Convertible Instruments and Contracts in an Entity's Own Equity	January 1, 2022
2018-12	Targeted Improvements to the Accounting for Long Duration Contracts	January 1, 2023

(a) Early adoption for each of the standards is permitted.

AGGREGATE CONTRACTUAL OBLIGATIONS

We are party to many contractual obligations involving commitments to make payments to third parties. Most of these are debt obligations incurred by our Ford Credit segment. Long-term debt may have fixed or variable interest rates. For long-term debt with variable-rate interest, we estimate the future interest payments based on projected market interest rates for various floating-rate benchmarks received from third parties. In addition, as part of our normal business practices, we enter into contracts with suppliers for purchases of certain raw materials, components, and services to facilitate adequate supply of these materials and services. These arrangements may contain fixed or minimum quantity purchase requirements. "Purchase obligations" are defined as off-balance sheet agreements to purchase goods or services that are enforceable and legally binding on the Company and that specify all significant terms.

The table below summarizes our contractual obligations as of December 31, 2020 (in millions):

	Payments Due by Period				
	2021	2022 - 2023	2024 - 2025	Thereafter	Total
Company excluding Ford Credit					
On-balance sheet					
Long-term debt (a)	\$ 716	\$ 6,396	\$ 4,590	\$ 11,709	\$ 23,411
Interest payments relating to long-term debt	1,482	2,693	2,017	9,916	16,108
Finance leases (b)	60	97	64	303	524
Operating leases	348	460	247	334	1,389
Pension funding (c)	185	375	370	—	930
Off-balance sheet					
Purchase obligations	1,626	1,429	682	370	4,107
Total Company excluding Ford Credit	4,417	11,450	7,970	22,632	46,469
Ford Credit					
On-balance sheet					
Long-term debt (a)	38,530	47,087	28,747	10,639	125,003
Interest payments relating to long-term debt	2,946	3,815	1,980	1,053	9,794
Operating leases	18	29	26	18	91
Off-balance sheet					
Purchase obligations	29	40	4	—	73
Total Ford Credit	41,523	50,971	30,757	11,710	134,961
Total Company	\$ 45,940	\$ 62,421	\$ 38,727	\$ 34,342	\$ 181,430

(a) Excludes unamortized debt discounts/premiums, unamortized debt issuance costs, and fair value adjustments.

(b) Includes interest payments of \$110 million.

(c) Amounts represent our estimate of contractually obligated contributions to the Ford-Werke plan. See Note 17 of the Notes to the Financial Statements for further information regarding our expected 2020 pension contributions and funded status.

The amount of unrecognized tax benefits for 2020 of \$1.9 billion (see Note 7 of the Notes to the Financial Statements for additional discussion) is excluded from the table above. Final settlement of a significant portion of these obligations will require bilateral tax agreements among us and various countries, the timing of which cannot reasonably be estimated.

For additional information regarding pension and OPEB obligations, operating lease obligations, long-term debt, and agreed future funding for Argo AI, see Notes 17, 18, 19, and 22, respectively, of the Notes to the Financial Statements.

ITEM 7A. Quantitative and Qualitative Disclosures About Market Risk

OVERVIEW

We are exposed to a variety of market and other risks, including the effects of changes in foreign currency exchange rates, commodity prices, and interest rates, as well as risks to availability of funding sources, hazard events, and specific asset risks.

These risks affect our Automotive and Ford Credit segments differently. We monitor and manage these exposures as an integral part of our overall risk management program, which includes regular reports to a central management committee, the Global Risk Management Committee ("GRMC"). The GRMC is chaired by our Chief Financial Officer, and the committee includes our Controller, Treasurer, and other members of senior management.

Our Automotive and Ford Credit segments are exposed to liquidity risk, including the possibility of having to curtail business or being unable to meet financial obligations as they come due because funding sources may be reduced or become unavailable. Our plan is to maintain funding sources to ensure liquidity through a variety of economic or business cycles. As discussed in greater detail in Item 7, our funding sources include sales of receivables in securitizations and other structured financings, unsecured debt issuances, equity and equity-linked issuances, and bank borrowings.

We are exposed to a variety of insurable risks, such as loss or damage to property, liability claims, and employee injury. We protect against these risks through the purchase of commercial insurance that is designed to protect us above our self-insured retentions against events that could generate significant losses.

Direct responsibility for the execution of our market risk management strategies resides with our Treasurer's Office and is governed by written policies and procedures. Separation of duties is maintained between the development and authorization of derivative trades, the transaction of derivatives, and the settlement of cash flows. Regular audits are conducted to ensure that appropriate controls are in place and that they remain effective. In addition, our market risk exposures and our use of derivatives to manage these exposures are approved by the GRMC, and reviewed by the Audit Committee of our Board of Directors.

In accordance with our corporate risk management policies, we use derivative instruments, when available, such as forward contracts, swaps, and options that economically hedge certain exposures (foreign currency, commodity, and interest rates). We do not use derivative contracts for trading, market-making, or speculative purposes. In certain instances, we forgo hedge accounting, and in certain other instances, our derivatives do not qualify for hedge accounting. Either situation results in unrealized gains and losses that are recognized in income. For additional information on our derivatives, see Note 20 of the Notes to the Financial Statements.

The market and counterparty risks of our Automotive and Ford Credit segments are discussed and quantified below.

AUTOMOTIVE MARKET RISK

Our Automotive segment frequently has expenditures and receipts denominated in foreign currencies, including the following: purchases and sales of finished vehicles and production parts, debt and other payables, subsidiary dividends, and investments in foreign operations. These expenditures and receipts create exposures to changes in exchange rates. We also are exposed to changes in prices of commodities used in the production of our vehicles and changes in interest rates.

Foreign currency risk, commodity risk, and interest rate risk are measured and quantified using a model to evaluate the sensitivity of market value to instantaneous, parallel shifts in rates and/or prices.

Foreign Currency Risk. Foreign currency risk is the possibility that our financial results could be worse than planned because of changes in currency exchange rates. Accordingly, our practice is to use derivative instruments to hedge our economic exposure with respect to forecasted revenues and costs, assets, liabilities, and firm commitments denominated in certain foreign currencies consistent with our overall risk management strategy. In our hedging actions, we use derivative instruments commonly used by corporations to reduce foreign exchange risk (e.g., forward contracts).

The net fair value of foreign exchange forward contracts (including adjustments for credit risk) as of December 31, 2020, was a liability of \$487 million, compared with a liability of \$596 million as of December 31, 2019. The potential decrease in fair value from a 10% adverse change in the underlying exchange rates, in U.S. dollar terms, would have been \$2.5 billion at December 31, 2020, compared with \$2.3 billion at December 31, 2019. The sensitivity analysis presented is hypothetical and assumes foreign exchange rate changes are instantaneous and adverse across all currencies. In reality, some of our exposures offset and foreign exchange rates move in different magnitudes and at different times, and any changes in fair value would generally be offset by changes in the underlying exposure. See Note 20 of the Notes to the Financial Statements for more information regarding our foreign currency exchange contracts.

Commodity Price Risk. Commodity price risk is the possibility that our financial results could be worse than planned because of changes in the prices of commodities used in the production of motor vehicles, such as base metals (e.g., steel, copper, and aluminum), precious metals (e.g., palladium), energy (e.g., natural gas and electricity), and plastics/resins (e.g., polypropylene). Accordingly, our practice is to use derivative instruments to hedge the price risk with respect to forecasted purchases of certain commodities that we can economically hedge (primarily base metals and precious metals) and consistent with our overall risk management strategy. In our hedging actions, we use derivative instruments commonly used by corporations to reduce commodity price risk (e.g., financially settled forward contracts). The extent to which we hedge is also impacted by our ability to achieve designated hedge accounting.

The net fair value of commodity forward contracts (including adjustments for credit risk) as of December 31, 2020, was an asset of \$105 million, compared with a liability of \$24 million as of December 31, 2019. The potential decrease in fair value from a 10% adverse change in the underlying commodity prices would be \$141 million at December 31, 2020, compared with \$112 million at December 31, 2019. The sensitivity analysis presented is hypothetical and assumes commodity price changes are instantaneous and adverse across all commodities. In reality, commodity prices move in different magnitudes and at different times, and any changes in fair value would generally be offset by changes in the underlying exposure.

In addition, our purchasing organization (with guidance from the GRMC, as appropriate) negotiates contracts for the continuous supply of raw materials. In some cases, these contracts stipulate minimum purchase amounts and specific prices, and, therefore, play a role in managing commodity price risk.

Interest Rate Risk. Interest rate risk relates to the loss we could incur in our Company cash investment portfolios due to a change in interest rates. Our interest rate sensitivity analysis on the investment portfolios includes cash and cash equivalents and net marketable securities. At December 31, 2020, we had \$30.8 billion in our Company cash investment portfolios, compared to \$22.3 billion at December 31, 2019. We invest the portfolios in securities of various types and maturities, the value of which are subject to fluctuations in interest rates. The investment strategy is based on clearly defined risk and liquidity guidelines to maintain liquidity, minimize risk, and earn a reasonable return on the short-term investments. In investing our Company cash, safety of principal is the primary objective and risk-adjusted return is the secondary objective.

At any time, a rise in interest rates could have a material adverse impact on the fair value of our portfolios. Assuming a hypothetical increase in interest rates of one percentage point, the value of our portfolios would be reduced by \$250 million, as calculated as of December 31, 2020. This compares to \$173 million, as calculated as of December 31, 2019. While these are our best estimates of the impact of the specified interest rate scenario, actual results could differ from those projected. The sensitivity analysis presented assumes interest rate changes are instantaneous, parallel shifts in the yield curve. In reality, interest rate changes of this magnitude are rarely instantaneous or parallel.

FORD CREDIT MARKET RISK

Market risk for Ford Credit is the possibility that changes in interest and currency exchange rates will adversely affect cash flow and economic value.

Interest Rate Risk. Generally, Ford Credit's assets and the related debt have different re-pricing periods, and consequently, respond differently to changes in interest rates.

Ford Credit's assets consist primarily of fixed-rate retail financing and operating lease contracts and floating-rate wholesale receivables. Fixed-rate retail financing and operating lease contracts generally require customers to make equal monthly payments over the life of the contract. Wholesale receivables are originated to finance new and used vehicles held in dealers' inventory and generally require dealers to pay a floating rate.

Debt consists primarily of short- and long-term unsecured and securitized debt. Ford Credit's term debt instruments are principally fixed-rate and require fixed and equal interest payments over the life of the instrument and a single principal payment at maturity.

Ford Credit's interest rate risk management objective is to reduce volatility in its cash flows and volatility in its economic value from changes in interest rates based on an established risk tolerance that may vary by market. Ford Credit uses economic value sensitivity analysis and re-pricing gap analysis to evaluate potential long-term effects of changes in interest rates. It then enters into interest rate swaps to convert portions of its floating-rate debt to fixed or its fixed-rate debt to floating to ensure that Ford Credit's exposure falls within the established tolerances. Ford Credit also uses pre-tax cash flow sensitivity analysis to monitor the level of near-term cash flow exposure. The pre-tax cash flow sensitivity analysis measures the changes in expected cash flows associated with Ford Credit's interest-rate-sensitive assets, liabilities, and derivative financial instruments from hypothetical changes in interest rates over a twelve-month horizon. Ford Credit's Asset-Liability Committee reviews the re-pricing mismatch and exposure every month and approves interest rate swaps required to maintain exposure within approved thresholds prior to execution.

To provide a quantitative measure of the sensitivity of its pre-tax cash flow to changes in interest rates, Ford Credit uses interest rate scenarios that assume a hypothetical, instantaneous increase or decrease of one percentage point in all interest rates across all maturities (a "parallel shift"), as well as a base case that assumes that all interest rates remain constant at existing levels. In reality, interest rate changes are rarely instantaneous or parallel and rates could move more or less than the one percentage point assumed in Ford Credit's analysis. As a result, the actual impact to pre-tax cash flow could be higher or lower than the results detailed in the table below. These interest rate scenarios are purely hypothetical and do not represent Ford Credit's view of future interest rate movements.

Under these interest rate scenarios, Ford Credit expects more debt and liabilities than assets to re-price in the next twelve months. Other things being equal, this means that during a period of rising interest rates, the interest received on Ford Credit's assets will increase less than the interest paid on Ford Credit's debt, thereby initially decreasing Ford Credit's pre-tax cash flow. During a period of falling interest rates, Ford Credit would expect its pre-tax cash flow to initially increase. Ford Credit's pre-tax cash flow sensitivity to interest rate movement is highlighted in the table below.

Pre-tax cash flow sensitivity at December 31 was as follows (in millions):

Pre-Tax Cash Flow Sensitivity	2019	2020
One percentage point instantaneous <i>increase</i> in interest rates	\$ (26)	\$ (3)
One percentage point instantaneous <i>decrease</i> in interest rates (a)	26	3

(a) Pre-tax cash flow sensitivity given a one percentage point decrease in interest rates requires an assumption of negative interest rates in markets where existing interest rates are below one percent.

While the sensitivity analysis presented is Ford Credit's best estimate of the impacts of the specified assumed interest rate scenarios, its actual results could differ from those projected. The model Ford Credit uses to conduct this analysis is heavily dependent on assumptions. Embedded in the model are assumptions regarding the reinvestment of maturing asset principal, refinancing of maturing debt, replacement of maturing derivatives, exercise of options embedded in debt and derivatives, and predicted repayment of retail financing and operating lease contracts ahead of contractual maturity. Ford Credit's repayment projections ahead of contractual maturity are based on historical experience. If interest rates or other factors change, Ford Credit's actual prepayment experience could be different than projected.

Foreign Currency Risk. Ford Credit's policy is to minimize exposure to changes in currency exchange rates. To meet funding objectives, Ford Credit borrows in a variety of currencies, principally U.S. dollars, Canadian dollars, euros, sterling, and renminbi. Ford Credit faces exposure to currency exchange rates if a mismatch exists between the currency of receivables and the currency of the debt funding those receivables. When possible, receivables are funded with debt in the same currency, minimizing exposure to exchange rate movements. When a different currency is used, Ford Credit may use foreign currency swaps and foreign currency forwards to convert substantially all of its foreign currency debt obligations to the local country currency of the receivables. As a result of this policy, Ford Credit believes its market risk exposure, relating to changes in currency exchange rates at December 31, 2020, is insignificant.

Derivative Fair Values. The net fair value of Ford Credit's derivative financial instruments was an asset of \$2.1 billion and \$772 million at December 31, 2020 and 2019, respectively.

COUNTERPARTY RISK

Counterparty risk relates to the loss we could incur if an obligor or counterparty defaulted on an investment or a derivative contract. We enter into master agreements with counterparties that allow netting of certain exposures in order to manage this risk. Exposures primarily relate to investments in fixed income instruments and derivative contracts used for managing interest rate, foreign currency exchange rate, and commodity price risk. We, together with Ford Credit, establish exposure limits for each counterparty to minimize risk and provide counterparty diversification.

Our approach to managing counterparty risk is forward-looking and proactive, allowing us to take risk mitigation actions before risks become losses. Exposure limits are established based on our overall risk tolerance, which is calculated from counterparty credit ratings and market-based credit default swap ("CDS") spreads. The exposure limits are lower for smaller and lower-rated counterparties, counterparties that have relatively higher CDS spreads, and for longer dated exposures. Our exposures are monitored on a regular basis and included in periodic reports to our Treasurer.

Substantially all of our counterparty exposures are with counterparties that have an investment grade rating. Investment grade is our guideline for minimum counterparty long-term ratings.

ITEM 8. Financial Statements and Supplementary Data.

The Report of Independent Registered Public Accounting Firm, our Financial Statements, the accompanying Notes to the Financial Statements, and the Financial Statement Schedule that are filed as part of this Report are listed under "Item 15. Exhibits and Financial Statement Schedules" and are set forth beginning on page 98 immediately following the signature pages of this Report.

Selected quarterly financial data for 2019 and 2020 are provided in Note 27 of the Notes to the Financial Statements.

ITEM 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure.

None.

ITEM 9A. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures. James D. Farley, Jr., our Chief Executive Officer (“CEO”), and John T. Lawler, our Chief Financial Officer (“CFO”), have performed an evaluation of the Company’s disclosure controls and procedures, as that term is defined in Rule 13a-15(e) of the Securities Exchange Act of 1934, as amended (“Exchange Act”), as of December 31, 2020, and each has concluded that such disclosure controls and procedures are effective to ensure that information required to be disclosed in our periodic reports filed under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified by SEC rules and forms, and that such information is accumulated and communicated to the CEO and CFO to allow timely decisions regarding required disclosures.

Management’s Report on Internal Control Over Financial Reporting. Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rule 13a-15(f). The 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.

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 because the degree of compliance with policies or procedures may deteriorate.

Under the supervision and with the participation of our management, including our CEO and CFO, we conducted an assessment of the effectiveness of our internal control over financial reporting as of December 31, 2020. The assessment was based on criteria established in the framework *Internal Control - Integrated Framework (2013)*, issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on this assessment, management concluded that our internal control over financial reporting was effective as of December 31, 2020.

The effectiveness of the Company’s internal control over financial reporting as of December 31, 2020 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in its report included herein.

Changes in Internal Control Over Financial Reporting. There were no changes in internal control over financial reporting during the quarter ended December 31, 2020 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. Other Information.

None.

PART III.

ITEM 10. *Directors, Executive Officers of Ford, and Corporate Governance.*

The information required by Item 10 regarding our directors is incorporated by reference from the information under the captions “Proposal 1. Election of Directors,” “Corporate Governance – Beneficial Stock Ownership,” and “Corporate Governance – Delinquent Section 16(a) Reports” in our Proxy Statement. The information required by Item 10 regarding our executive officers appears as Item 4A under Part I of this Report. The information required by Item 10 regarding an audit committee financial expert is incorporated by reference from the information under the caption “Corporate Governance – Audit Committee Financial Expert and Auditor Rotation” in our Proxy Statement. The information required by Item 10 regarding the members of our Audit Committee of the Board of Directors is incorporated by reference from the information under the captions “Proxy Summary,” “Corporate Governance – Board Committee Functions,” “Corporate Governance – Audit Committee Financial Expert and Auditor Rotation,” and “Proposal 1 – Election of Directors” in our Proxy Statement. The information required by Item 10 regarding the Audit Committee’s review and discussion of the audited financial statements is incorporated by reference from information under the caption “Audit Committee Report” in our Proxy Statement. The information required by Item 10 regarding our codes of ethics is incorporated by reference from the information under the caption “Corporate Governance – Codes of Ethics” in our Proxy Statement. In addition, we have included in Item 1 instructions for how to access our codes of ethics on our website and our Internet address. Amendments to, and waivers granted under, our Code of Ethics for Senior Financial Personnel, if any, will be posted to our website as well.

ITEM 11. *Executive Compensation.*

The information required by Item 11 is incorporated by reference from the information under the following captions in our Proxy Statement: “Director Compensation in 2020,” “Compensation Discussion and Analysis,” “Compensation Committee Report,” “Compensation Committee Interlocks and Insider Participation,” “Compensation of Named Executives,” “Summary Compensation Table,” “Grants of Plan-Based Awards in 2020,” “Outstanding Equity Awards at 2020 Fiscal Year-End,” “Option Exercises and Stock Vested in 2020,” “Pension Benefits in 2020,” “Nonqualified Deferred Compensation in 2020,” “Potential Payments Upon Termination or Change-in-Control,” and “Pay Ratio.”

ITEM 12. *Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.*

The information required by Item 12 is incorporated by reference from the information under the captions “Equity Compensation Plan Information” and “Corporate Governance – Beneficial Stock Ownership” in our Proxy Statement.

ITEM 13. *Certain Relationships and Related Transactions, and Director Independence.*

The information required by Item 13 is incorporated by reference from the information under the captions “Corporate Governance – Certain Relationships and Related Party Transactions” and “Corporate Governance – Independence of Directors and Relevant Facts and Circumstances” in our Proxy Statement.

ITEM 14. *Principal Accounting Fees and Services.*

The information required by Item 14 is incorporated by reference from the information under the caption “Proposal 2. Ratification of Independent Registered Public Accounting Firm” in our Proxy Statement.

PART IV.

ITEM 15. Exhibits and Financial Statement Schedules.

(a) 1. Financial Statements – Ford Motor Company and Subsidiaries

The following are contained in this 2020 Form 10-K Report:

- Report of Independent Registered Public Accounting Firm.
- Consolidated Statements of Cash Flows for the years ended December 31, 2018, 2019, and 2020.
- Consolidated Income Statements for the years ended December 31, 2018, 2019, and 2020.
- Consolidated Statements of Comprehensive Income for the years ended December 31, 2018, 2019, and 2020.
- Consolidated Balance Sheets at December 31, 2019 and 2020.
- Consolidated Statements of Equity for the years ended December 31, 2018, 2019, and 2020.
- Notes to the Financial Statements.

The Report of Independent Registered Public Accounting Firm, the Consolidated Financial Statements, and the Notes to the Financial Statements listed above are filed as part of this Report and are set forth beginning on page [98](#) immediately following the signature pages of this Report.

(a) 2. Financial Statement Schedules

Designation	Description
Schedule II	Valuation and Qualifying Accounts for the years ended 2018, 2019, and 2020

Schedule II is filed as part of this Report and is set forth on page [170](#) immediately following the Notes to the Financial Statements referred to above. The other schedules are omitted because they are not applicable, the information required to be contained in them is disclosed elsewhere on our Consolidated Financial Statements, or the amounts involved are not sufficient to require submission.

(a) 3. Exhibits

Designation	Description	Method of Filing
Exhibit 3-A	Restated Certificate of Incorporation, dated August 2, 2000.	Filed as Exhibit 3-A to our Annual Report on Form 10-K for the year ended December 31, 2000. (a)
Exhibit 3-A-1	Certificate of Designations of Series A Junior Participating Preferred Stock filed on September 11, 2009.	Filed as Exhibit 3.1 to our Current Report on Form 8-K filed September 11, 2009. (a)
Exhibit 3-B	By-laws.	Filed as Exhibit 3.2 to our Form 8-A/A filed on September 11, 2015. (a)
Exhibit 4-A	Tax Benefit Preservation Plan ("TBPP") dated September 11, 2009 between Ford Motor Company and Computershare Trust Company, N.A.	Filed as Exhibit 4.1 to our Current Report on Form 8-K filed September 11, 2009. (a)
Exhibit 4-A-1	Amendment No. 1 to TBPP dated September 11, 2012.	Filed as Exhibit 4 to our Current Report on Form 8-K filed September 12, 2012. (a)
Exhibit 4-A-2	Amendment No. 2 to TBPP dated September 9, 2015.	Filed as Exhibit 4 to our Current Report on Form 8-K filed September 11, 2015. (a)
Exhibit 4-A-3	Amendment No. 3 to TBPP dated September 13, 2018.	Filed as Exhibit 4 to our Current Report on Form 8-K filed September 14, 2018. (a)
Exhibit 4-B	Description of Securities.	Filed with this Report.
Exhibit 10-A	Executive Separation Allowance Plan, as amended and restated effective as of January 1, 2018. (b)	Filed as Exhibit 10.1 to our Current Report on Form 8-K filed February 7, 2018. (a)
Exhibit 10-B	Deferred Compensation Plan for Non-Employee Directors, as amended and restated as of January 1, 2012. (b)	Filed as Exhibit 10-B to our Annual Report on Form 10-K for the year ended December 31, 2011. (a)
Exhibit 10-C	2014 Stock Plan for Non-Employee Directors (b)	Filed as Exhibit 10-C to our Annual Report on Form 10-K for the year ended December 31, 2013. (a)

Designation	Description	Method of Filing
Exhibit 10-D	Benefit Equalization Plan, as amended and restated effective as of January 1, 2018. (b)	Filed as Exhibit 10.2 to our Current Report on Form 8-K filed February 7, 2018. (a)
Exhibit 10-E	Description of financial counseling services provided to certain executives. (b)	Filed as Exhibit 10-E to our Annual Report on Form 10-K for the year ended December 31, 2019. (a)
Exhibit 10-F	Defined Benefit Supplemental Executive Retirement Plan, as amended and restated effective as of January 1, 2018. (b)	Filed as Exhibit 10.3 to our Current Report on Form 8-K filed February 7, 2018. (a)
Exhibit 10-F-1	Defined Contribution Supplemental Executive Retirement Plan, as amended and restated effective as of July 9, 2020. (b)	Filed as Exhibit 10 to our Quarterly Report on Form 10-Q for the quarter ended June 30, 2020. (a)
Exhibit 10-G	Description of Director Compensation as of July 13, 2006. (b)	Filed as Exhibit 10-G-3 to our Quarterly Report on Form 10-Q for the quarter ended September 30, 2006. (a)
Exhibit 10-G-1	Amendment to Description of Director Compensation as of February 8, 2012. (b)	Filed as Exhibit 10-F-3 to our Annual Report on Form 10-K for the year ended December 31, 2011. (a)
Exhibit 10-G-2	Amendment to Description of Director Compensation as of July 1, 2013. (b)	Filed as Exhibit 10-G-2 to our Annual Report on Form 10-K for the year ended December 31, 2013. (a)
Exhibit 10-G-3	Amendment to Description of Director Compensation as of January 1, 2017. (b)	Filed as Exhibit 10-G-3 to our Annual Report on Form 10-K for the year ended December 31, 2016. (a)
Exhibit 10-H	2008 Long-Term Incentive Plan. (b)	Filed as Exhibit 10.1 to our Quarterly Report on Form 10-Q for the quarter ended June 30, 2008. (a)
Exhibit 10-I	Description of Matching Gift Program and Vehicle Evaluation Program for Non-Employee Directors. (b)	Filed as Exhibit 10-I to our Annual Report on Form 10-K/A for the year ended December 31, 2005. (a)
Exhibit 10-J	Non-Employee Directors Life Insurance and Optional Retirement Plan as amended and restated as of December 31, 2010. (b)	Filed as Exhibit 10-I to our Annual Report on Form 10-K for the year ended December 31, 2010. (a)
Exhibit 10-K	Description of Non-Employee Directors Accidental Death, Dismemberment and Permanent Total Disablement Indemnity. (b)	Filed as Exhibit 10-S to our Annual Report on Form 10-K for the year ended December 31, 1992. (a)
Exhibit 10-K-1	Description of Amendment to Basic Life Insurance and Accidental Death & Dismemberment Insurance. (b)	Filed as Exhibit 10-K-1 to our Annual Report on Form 10-K for the year ended December 31, 2013. (a)
Exhibit 10-L	Executive Waiver and Release Agreement between Ford Motor Company and Joseph R. Hinrichs dated February 21, 2020. (b)	Filed as Exhibit 10.3 to our Quarterly Report on Form 10-Q for the quarter ended March 31, 2020. (a)
Exhibit 10-M	Offer Letter to Tim Stone dated March 11, 2019. (b)	Filed as Exhibit 99 to our Current Report on Form 8-K filed June 4, 2019. (a)
Exhibit 10-M-1	Executive Separation Waiver and Release Agreement between Ford Motor Company and Tim Stone dated September 30, 2020. (b)	Filed as Exhibit 10.3 to our Quarterly Report on Form 10-Q for the quarter ended September 30, 2020. (a)
Exhibit 10-N	Agreement between Ford Motor Company and James D. Farley, Jr. dated August 3, 2020. (b)	Filed as Exhibit 10.1 to our Quarterly Report on Form 10-Q for the quarter ended September 30, 2020. (a)
Exhibit 10-O	Select Retirement Plan, as amended and restated effective as of January 1, 2018. (b)	Filed as Exhibit 10.4 to our Current Report on Form 8-K filed February 7, 2018. (a)
Exhibit 10-P	Deferred Compensation Plan, as amended and restated as of December 31, 2010. (b)	Filed as Exhibit 10-M to our Annual Report on Form 10-K for the year ended December 31, 2010. (a)
Exhibit 10-P-1	Suspension of Open Enrollment in Deferred Compensation Plan. (b)	Filed as Exhibit 10-M-1 to our Annual Report on Form 10-K for the year ended December 31, 2009. (a)
Exhibit 10-Q	Annual Incentive Compensation Plan, as amended and restated effective as of September 9, 2020. (b)	Filed as Exhibit 10.2 to our Quarterly Report on Form 10-Q for the quarter ended September 30, 2020. (a)
Exhibit 10-Q-1	Annual Incentive Compensation Plan Metrics for 2019. (b)	Filed as Exhibit 10.1 to our Quarterly Report on Form 10-Q for the quarter ended March 31, 2019. (a)
Exhibit 10-Q-2	Annual Incentive Compensation Plan Metrics for 2020. (b)	Filed as Exhibit 10.1 to our Quarterly Report on Form 10-Q for the quarter ended March 31, 2020. (a)
Exhibit 10-Q-3	Performance-Based Restricted Stock Unit Metrics for 2017. (b)	Filed as Exhibit 10-O-10 to our Annual Report on Form 10-K for the year ended December 31, 2016. (a)
Exhibit 10-Q-4	Performance-Based Restricted Stock Unit Metrics for 2018. (b)	Filed as Exhibit 10.2 to our Quarterly Report on Form 10-Q for the quarter ended March 31, 2018. (a)
Exhibit 10-Q-5	Performance-Based Restricted Stock Unit Metrics for 2019. (b)	Filed as Exhibit 10.2 to our Quarterly Report on Form 10-Q for the quarter ended March 31, 2019. (a)
Exhibit 10-Q-6	Performance-Based Restricted Stock Unit Metrics for 2020. (b)	Filed as Exhibit 10.2 to our Quarterly Report on Form 10-Q for the quarter ended March 31, 2020. (a)
Exhibit 10-Q-7	Executive Compensation Recoupment Policy. (b)	Filed as Exhibit 10-N-8 to our Annual Report on Form 10-K for the year ended December 31, 2010. (a)
Exhibit 10-Q-8	Incremental Bonus Description. (b)	Filed as Exhibit 10-N-9 to our Annual Report on Form 10-K for the year ended December 31, 2010. (a)
Exhibit 10-R	2018 Long-Term Incentive Plan. (b)	Filed as Exhibit 4.1 to Registration Statement No. 333-226348. (a)
Exhibit 10-R-1	Form of Stock Option Terms and Conditions for Long-Term Incentive Plan. (b)	Filed as Exhibit 10.4 to our Quarterly Report on Form 10-Q for the quarter ended September 30, 2020. (a)

Designation	Description	Method of Filing
Exhibit 10-R-2	Form of Stock Option Agreement for Long-Term Incentive Plan. (b)	Filed as Exhibit 10-P-3 to our Annual Report on Form 10-K for the year ended December 31, 2017. (a)
Exhibit 10-R-3	Form of Stock Option Agreement (ISO) for Long-Term Incentive Plan. (b)	Filed as Exhibit 10-P-4 to our Annual Report on Form 10-K for the year ended December 31, 2017. (a)
Exhibit 10-R-4	Form of Stock Option Agreement (U.K. NQO) for Long-Term Incentive Plan. (b)	Filed as Exhibit 10-P-5 to our Annual Report on Form 10-K for the year ended December 31, 2017. (a)
Exhibit 10-R-5	Form of Stock Option (U.K.) Terms and Conditions for Long-Term Incentive Plan. (b)	Filed with this Report.
Exhibit 10-R-6	Form of Restricted Stock Grant Letter. (b)	Filed as Exhibit 10-P-7 to our Annual Report on Form 10-K for the year ended December 31, 2017. (a)
Exhibit 10-R-7	Form of Final Award Notification Letter for Performance-Based Restricted Stock Units. (b)	Filed as Exhibit 10-P-8 to our Annual Report on Form 10-K for the year ended December 31, 2017. (a)
Exhibit 10-R-8	Form of Annual Equity Grant Letter V.1. (b)	Filed as Exhibit 10-P-9 to our Annual Report on Form 10-K for the year ended December 31, 2017. (a)
Exhibit 10-R-9	Form of Annual Equity Grant Letter V.2. (b)	Filed as Exhibit 10-P-10 to our Annual Report on Form 10-K for the year ended December 31, 2017. (a)
Exhibit 10-R-10	Long-Term Incentive Plan Restricted Stock Unit Agreement. (b)	Filed as Exhibit 10-P-11 to our Annual Report on Form 10-K for the year ended December 31, 2017. (a)
Exhibit 10-R-11	Long-Term Incentive Plan Restricted Stock Unit Terms and Conditions. (b)	Filed as Exhibit 10-P-12 to our Annual Report on Form 10-K for the year ended December 31, 2017. (a)
Exhibit 10-R-12	Form of Final Award Agreement for Performance-Based Restricted Stock Units under Long-Term Incentive Plan. (b)	Filed as Exhibit 10-P-13 to our Annual Report on Form 10-K for the year ended December 31, 2017. (a)
Exhibit 10-R-13	Form of Final Award Terms and Conditions for Performance-Based Restricted Stock Units under Long-Term Incentive Plan. (b)	Filed as Exhibit 10-P-14 to our Annual Report on Form 10-K for the year ended December 31, 2017. (a)
Exhibit 10-R-14	Form of Notification Letter for Time-Based Restricted Stock Units. (b)	Filed as Exhibit 10-P-15 to our Annual Report on Form 10-K for the year ended December 31, 2017. (a)
Exhibit 10-S	Agreement dated January 13, 1999 between Ford Motor Company and Edsel B. Ford II. (b)	Filed as Exhibit 10-X to our Annual Report on Form 10-K for the year ended December 31, 1998. (a)
Exhibit 10-S-1	Amendment dated May 5, 2010 to the Consulting Agreement between Ford Motor Company and Edsel B. Ford II. (b)	Filed as Exhibit 10.3 to our Quarterly Report on Form 10-Q for the quarter ended March 31, 2010. (a)
Exhibit 10-S-2	Amendment dated January 1, 2012 to the Consulting Agreement between Ford Motor Company and Edsel B. Ford II. (b)	Filed as Exhibit 10-P-2 to our Annual Report on Form 10-K for the year ended December 31, 2011. (a)
Exhibit 10-T	Second Amended and Restated Relationship Agreement dated March 19, 2020 between Ford Motor Company and Ford Motor Credit Company LLC.	Filed as Exhibit 10 to our Current Report on Form 8-K filed March 19, 2020. (a)
Exhibit 10-U	Form of Trade Secrets/Non-Compete Statement between Ford and certain of its Executive Officers. (b)	Filed as Exhibit 10-V to our Annual Report on Form 10-K for the year ended December 31, 2003. (a)
Exhibit 10-V	Arrangement between Ford Motor Company and William C. Ford, Jr., dated February 24, 2009. (b)	Filed as Exhibit 10-V to our Annual Report on Form 10-K for the year ended December 31, 2008. (a)
Exhibit 10-W	Description of Company Practices regarding Club Memberships for Executives. (b)	Filed as Exhibit 10-BB to our Annual Report on Form 10-K for the year ended December 31, 2006. (a)
Exhibit 10-X	Amended and Restated Credit Agreement dated as of November 24, 2009.	Filed as Exhibit 99.2 to our Current Report on Form 8-K filed November 25, 2009. (a)
Exhibit 10-X-1	Seventh Amendment dated as of March 15, 2012 to our Credit Agreement dated as of December 15, 2006, as amended and restated as of November 24, 2009, and as further amended.	Filed as Exhibit 99.2 to our Current Report on Form 8-K filed March 15, 2012. (a)
Exhibit 10-X-2	Ninth Amendment dated as of April 30, 2013 to our Credit Agreement dated as of December 15, 2006, as amended and restated as of November 24, 2009, and as further amended.	Filed as Exhibit 10 to our Quarterly Report on Form 10-Q for the quarter ended March 31, 2013. (a)
Exhibit 10-X-3	Tenth Amendment dated as of April 30, 2014 to our Credit Agreement dated as of December 15, 2006, as amended and restated as of November 24, 2009, and as further amended.	Filed as Exhibit 10.1 to our Quarterly Report on Form 10-Q for the quarter ended March 31, 2014. (a)
Exhibit 10-X-4	Eleventh Amendment dated as of April 30, 2015 to our Credit Agreement dated as of December 15, 2006, as amended and restated as of November 24, 2009, as amended and restated as of April 30, 2014, and as further amended, including the Third Amended and Restated Credit Agreement.	Filed as Exhibit 10.1 to our Current Report on Form 8-K filed May 1, 2015. (a)
Exhibit 10-X-5	Twelfth Amendment dated as of April 29, 2016 to our Credit Agreement dated as of December 15, 2006, as amended and restated as of November 24, 2009, as amended and restated as of April 30, 2014, and as further amended and restated as of April 30, 2015.	Filed as Exhibit 10 to our Current Report on Form 8-K filed April 29, 2016. (a)

Designation	Description	Method of Filing
Exhibit 10-X-6	Thirteenth Amendment dated as of April 28, 2017 to our Credit Agreement dated as of December 15, 2006, as amended and restated as of November 24, 2009, as amended and restated as of April 30, 2014, and as further amended and restated as of April 30, 2015.	Filed as Exhibit 10 to our Current Report on Form 8-K filed April 28, 2017. (a)
Exhibit 10-X-7	Fourteenth Amendment dated as of April 26, 2018 to our Credit Agreement dated as of December 15, 2006, as amended and restated as of November 24, 2009, as amended and restated as of April 30, 2014, and as further amended and restated as of April 30, 2015.	Filed as Exhibit 10 to our Current Report on Form 8-K filed April 26, 2018. (a)
Exhibit 10-X-8	Fifteenth Amendment dated as of April 23, 2019 to our Credit Agreement dated as of December 15, 2006, as amended and restated as of November 24, 2009, as amended and restated as of April 30, 2014, and as further amended and restated as of April 30, 2015.	Filed as Exhibit 10.1 to our Current Report on Form 8-K filed April 26, 2019. (a)
Exhibit 10-X-9	Sixteenth Amendment dated as of July 27, 2020 to our Credit Agreement dated as of December 15, 2006, as amended and restated as of November 24, 2009, as amended and restated as of April 30, 2014, and as further amended and restated as of April 30, 2015.	Filed as Exhibit 10.1 to our Current Report on Form 8-K filed July 30, 2020. (a)
Exhibit 10-Y	Revolving Credit Agreement dated as of April 23, 2019.	Filed as Exhibit 10.2 to our Current Report on Form 8-K filed April 26, 2019. (a)
Exhibit 10-Y-1	First Amendment dated July 27, 2020 to the Revolving Credit Agreement dated April 23, 2019.	Filed as Exhibit 10.2 to our Current Report on Form 8-K filed July 30, 2020. (a)
Exhibit 10-Z	Term Loan Credit Agreement dated as of April 23, 2019.	Filed as Exhibit 10.3 to our Current Report on Form 8-K filed April 26, 2019. (a)
Exhibit 10-AA	Loan Arrangement and Reimbursement Agreement between Ford Motor Company and the U.S. Department of Energy dated as of September 16, 2009.	Filed as Exhibit 10.1 to our Current Report on Form 8-K filed September 22, 2009. (a)
Exhibit 10-BB	Note Purchase Agreement dated as of September 16, 2009 among the Federal Financing Bank, Ford Motor Company, and the U.S. Secretary of Energy.	Filed as Exhibit 10.2 to our Current Report on Form 8-K filed September 22, 2009. (a)
Exhibit 21	List of Subsidiaries of Ford as of January 31, 2021.	Filed with this Report.
Exhibit 23	Consent of Independent Registered Public Accounting Firm.	Filed with this Report.
Exhibit 24	Powers of Attorney.	Filed with this Report.
Exhibit 31.1	Rule 15d-14(a) Certification of CEO.	Filed with this Report.
Exhibit 31.2	Rule 15d-14(a) Certification of CFO.	Filed with this Report.
Exhibit 32.1	Section 1350 Certification of CEO.	Furnished with this Report.
Exhibit 32.2	Section 1350 Certification of CFO.	Furnished with this Report.
Exhibit 101.INS	Interactive Data Files pursuant to Rule 405 of Regulation S-T formatted in Inline Extensible Business Reporting Language ("Inline XBRL").	(c)
Exhibit 101.SCH	XBRL Taxonomy Extension Schema Document.	(c)
Exhibit 101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document.	(c)
Exhibit 101.LAB	XBRL Taxonomy Extension Label Linkbase Document.	(c)
Exhibit 101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document.	(c)
Exhibit 101.DEF	XBRL Taxonomy Extension Definition Linkbase Document.	(c)
Exhibit 104	Cover Page Interactive Data File (formatted in Inline XBRL contained in Exhibit 101).	(c)

(a) Incorporated by reference as an exhibit to this Report (file number reference 1-3950, unless otherwise indicated).

(b) Management contract or compensatory plan or arrangement.

(c) Submitted electronically with this Report in accordance with the provisions of Regulation S-T.

Instruments defining the rights of holders of certain issues of long-term debt of Ford and of certain consolidated subsidiaries and of any unconsolidated subsidiary, for which financial statements are required to be filed with this Report, have not been filed as exhibits to this Report because the authorized principal amount of any one of such issues does not exceed 10% of the total assets of Ford and our subsidiaries on a consolidated basis. Ford agrees to furnish a copy of each of such instrument to the Securities and Exchange Commission upon request.

ITEM 16. **Form 10-K Summary.**

None.

SIGNATURES

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

FORD MOTOR COMPANY

By: /s/ Cathy O'Callaghan
Cathy O'Callaghan, Controller
(principal accounting officer)

Date: February 4, 2021

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, this Report has been signed below by the following persons on behalf of Ford and in the capacities on the date indicated:

Signature	Title	Date
<u>/s/ WILLIAM CLAY FORD, JR.</u> William Clay Ford, Jr.	Director, Chairman of the Board, Executive Chairman, Chair of the Office of the Chairman and Chief Executive, and Chair of the Finance Committee	February 4, 2021
<u>/s/ JAMES D. FARLEY, JR.</u> James D. Farley, Jr.	Director, President and Chief Executive Officer (principal executive officer)	February 4, 2021
<u>KIMBERLY A. CASIANO*</u> Kimberly A. Casiano	Director	February 4, 2021
<u>ANTHONY F. EARLEY, JR.*</u> Anthony F. Earley, Jr.	Director and Chair of the Compensation Committee	February 4, 2021
<u>EDSEL B. FORD II*</u> Edsel B. Ford II	Director	February 4, 2021
<u>WILLIAM W. HELMAN IV*</u> William W. Helman IV	Director and Chair of the Sustainability and Innovation Committee	February 4, 2021
<u>JON M. HUNTSMAN, JR.*</u> Jon M. Huntsman, Jr.	Director	February 4, 2021
<u>WILLIAM E. KENNARD*</u> William E. Kennard	Director and Chair of the Nominating and Governance Committee	February 4, 2021
<u>JOHN C. LECHLEITER*</u> John C. Lechleiter	Director	February 4, 2021
<u>BETH E. MOONEY*</u> Beth E. Mooney	Director	February 4, 2021
<u>JOHN L. THORNTON*</u> John L. Thornton	Director	February 4, 2021

Signature	Title	Date
<u>JOHN B. VEIHMEYER*</u> John B. Veihmeyer	Director and Chair of the Audit Committee	February 4, 2021
<u>LYNN M. VOJVODICH*</u> Lynn M. Vojvodich	Director	February 4, 2021
<u>JOHN S. WEINBERG*</u> John S. Weinberg	Director	February 4, 2021
<u>/s/ JOHN T. LAWLER</u> John T. Lawler	Chief Financial Officer (principal financial officer)	February 4, 2021
<u>/s/ CATHY O'CALLAGHAN</u> Cathy O'Callaghan	Controller (principal accounting officer)	February 4, 2021
<u>*By: /s/ JONATHAN E. OSGOOD</u> Jonathan E. Osgood Attorney-in-Fact		February 4, 2021

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of Ford Motor Company

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Ford Motor Company and its subsidiaries (the "Company") as of December 31, 2020 and 2019, and the related consolidated statements of income, of comprehensive income, of equity and of cash flows for each of the three years in the period ended December 31, 2020, including the related notes and financial statement schedule listed in the index appearing under Item 15(a)(2) (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2020, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2020 and 2019, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2020 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2020, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

Changes in Accounting Principles

As discussed in Note 3 to the consolidated financial statements, the Company changed the manner in which it accounts for credit losses in 2020.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Management's Report on Internal Control Over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on the Company's consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (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 audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated 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 consolidated 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 consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

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 (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) 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 (iii) 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.

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current period audit of the consolidated financial statements that were communicated or required to be communicated to the audit committee and that (i) relate to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated 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.

Consumer Finance Receivables Allowance for Credit Losses

As described in Note 10 to the consolidated financial statements, the Company had consumer finance receivables of \$78,075 million, for which a consumer allowance for credit losses of \$1,245 million was recorded as of December 31, 2020. The consumer allowance for credit losses represents management's estimate of the lifetime expected credit losses inherent in the consumer finance receivables as of the balance sheet date. For consumer receivables that share similar risk characteristics, the estimate of the lifetime expected credit losses is based on a collective assessment using measurement models and management judgment. The lifetime expected credit losses for the receivables is determined by applying probability of default and loss given default assumptions to monthly expected exposures, then discounting these cash flows to present value using the receivable's original effective interest rate or the current effective interest rate for a variable rate receivable. If management does not believe the models reflect lifetime expected credit losses for the portfolio, an adjustment is made to reflect management judgment regarding qualitative factors including economic uncertainty, observable changes in portfolio performance, and other relevant factors.

The principal considerations for our determination that performing procedures relating to the consumer finance receivables allowance for credit losses is a critical audit matter are the significant judgment by management in determining the consumer finance receivables allowance for credit losses, which led to a high degree of auditor judgment, subjectivity and effort in performing procedures and evaluating audit evidence relating to the probability of default and loss given default assumptions and management's judgment regarding qualitative factors. In addition, the audit effort involved the use of professionals with specialized skill and knowledge.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to the Company's determination of the consumer finance receivables allowance for credit losses. These procedures also included, among others, testing management's process for estimating the consumer finance receivables allowance for credit losses by, evaluating the appropriateness of the models used to estimate the allowance, evaluating the reasonableness of the probability of default and loss given default assumptions, testing the data used in the models, and evaluating the reasonableness of management's judgment regarding qualitative factors related to economic uncertainty, observable changes in portfolio performance, and other relevant factors, which also involved the use of professionals with specialized skill and knowledge to perform these procedures to test management's process.

Defined Benefit Pension Plan Obligations and Benefit Cost

As described in Note 17 to the consolidated financial statements, the Company has defined pension benefit obligations of \$88,855 million (comprised of \$49,020 million and \$39,835 million for its U.S. plans and non-U.S. plans, respectively) as of December 31, 2020, and pre-tax net periodic benefit cost ("benefit cost") of \$273 million (comprised of \$(563) million of benefit income and \$836 million of benefit cost for its U.S. plans and non-U.S. plans, respectively) for the year ended December 31, 2020. Management remeasures defined benefit pension plan obligations at least annually as of December 31 based on the present value of projected future benefit payments for all participants for services rendered to date. Actuarial gains and losses resulting from plan remeasurement are recognized in net periodic benefit cost in the period of the remeasurement. The measurement of projected future benefits is dependent on the provisions of each specific plan, demographics of the group covered by the plan, and other key measurement assumptions including the discount rate and the average rate of increase in compensation. The assumptions used to determine the benefit cost include discount rate-service cost, effective interest rate on benefit obligation, expected long-term rate of return on assets, and average rate of increase in compensation.

The principal considerations for our determination that performing procedures relating to defined benefit pension plan obligations and benefit cost is a critical audit matter are the significant judgment by management when developing assumptions used in the estimation of the defined benefit pension obligations and benefit cost, which led to a high degree of auditor judgment, subjectivity, and effort in performing procedures to evaluate the significant assumptions. In addition to the demographics of the group covered by the plan, significant assumptions are related to the discount rate and the average rate of increase in compensation used in determining the benefit obligation and the discount rate-service cost, the effective interest rate on benefit obligation, and the average rate of increase in compensation used in determining the benefit cost. In addition, the audit effort involved the use of professionals with specialized skill and knowledge.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to the determination of the defined benefit pension plan obligations and benefit cost. These procedures also included, among others, evaluating the Company's historical experience and expectations of future experience to evaluate the reasonableness of the average rate of increase in compensation. Additionally, professionals with specialized skill and knowledge were used to assist in the evaluation of the appropriateness of the actuarial model, as well as the reasonableness of significant assumptions related to demographics of the group covered by the plan, the discount rate used in determining the benefit obligation and the discount rate-service cost and the effective interest rate on benefit obligation used in determining the benefit cost.

Warranty and Field Service Actions Accrual (United States)

As described in Note 25 to the consolidated financial statements, the Company recorded an accrual for estimated future warranty and field service action costs, net of estimated supplier recoveries ("warranty accrual"), of \$8,172 million as of December 31, 2020, of which the United States comprises a significant portion. Management accrues the estimated cost of both base warranty coverages and field service actions at the time of sale. Management establishes their estimate of base warranty obligations using a patterned estimation model, using historical information regarding the nature, frequency, and average cost of claims for each vehicle line by model year. Management establishes their estimates of field service action obligations using a patterned estimation model, using historical information regarding the nature, frequency, severity, and average cost of claims for each model year.

The principal considerations for our determination that performing procedures relating to the warranty accrual for the United States is a critical audit matter are the significant judgment by management in the estimation of the accrual and development of the patterned estimation model, which led to a high degree of auditor judgment, subjectivity, and effort in performing procedures to evaluate the estimation model and significant assumptions, related to the frequency and average cost of claims. In addition, the audit effort involved the use of professionals with specialized skill and knowledge.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls related to the estimate of the warranty accrual for the United States. These procedures also included, among others, evaluating the reasonableness of significant assumptions used by management to develop the warranty accrual for the United States, related to the frequency and average cost of claims, in part by considering the historical experience of the Company. Additionally, professionals with specialized skill and knowledge were used to assist in the evaluation of the appropriateness of the model as well as the reasonableness of significant assumptions related to the frequency and average cost of claims.

/s/ PricewaterhouseCoopers LLP

Detroit, Michigan
February 4, 2021

We have served as the Company's auditor since 1946.

FORD MOTOR COMPANY AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in millions)

	For the years ended December 31,		
	2018	2019	2020
Cash flows from operating activities			
Net income/(loss)	\$ 3,695	\$ 84	\$ (1,276)
Depreciation and tooling amortization (Note 12 and Note 13)	9,385	9,689	8,751
Other amortization	(972)	(1,199)	(1,294)
Held-for-sale impairment charges (Note 22)	—	804	23
Brazil manufacturing exit non-cash charges (excluding accelerated depreciation of \$145) (Note 21)	—	—	1,159
Provision for credit and insurance losses	504	413	929
Pension and other post-retirement employee benefits ("OPEB") expense/(income) (Note 17)	400	2,625	1,027
Equity investment dividends received in excess of (earnings)/losses	206	203	130
Foreign currency adjustments	529	(54)	(420)
Net (gain)/loss on changes in investments in affiliates (Note 5)	(42)	(29)	(3,446)
Stock compensation (Note 6)	191	228	199
Provision for deferred income taxes	(197)	(1,370)	(269)
Decrease/(Increase) in finance receivables (wholesale and other)	(2,408)	1,554	12,104
Decrease/(Increase) in accounts receivable and other assets	(2,239)	(816)	(63)
Decrease/(Increase) in inventory	(828)	206	148
Increase/(Decrease) in accounts payable and accrued and other liabilities	6,781	5,260	6,809
Other	17	41	(242)
Net cash provided by/(used in) operating activities	15,022	17,639	24,269
Cash flows from investing activities			
Capital spending	(7,785)	(7,632)	(5,742)
Acquisitions of finance receivables and operating leases	(62,924)	(55,576)	(55,901)
Collections of finance receivables and operating leases	50,880	50,182	48,746
Proceeds from sale of business (Note 22)	—	—	1,340
Purchases of marketable securities and other investments	(17,140)	(17,472)	(39,624)
Sales and maturities of marketable securities and other investments	20,527	16,929	32,395
Settlements of derivatives	358	(114)	(323)
Other	(177)	(38)	494
Net cash provided by/(used in) investing activities	(16,261)	(13,721)	(18,615)
Cash flows from financing activities			
Cash payments for dividends and dividend equivalents	(2,905)	(2,389)	(596)
Purchases of common stock	(164)	(237)	—
Net changes in short-term debt	(2,819)	(1,384)	(2,291)
Proceeds from issuance of long-term debt	50,130	47,604	65,900
Principal payments on long-term debt	(44,172)	(46,497)	(60,514)
Other	(192)	(226)	(184)
Net cash provided by/(used in) financing activities	(122)	(3,129)	2,315
Effect of exchange rate changes on cash, cash equivalents, and restricted cash	(370)	45	225
Net increase/(decrease) in cash, cash equivalents, and restricted cash	\$ (1,731)	\$ 834	\$ 8,194
Cash, cash equivalents, and restricted cash at beginning of period (Note 9)	\$ 18,638	\$ 16,907	\$ 17,741
Net increase/(decrease) in cash, cash equivalents, and restricted cash	(1,731)	834	8,194
Cash, cash equivalents, and restricted cash at end of period (Note 9)	\$ 16,907	\$ 17,741	\$ 25,935

The accompanying notes are part of the consolidated financial statements.

FORD MOTOR COMPANY AND SUBSIDIARIES
CONSOLIDATED INCOME STATEMENTS
(in millions, except per share amounts)

	For the years ended December 31,		
	2018	2019	2020
Revenues			
Automotive	\$ 148,294	\$ 143,599	\$ 115,885
Ford Credit	12,018	12,260	11,203
Mobility	26	41	56
Total revenues (Note 4)	160,338	155,900	127,144
Costs and expenses			
Cost of sales	136,269	134,693	112,752
Selling, administrative, and other expenses	11,403	11,161	10,193
Ford Credit interest, operating, and other expenses	9,463	9,472	8,607
Total costs and expenses	157,135	155,326	131,552
Operating income/(loss)	3,203	574	(4,408)
Interest expense on Automotive debt	1,171	963	1,603
Interest expense on Other debt	57	57	46
Other income/(loss), net (Note 5 and Note 22)	2,247	(226)	4,899
Equity in net income/(loss) of affiliated companies	123	32	42
Income/(Loss) before income taxes	4,345	(640)	(1,116)
Provision for/(Benefit from) income taxes (Note 7)	650	(724)	160
Net income/(loss)	3,695	84	(1,276)
Less: Income/(Loss) attributable to noncontrolling interests	18	37	3
Net income/(loss) attributable to Ford Motor Company	\$ 3,677	\$ 47	\$ (1,279)
EARNINGS/(LOSS) PER SHARE ATTRIBUTABLE TO FORD MOTOR COMPANY COMMON AND CLASS B STOCK (Note 8)			
Basic income/(loss)	\$ 0.93	\$ 0.01	\$ (0.32)
Diluted income/(loss)	0.92	0.01	(0.32)
Weighted-average shares used in computation of earnings/(loss) per share			
Basic shares	3,974	3,972	3,973
Diluted shares	3,998	4,004	3,973

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(in millions)

	For the years ended December 31,		
	2018	2019	2020
Net income/(loss)	\$ 3,695	\$ 84	\$ (1,276)
Other comprehensive income/(loss), net of tax (Note 23)			
Foreign currency translation	(523)	174	(901)
Marketable securities	(11)	130	85
Derivative instruments	183	(689)	222
Pension and other postretirement benefits	(56)	23	27
Total other comprehensive income/(loss), net of tax	(407)	(362)	(567)
Comprehensive income/(loss)	3,288	(278)	(1,843)
Less: Comprehensive income/(loss) attributable to noncontrolling interests	18	37	2
Comprehensive income/(loss) attributable to Ford Motor Company	\$ 3,270	\$ (315)	\$ (1,845)

The accompanying notes are part of the consolidated financial statements.

FORD MOTOR COMPANY AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
(in millions)

	December 31, 2019	December 31, 2020
ASSETS		
Cash and cash equivalents (Note 9)	\$ 17,504	\$ 25,243
Marketable securities (Note 9)	17,147	24,718
Ford Credit finance receivables, net of allowance for credit losses of \$162 and \$394 (Note 10)	53,651	42,401
Trade and other receivables, less allowances of \$63 and \$84	9,237	9,993
Inventories (Note 11)	10,786	10,808
Assets held for sale (Note 2, Note 10, and Note 22)	2,383	47
Other assets	3,339	3,534
Total current assets	114,047	116,744
Ford Credit finance receivables, net of allowance for credit losses of \$351 and \$911 (Note 10)	53,703	55,277
Net investment in operating leases (Note 12)	29,230	27,951
Net property (Note 13)	36,469	37,083
Equity in net assets of affiliated companies (Note 14)	2,519	4,901
Deferred income taxes (Note 7)	11,863	12,423
Other assets	10,706	12,882
Total assets	\$ 258,537	\$ 267,261
LIABILITIES		
Payables	\$ 20,673	\$ 22,204
Other liabilities and deferred revenue (Note 16 and Note 25)	22,987	23,645
Automotive debt payable within one year (Note 19)	1,445	1,194
Ford Credit debt payable within one year (Note 19)	52,371	49,969
Other debt payable within one year (Note 19)	130	180
Liabilities held for sale (Note 22)	526	—
Total current liabilities	98,132	97,192
Other liabilities and deferred revenue (Note 16 and Note 25)	25,324	28,379
Automotive long-term debt (Note 19)	13,233	22,342
Ford Credit long-term debt (Note 19)	87,658	87,708
Other long-term debt (Note 19)	470	291
Deferred income taxes (Note 7)	490	538
Total liabilities	225,307	236,450
EQUITY		
Common Stock, par value \$0.01 per share (4,025 million shares issued of 6 billion authorized)	40	40
Class B Stock, par value \$0.01 per share (71 million shares issued of 530 million authorized)	1	1
Capital in excess of par value of stock	22,165	22,290
Retained earnings	20,320	18,243
Accumulated other comprehensive income/(loss) (Note 23)	(7,728)	(8,294)
Treasury stock	(1,613)	(1,590)
Total equity attributable to Ford Motor Company	33,185	30,690
Equity attributable to noncontrolling interests	45	121
Total equity	33,230	30,811
Total liabilities and equity	\$ 258,537	\$ 267,261

The following table includes assets to be used to settle liabilities of the consolidated variable interest entities ("VIEs"). These assets and liabilities are included in the consolidated balance sheets above. See Note 24 for additional information on our VIEs.

	December 31, 2019	December 31, 2020
ASSETS		
Cash and cash equivalents	\$ 3,202	\$ 2,822
Ford Credit finance receivables, net	58,478	51,472
Net investment in operating leases	14,883	12,794
Other assets	12	—
LIABILITIES		
Other liabilities and deferred revenue	\$ 19	\$ 56
Debt	50,865	46,770

The accompanying notes are part of the consolidated financial statements.

FORD MOTOR COMPANY AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF EQUITY
(in millions)

Equity Attributable to Ford Motor Company

	Capital Stock	Cap. in Excess of Par Value of Stock	Retained Earnings/ (Accumulated Deficit)	Accumulated Other Comprehensive Income/(Loss) (Note 23)	Treasury Stock	Total	Equity Attributable to Non- controlling Interests	Total Equity
Balance at December 31, 2017	\$ 41	\$21,843	\$ 21,906	\$ (6,959)	\$ (1,253)	\$ 35,578	\$ 28	\$ 35,606
Adoption of accounting standards	—	—	—	—	—	—	—	—
Net income	—	—	3,677	—	—	3,677	18	3,695
Other comprehensive income/(loss), net of tax	—	—	—	(407)	—	(407)	—	(407)
Common stock issued (a)	—	163	—	—	—	163	—	163
Treasury stock/other	—	—	—	—	(164)	(164)	—	(164)
Dividend and dividend equivalents declared (b)	—	—	(2,915)	—	—	(2,915)	(12)	(2,927)
Balance at December 31, 2018	<u>\$ 41</u>	<u>\$22,006</u>	<u>\$ 22,668</u>	<u>\$ (7,366)</u>	<u>\$ (1,417)</u>	<u>\$ 35,932</u>	<u>\$ 34</u>	<u>\$ 35,966</u>
Balance at December 31, 2018	\$ 41	\$22,006	\$ 22,668	\$ (7,366)	\$ (1,417)	\$ 35,932	\$ 34	\$ 35,966
Adoption of accounting standards	—	—	13	—	—	13	—	13
Net income	—	—	47	—	—	47	37	84
Other comprehensive income/(loss), net of tax	—	—	—	(362)	—	(362)	—	(362)
Common stock issued (a)	—	159	—	—	—	159	—	159
Treasury stock/other	—	—	—	—	(196)	(196)	(26)	(222)
Dividend and dividend equivalents declared (b)	—	—	(2,408)	—	—	(2,408)	—	(2,408)
Balance at December 31, 2019	<u>\$ 41</u>	<u>\$22,165</u>	<u>\$ 20,320</u>	<u>\$ (7,728)</u>	<u>\$ (1,613)</u>	<u>\$ 33,185</u>	<u>\$ 45</u>	<u>\$ 33,230</u>
Balance at December 31, 2019	\$ 41	\$22,165	\$ 20,320	\$ (7,728)	\$ (1,613)	\$ 33,185	\$ 45	\$ 33,230
Adoption of accounting standards	—	—	(202)	—	—	(202)	—	(202)
Net income/(loss)	—	—	(1,279)	—	—	(1,279)	3	(1,276)
Other comprehensive income/(loss), net of tax	—	—	—	(566)	—	(566)	(1)	(567)
Common stock issued (a)	—	125	—	—	—	125	—	125
Treasury stock/other	—	—	—	—	23	23	86	109
Dividend and dividend equivalents declared (b)	—	—	(596)	—	—	(596)	(12)	(608)
Balance at December 31, 2020	<u>\$ 41</u>	<u>\$22,290</u>	<u>\$ 18,243</u>	<u>\$ (8,294)</u>	<u>\$ (1,590)</u>	<u>\$ 30,690</u>	<u>\$ 121</u>	<u>\$ 30,811</u>

(a) Includes impacts of share-based compensation.

(b) We declared dividends per share of Common and Class B Stock of \$0.73, \$0.60, and \$0.15 per share in 2018, 2019, and 2020, respectively.

The accompanying notes are part of the consolidated financial statements.

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

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FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 1. PRESENTATION

For purposes of this report, “Ford,” the “Company,” “we,” “our,” “us,” or similar references mean Ford Motor Company, our consolidated subsidiaries, and our consolidated VIEs of which we are the primary beneficiary, unless the context requires otherwise. We also make reference to Ford Motor Credit Company LLC, herein referenced to as Ford Credit. Our consolidated financial statements are presented in accordance with U.S. generally accepted accounting principles (“GAAP”). We reclassified certain prior year amounts in our consolidated financial statements to conform to the current year presentation.

Certain Transactions Between Automotive, Mobility, and Ford Credit

Intersegment transactions occur in the ordinary course of business. Additional detail regarding certain transactions and the effect on each segment at December 31 was as follows (in billions):

	2019			2020		
	Automotive	Mobility	Ford Credit	Automotive	Mobility	Ford Credit
Trade and other receivables (a)			\$ 4.9			\$ 5.9
Unearned interest supplements and residual support (b)			(6.7)			(6.5)
Finance receivables and other (c)			2.1			1.5
Intersegment receivables/(payables)	\$ (2.6)	\$ 0.1	2.5	\$ (2.7)	\$ —	2.7

(a) Automotive receivables (generated primarily from vehicle and parts sales to third parties) sold to Ford Credit.

(b) Automotive pays amounts to Ford Credit at the point of retail financing or lease origination, which represent interest supplements and residual support.

(c) Primarily receivables with entities that are consolidated subsidiaries of Ford.

Global Pandemic

On March 11, 2020, the World Health Organization characterized the outbreak of COVID-19 as a global pandemic and recommended containment and mitigation measures. As a result, extraordinary actions were taken by international, federal, state, and local public health and governmental authorities to contain and combat the outbreak and spread of COVID-19 in regions throughout the world. These actions included travel bans, quarantines, “stay-at-home” orders, and similar mandates for many individuals to substantially restrict daily activities and for many businesses to curtail or cease normal operations.

Consistent with the actions taken by governmental authorities, by late March 2020, we had idled all of our significant manufacturing operations in regions around the world. By May 2020, we restarted manufacturing operations in a phased manner at locations around the world.

Our results include adjustments to our assets and liabilities recorded during 2020 due to the impact of COVID-19, the most significant of which were valuation allowances on certain deferred tax assets (see Note 7) and a charge to the provision for credit losses on Ford Credit’s finance receivables (see Note 10). The majority of these adjustments were recorded in the first quarter of 2020.

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

For each accounting topic that is addressed in its own note, the description of the accounting policy may be found in the related note. Other significant accounting policies are described below.

Use of Estimates

The preparation of financial statements requires us to make estimates and assumptions that affect our results. Estimates are used to account for certain items such as marketing accruals, warranty costs, employee benefit programs, allowance for credit losses, and other items requiring judgment. Estimates are based on assumptions that we believe are reasonable under the circumstances. Due to the inherent uncertainty involved with estimates, actual results may differ.

Foreign Currency

We remeasure monetary assets and liabilities denominated in a currency that is different than a reporting entity's functional currency from the transactional currency to the legal entity's functional currency. The effect of this remeasurement process and the results of our foreign currency hedging activities are reported in *Cost of sales* and *Other income/(loss), net* and were \$(121) million, \$108 million, and \$25 million, for the years ended 2018, 2019, and 2020, respectively.

Generally, our foreign subsidiaries use the local currency as their functional currency. We translate the assets and liabilities of our foreign subsidiaries from their respective functional currencies to U.S. dollars using end-of-period exchange rates. Changes in the carrying value of these assets and liabilities attributable to fluctuations in exchange rates are recognized in *Foreign currency translation*, a component of *Other comprehensive income/(loss), net of tax*. Upon sale or upon complete or substantially complete liquidation of an investment in a foreign subsidiary, the amount of accumulated foreign currency translation related to the entity is reclassified to income and recognized as part of the gain or loss on the investment.

Cash Equivalents

Cash and cash equivalents are highly liquid investments that are readily convertible to known amounts of cash and are subject to an insignificant risk of change in value due to interest rate, quoted price, or penalty on withdrawal. A debt security is classified as a cash equivalent if it meets these criteria and if it has a remaining time to maturity of three months or less from the date of purchase. Amounts on deposit and available upon demand, or negotiated to provide for daily liquidity without penalty, are classified as *Cash and cash equivalents*. Time deposits, certificates of deposit, and money market accounts that meet the above criteria are reported at par value on our consolidated balance sheets.

Restricted Cash

Cash and cash equivalents that are restricted as to withdrawal or use under the terms of certain contractual agreements are recorded in *Other assets* in the non-current assets section of our consolidated balance sheets. Our Automotive segment restricted cash balances primarily include various escrow agreements related to legal, insurance, customs, and environmental matters. Mobility segment restricted cash balances primarily include cash held under the terms of certain contractual agreements. Our Ford Credit segment restricted cash balances primarily include cash held to meet certain local governmental and regulatory reserve requirements and cash held under the terms of certain contractual agreements. Restricted cash does not include required minimum balances or cash securing debt issued through securitization transactions.

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (*Continued*)

Marketable Securities

Investments in securities with a maturity date greater than three months at the date of purchase and other securities for which there is more than an insignificant risk of change in value due to interest rate, quoted price, or penalty on withdrawal are classified as *Marketable securities*.

Realized gains and losses and interest income on all of our marketable securities and unrealized gains and losses on securities not classified as available for sale are recorded in *Other income/(loss), net*. Unrealized gains and losses on available-for-sale securities are recognized in *Unrealized gains and losses on securities*, a component of *Other comprehensive income/(loss), net of tax*. Realized gains and losses and reclassifications of accumulated other comprehensive income into net income are measured using the specific identification method.

On a quarterly basis, we review our available-for-sale securities for credit losses. We compare the present value of cash flows expected to be collected from the security with the amortized cost basis of the security. If the present value of cash flows expected to be collected is less than the amortized cost basis of the security, we determine if a credit loss allowance is necessary. If a credit loss allowance is necessary, we will record an allowance, limited by the amount that fair value is less than the amortized cost basis, and recognize the corresponding charge in *Other income/(loss), net*. Factors we consider include the severity of the impairment, the reason for the decline in value, interest rate changes, and counterparty long-term ratings.

Trade Receivables

Trade and other receivables consists primarily of Automotive segment receivables from contracts with customers for the sale of vehicles, parts, and accessories. Trade receivables initially are recorded at the transaction amount and are typically outstanding for less than 30 days. Each reporting period, we evaluate the collectibility of the receivables and record an allowance for doubtful accounts representing our estimate of the expected losses that result from all possible default events over the expected life of a receivable. Additions to the allowance for doubtful accounts are made by recording charges to bad debt expense reported in *Selling, administrative, and other expenses*.

At December 31, 2020, there were \$11 million of certain trade receivables specifically identified as held for sale. These held-for-sale values are reported in *Assets held for sale* on our consolidated balance sheets.

Net Intangible Assets and Goodwill

Indefinite-lived intangible assets and goodwill are not amortized but are tested for impairment annually or more frequently if events or circumstances indicate the assets may be impaired. Goodwill impairment testing is also performed following an allocation of goodwill to a business to be disposed or a change in reporting units. We test for impairment by assessing qualitative factors to determine whether it is more likely than not that the fair value of the indefinite-lived intangible asset or the reporting unit allocated the goodwill is less than its carrying amount. If the qualitative assessment indicates a possible impairment, the carrying value of the asset or reporting unit is compared with its fair value. Fair value is measured relying primarily on the income approach by applying a discounted cash flow method, the market approach using market values or multiples, and/or third-party valuations. We capitalize and amortize our finite-lived intangible assets over their estimated useful lives.

Intangible assets are comprised primarily of licensing and advertising agreements, land rights, patents, customer contracts, and technology. The carrying amount of intangible assets and goodwill is reported in *Other assets* in the non-current assets section of our consolidated balance sheets. The net carrying amount of our intangible assets was \$188 million and \$144 million at December 31, 2019 and 2020, respectively. The net carrying amount of goodwill was \$278 million and \$258 million at December 31, 2019 and 2020, respectively.

For the periods presented, we have not recorded any material impairments for indefinite-lived intangibles or goodwill.

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

Held-and-Used Long-Lived Asset Impairment

We test long-lived asset groups for recoverability when changes in circumstances indicate the carrying value may not be recoverable. Events that trigger a test for recoverability include material adverse changes in projected revenues and expenses, present cash flow losses combined with a history of cash flow losses and a forecast that demonstrates significant continuing losses, significant negative industry or economic trends, a current expectation that a long-lived asset group will be disposed of significantly before the end of its useful life, a significant adverse change in the manner in which an asset group is used or in its physical condition, or when there is a change in the asset grouping. When a triggering event occurs, a test for recoverability is performed, comparing projected undiscounted future cash flows to the carrying value of the asset group. If the test for recoverability identifies a possible impairment, the asset group's fair value is measured relying primarily on a discounted cash flow method. To the extent available, we will also consider third-party valuations of our long-lived assets that were prepared for other business purposes. An impairment charge is recognized for the amount by which the carrying value of the asset group exceeds its estimated fair value. When an impairment loss is recognized for assets to be held and used, the adjusted carrying amounts of those assets are depreciated over their remaining useful life. For the periods presented, we have not recorded any impairments.

Held-for-Sale Asset Impairment

We perform an impairment test on a disposal group to be discontinued, held for sale ("HFS"), or otherwise disposed when we have committed to an action and the action is expected to be completed within one year. We estimate fair value to approximate the expected proceeds to be received, less cost to sell, and compare it to the carrying value of the disposal group. An impairment charge is recognized when the carrying value exceeds the estimated fair value (see Note 22). We also assess fair value if circumstances arise that were considered unlikely and, as a result, we decide not to sell a disposal group previously classified as HFS upon reclassification as held and used. When there is a change to a plan of sale, and the assets are reclassified from HFS to held and used, the long-lived assets should be reported at the lower of (i) the carrying amount before HFS designation, adjusted for depreciation that would have been recognized if the assets had not been classified as HFS, or (ii) the fair value at the date the assets no longer satisfy the criteria for classification as HFS.

Fair Value Measurements

We measure fair value of our financial instruments, including those held within our pension plans, using various valuation methods and prioritize the use of observable inputs. The use of observable and unobservable inputs and their significance in measuring fair value are reflected in our fair value hierarchy:

- Level 1 - inputs include quoted prices for identical instruments and are the most observable
- Level 2 - inputs include quoted prices for similar instruments and observable inputs such as interest rates, currency exchange rates, and yield curves
- Level 3 - inputs include data not observable in the market and reflect management judgment about the assumptions market participants would use in pricing the instruments

Fixed income securities, equities, commingled funds, derivative financial instruments, and alternative assets are remeasured and presented within our consolidated financial statements at fair value on a recurring basis. Finance receivables and debt are measured at fair value for the purpose of disclosure. Other assets and liabilities are measured at fair value on a nonrecurring basis.

Transfers into and transfers out of the hierarchy levels are recognized as if they had taken place at the end of the reporting period.

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

Valuation Method

Fixed Income Securities. Fixed income securities primarily include government securities, government agency securities, corporate bonds, and asset-backed securities. We generally measure fair value using prices obtained from pricing services or quotes from dealers that make markets in such securities. Pricing methods and inputs to valuation models used by the pricing services depend on the security type (i.e., asset class). Where possible, fair values are generated using market inputs, including quoted prices (the closing price in an exchange market), bid prices (the price at which a buyer stands ready to purchase), and other market information. For fixed income securities that are not actively traded, the pricing services use alternative methods to determine fair value for the securities, including quotes for similar fixed income securities, matrix pricing, discounted cash flow using benchmark curves, or other factors. In certain cases, when market data are not available, we may use broker quotes or pricing services that use proprietary pricing models to determine fair value. The proprietary models incorporate unobservable inputs primarily consisting of prepayment curves, discount rates, default assumptions, recovery rates, yield assumptions, and credit spread assumptions.

An annual review is performed on the security prices received from our pricing services, which includes discussion and analysis of the inputs used by the pricing services to value our securities. We also compare the price of certain securities sold close to the quarter end to the price of the same security at the balance sheet date to ensure the reported fair value is reasonable.

Equities. Equity securities are primarily exchange-traded and are valued based on the closing bid, official close, or last trade pricing on an active exchange. If closing prices are not available, securities are valued at the last quoted bid price or may be valued using the last available price. Securities that are thinly traded or delisted are valued using unobservable pricing data.

Commingled Funds. Fixed income and public equity securities may each be combined into commingled fund investments. Most commingled funds are valued to reflect our interest in the fund based on the reported year-end net asset value ("NAV").

Derivative Financial Instruments. Exchange-traded derivatives for which market quotations are readily available are valued at the last reported sale price or official closing price as reported by an independent pricing service on the primary market or exchange on which they are traded. Over-the-counter derivatives are not exchange traded and are valued using independent pricing services or industry-standard valuation models such as a discounted cash flow. When discounted cash flow models are used, projected future cash flows are discounted to a present value using market-based expectations for interest rates, foreign exchange rates, commodity prices, and the contractual terms of the derivative instruments. The discount rate used is the relevant benchmark interest rate (e.g., LIBOR, SONIA) plus an adjustment for non-performance risk. The adjustment reflects the full credit default swap ("CDS") spread applied to a net exposure, by counterparty, considering the master netting agreements and any posted collateral. We use our counterparty's CDS spread when we are in a net asset position and our own CDS spread when we are in a net liability position. In cases when market data are not available, we use broker quotes and models (e.g., Black-Scholes) to determine fair value. This includes situations where there is a lack of liquidity for a particular currency or commodity, or when the instrument is longer dated.

Alternative Assets. Hedge funds generally hold liquid and readily-priced securities, such as public equities, exchange-traded derivatives, and corporate bonds. Private equity and real estate investments are less liquid. External investment managers typically report valuations reflecting initial cost or updated appraisals, which are adjusted for cash flows, and realized and unrealized gains/losses. All alternative assets are valued at the NAV provided by the investment sponsor or third party administrator, as they do not have readily-available market quotations. Valuations may be lagged up to six months. The NAV will be adjusted for cash flows (additional investments or contributions, and distributions) through year end. We may make further adjustments for any known substantive valuation changes not reflected in the NAV.

The Ford-Werke GmbH ("Ford-Werke") defined benefit plan is primarily funded through a group insurance contract (see Note 17). We measure the fair value of the insurance asset by projecting expected future cash flows from the contract and discounting them to present value based on current market rates including an assessment for non-performance risk of the insurance company. The assumptions used to project expected future cash flows are based on actuarial estimates and are unobservable; therefore, the contract is categorized within Level 3 of the hierarchy.

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

Finance Receivables. We measure finance receivables at fair value using internal valuation models (see Note 10). These models project future cash flows of financing contracts based on scheduled contract payments (including principal and interest). The projected cash flows are discounted to present value based on assumptions regarding expected credit losses, pre-payment speed, and applicable spreads to approximate current rates. The fair value of finance receivables is categorized within Level 3 of the hierarchy.

On a nonrecurring basis, we also measure at fair value retail contracts greater than 120 days past due or deemed to be uncollectible, and individual dealer loans probable of foreclosure. We use the fair value of collateral, adjusted for estimated costs to sell, to determine the fair value of these receivables. The collateral for a retail financing or wholesale receivable is the vehicle financed, and for dealer loans is real estate or other property.

The fair value of collateral for retail receivables is calculated as the outstanding receivable balances multiplied by the average recovery value percentage. The fair value of collateral for wholesale receivables is based on the wholesale market value or liquidation value for new and used vehicles. The fair value of collateral for dealer loans is determined by reviewing various appraisals, which include total adjusted appraised value of land and improvements, alternate use appraised value, broker's opinion of value, and purchase offers.

Debt. We measure debt at fair value using quoted prices for our own debt with approximately the same remaining maturities (see Note 19). Where quoted prices are not available, we estimate fair value using discounted cash flows and market-based expectations for interest rates, credit risk, and the contractual terms of the debt instruments. For certain short-term debt with an original maturity date of one year or less, we assume that book value is a reasonable approximation of the debt's fair value. The fair value of debt is categorized within Level 2 of the hierarchy.

Finance and Lease Incentives

We routinely sponsor special retail financing and lease incentives to dealers' customers who choose to finance or lease our vehicles from Ford Credit. The cost for these incentives is included in our estimate of variable consideration when the vehicle is sold to the dealer. Ford Credit records a reduction to the finance receivable or reduces the cost of the vehicle operating lease when it records the underlying finance contract, and we transfer to Ford Credit the amount of the incentive on behalf of the dealer's customer. See Note 1 for additional information regarding transactions between Automotive and Ford Credit. The Ford Credit segment recognized interest revenue of \$2.4 billion, \$2.5 billion, and \$2.4 billion in 2018, 2019, and 2020, respectively, and lower depreciation of \$2.4 billion, \$2.6 billion, and \$2.3 billion in 2018, 2019, and 2020, respectively, associated with these incentives.

Supplier Price Adjustments

We frequently negotiate price adjustments with our suppliers throughout a production cycle, even after receiving production material. These price adjustments relate to changes in design specification or other commercial terms such as economics, productivity, and competitive pricing. We recognize price adjustments when we reach final agreement with our suppliers. In general, we avoid direct price changes in consideration of future business; however, when these occur, our policy is to defer the recognition of any such price change given explicitly in consideration of future business where guaranteed volumes are specified.

Government Incentives

We receive incentives from U.S. and non-U.S. governmental entities in the form of tax rebates or credits, grants, and loans. Government incentives are recorded in our consolidated financial statements in accordance with their purpose as a reduction of expense, a reduction of the cost of the capital investment, or other income. The benefit is generally recorded when all conditions attached to the incentive have been met and there is reasonable assurance of receipt.

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

Selected Other Costs

Engineering, research, and development expenses are reported in *Cost of sales* and primarily consist of salaries, materials, and associated costs. Engineering, research, and development costs are expensed as incurred when performed internally or when performed by a supplier if we guarantee reimbursement. Advertising costs are reported in *Selling, administrative, and other expenses* and are expensed as incurred. Engineering, research, development, and advertising expenses for the years ended December 31 were as follows (in billions):

	2018	2019	2020
Engineering, research, and development	\$ 8.2	\$ 7.4	\$ 7.1
Advertising	4.0	3.6	2.8

NOTE 3. NEW ACCOUNTING STANDARDS

Adoption of New Accounting Standards

Accounting Standards Update ("ASU") 2016-13, Credit Losses - Measurement of Credit Losses on Financial Instruments. On January 1, 2020, we adopted the new credit loss standard and all of the related amendments, which replaced the incurred loss impairment method with a method that reflects lifetime expected credit losses. We adopted the changes in accounting for credit losses by recognizing the cumulative effect of initially applying the new credit loss standard as an adjustment to the opening balance of *Retained earnings*. The comparative information has not been restated and continues to be reported under the accounting standard in effect for those periods.

The cumulative effect of the changes made to our consolidated balance sheet at January 1, 2020, for the adoption of *ASU 2016-13, Credit Losses - Measurement of Credit Losses on Financial Instruments*, was as follows (in millions):

	Balance at December 31, 2019	Adjustments due to ASU 2016-13	Balance at January 1, 2020
Balance sheet			
Assets			
Ford Credit finance receivables, net, current	\$ 53,651	\$ (69)	\$ 53,582
Trade and other receivables, net	9,237	(3)	9,234
Ford Credit finance receivables, net, non-current	53,703	(183)	53,520
Equity in net assets of affiliated companies	2,519	(7)	2,512
Deferred income taxes	11,863	2	11,865
Liabilities			
Deferred income taxes	490	(58)	432
Equity			
Retained earnings	20,320	(202)	20,118

ASU 2020-04, Reference Rate Reform: Facilitation of the Effects of Reference Rate Reform on Financial Reporting. On April 1, 2020, we adopted the new standard and the related amendment, which provides optional expedients and exceptions for applying generally accepted accounting principles to contracts, hedging relationships, and other transactions affected by reference rate reform (e.g., discontinuation of LIBOR) if certain criteria are met. As of December 31, 2020, we have not yet elected any optional expedients provided in the standard. We will apply the accounting relief as relevant contract and hedge accounting relationship modifications are made during the reference rate reform transition period. We do not expect the standard to have a material impact on our consolidated financial statements.

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 3. NEW ACCOUNTING STANDARDS (Continued)

We also adopted the following ASUs during 2020, none of which had a material impact to our consolidated financial statements or financial statement disclosures:

ASU		Effective Date
2020-01	Clarifying the Interaction between Equity Securities, Equity Method and Joint Ventures, and Derivatives and Hedging	January 1, 2020
2018-18	Clarifying the Interaction between Collaborative Arrangements and Revenue from Contracts with Customers	January 1, 2020
2018-15	Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement that is a Service Contract	January 1, 2020

Accounting Standards Issued But Not Yet Adopted

The Company considers the applicability and impact of all ASUs. ASUs were assessed and determined to be either not applicable or are expected to have minimal impact on our consolidated financial statements.

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 4. REVENUE

The following tables disaggregate our revenue by major source for the years ended December 31 (in millions):

	2018			
	Automotive	Mobility	Ford Credit	Consolidated
Vehicles, parts, and accessories	\$ 142,532	\$ —	\$ —	\$ 142,532
Used vehicles	3,022	—	—	3,022
Extended service contracts	1,323	—	—	1,323
Other revenue	879	26	218	1,123
Revenues from sales and services	147,756	26	218	148,000
Leasing income	538	—	5,795	6,333
Financing income	—	—	5,841	5,841
Insurance income	—	—	164	164
Total revenues	\$ 148,294	\$ 26	\$ 12,018	\$ 160,338

	2019			
	Automotive	Mobility	Ford Credit	Consolidated
Vehicles, parts, and accessories	\$ 137,659	\$ —	\$ —	\$ 137,659
Used vehicles	3,307	—	—	3,307
Extended service contracts	1,376	—	—	1,376
Other revenue	811	41	204	1,056
Revenues from sales and services	143,153	41	204	143,398
Leasing income	446	—	5,899	6,345
Financing income	—	—	5,996	5,996
Insurance income	—	—	161	161
Total revenues	\$ 143,599	\$ 41	\$ 12,260	\$ 155,900

	2020			
	Automotive	Mobility	Ford Credit	Consolidated
Vehicles, parts, and accessories	\$ 110,180	\$ —	\$ —	\$ 110,180
Used vehicles	2,935	—	—	2,935
Extended service contracts	1,431	—	—	1,431
Other revenue	1,027	56	161	1,244
Revenues from sales and services	115,573	56	161	115,790
Leasing income	312	—	5,653	5,965
Financing income	—	—	5,261	5,261
Insurance income	—	—	128	128
Total revenues	\$ 115,885	\$ 56	\$ 11,203	\$ 127,144

Revenue is recognized when obligations under the terms of a contract with our customer are satisfied; generally this occurs with the transfer of control of our vehicles, parts, accessories, or services. Revenue is measured as the amount of consideration we expect to receive in exchange for transferring goods or providing services. Sales, value-added, and other taxes we collect concurrent with revenue-producing activities are excluded from revenue. Incidental items that are immaterial in the context of the contract are recognized as expense. The expected costs associated with our base warranties and field service actions continue to be recognized as expense when the products are sold (see Note 25). We recognize revenue for vehicle service contracts that extend mechanical and maintenance coverages beyond our base warranties over the life of the contract. We do not have any material significant payment terms as payment is received at or shortly after the point of sale.

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 4. REVENUE (Continued)

Automotive Segment

Vehicles, Parts, and Accessories. For the majority of vehicles, parts, and accessories, we transfer control and recognize a sale when we ship the product from our manufacturing facility to our customer (dealers and distributors). We receive cash equal to the invoice price for most vehicle sales at the time of wholesale. When the vehicle sale is financed by our wholly-owned subsidiary Ford Credit, the dealer pays Ford Credit when it sells the vehicle to the retail customer (see Note 10). Payment terms on part sales to dealers, distributors, and retailers range from 30 to 120 days. The amount of consideration we receive and revenue we recognize varies with changes in return rights and marketing incentives we offer to our customers and their customers. When we give our dealers the right to return eligible parts and accessories, we estimate the expected returns based on an analysis of historical experience. Estimates of marketing incentives are based on expected retail and fleet sales volumes, mix of products to be sold, and incentive programs to be offered. Customer acceptance of products and programs, as well as other market conditions, will impact these estimates. We adjust our estimate of revenue at the earlier of when the value of consideration we expect to receive changes or when the consideration becomes fixed. As a result of changes in our estimate of marketing incentives, during 2018, 2019, and 2020, we recorded a decrease of \$903 million, \$844 million, and \$973 million, respectively, related to revenue recognized in prior annual periods.

Depending on the terms of the arrangement, we may also defer the recognition of a portion of the consideration received because we have to satisfy a future obligation (e.g., free extended service contracts). We use an observable price to determine the stand-alone selling price for separate performance obligations, or a cost plus margin approach when one is not available. We have elected to recognize the cost for freight and shipping when control over vehicles, parts, or accessories have transferred to the customer as an expense in *Cost of sales*.

We sell vehicles to daily rental companies and may guarantee that we will pay them the difference between an agreed amount and the value they are able to realize upon resale. At the time of transfer of vehicles to the daily rental companies, we record the probable amount we will pay under the guarantee to *Other liabilities and deferred revenue* (see Note 25).

Used Vehicles. We sell used vehicles both at auction and through our consolidated dealerships. Proceeds from the sale of these vehicles are recognized in *Automotive revenues* upon transfer of control of the vehicle to the customer, and the related vehicle carrying value is recognized in *Cost of sales*.

Extended Service Contracts. We sell separately priced service contracts that extend mechanical and maintenance coverages beyond our base warranty agreements to vehicle owners. The separately priced service contracts range from 12 to 120 months. We receive payment at contract inception and recognize revenue over the term of the agreement in proportion to the costs we expect to incur in satisfying the contract obligations. We had a balance of \$4 billion and \$4.2 billion of unearned revenue associated with outstanding contracts reported in *Other liabilities and deferred revenue* at December 31, 2018 and 2019, respectively. We recognized \$1.1 billion and \$1.2 billion of the unearned amounts as revenue during the years ended December 31, 2019 and 2020, respectively. At December 31, 2020, the unearned amount was \$4.2 billion. We expect to recognize approximately \$1.3 billion of the unearned amount in 2021, \$1 billion in 2022, and \$1.9 billion thereafter.

We record a premium deficiency reserve to the extent we estimate the future costs associated with these contracts exceed the unrecognized revenue. Amounts paid to dealers to obtain these contracts are deferred and recorded as *Other assets*. These costs are amortized to expense consistent with how the related revenue is recognized. We had a balance of \$270 million and \$283 million in deferred costs as of December 31, 2019 and 2020, respectively. We recognized \$73 million, \$74 million, and \$79 million of amortization during the years ended December 31, 2018, 2019, and 2020, respectively.

Other Revenue. Other revenue consists primarily of net commissions received for serving as the agent in facilitating the sale of a third party's products or services to our customers, payments for vehicle-related design and testing services we perform for others, and revenue associated with various Mobility operations. We have applied the practical expedient to recognize *Automotive revenues* for vehicle-related design and testing services over the two to three year term of these agreements in proportion to the amount we have the right to invoice.

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 4. REVENUE (Continued)

Leasing Income. We sell vehicles to daily rental companies with an obligation to repurchase the vehicles for a guaranteed amount, exercisable at the option of the customer. The transactions are accounted for as operating leases. Upon the transfer of vehicles to the daily rental companies, we record proceeds received in *Other liabilities and deferred revenue*. The difference between the proceeds received and the guaranteed repurchase amount is recorded in *Automotive revenues* over the term of the lease using a straight-line method. The cost of the vehicle is recorded in *Net investment in operating leases* on our consolidated balance sheets and the difference between the cost of the vehicle and the estimated auction value is depreciated in *Cost of sales* over the term of the lease.

Ford Credit Segment

Leasing Income. Ford Credit offers leasing plans to retail consumers through Ford and Lincoln brand dealers that originate the leases. Ford Credit records an operating lease upon purchase of a vehicle subject to a lease from the dealer. The retail consumer makes lease payments representing the difference between Ford Credit's purchase price of the vehicle and the contractual residual value of the vehicle plus lease fees, which we recognize on a straight-line basis over the term of the lease agreement. Depreciation and the gain or loss upon disposition of the vehicle is recorded in *Ford Credit interest, operating, and other expenses*.

Financing Income. Ford Credit originates and purchases finance installment contracts. Financing income represents interest earned on the finance receivables (including sales-type and direct financing leases). Interest is recognized using the interest method and includes the amortization of certain direct origination costs.

Insurance Income. Income from insurance contracts is recognized evenly over the term of the agreement. Insurance commission revenue is recognized on a net basis at the time of sale of the third party's product or service to our customer.

NOTE 5. OTHER INCOME/(LOSS)

The amounts included in *Other income/(loss), net* for the years ended December 31 were as follows (in millions):

	2018	2019	2020
Net periodic pension and OPEB income/(cost), excluding service cost	\$ 786	\$ (1,602)	\$ 69
Investment-related interest income	667	809	452
Interest income/(expense) on income taxes	33	(29)	(2)
Realized and unrealized gains/(losses) on cash equivalents, marketable securities, and other investments	115	144	325
Gains/(Losses) on changes in investments in affiliates (a)	42	20	3,446
Gains/(Losses) on extinguishment of debt	—	(55)	(1)
Royalty income	491	381	493
Other	113	106	117
Total	<u>\$ 2,247</u>	<u>\$ (226)</u>	<u>\$ 4,899</u>

(a) See Note 22 for additional information relating to our Argo AI, LLC ("Argo AI") and Volkswagen AG ("VW") transaction.

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 6. SHARE-BASED COMPENSATION

Under our Long-Term Incentive Plans, we may issue restricted stock units (“RSUs”), restricted stock shares (“RSSs”), and stock options. RSUs and RSSs consist of time-based and performance-based awards. The number of shares that may be granted in any year is limited to 2% of our issued and outstanding Common Stock as of December 31 of the prior calendar year. The limit may be increased up to 3% in any year, with a corresponding reduction in shares available for grants in future years. Granted RSUs generally cliff vest or ratably vest over a three-year service period. Performance-based RSUs have two components: one based on internal financial performance metrics, and the other based on total shareholder return relative to an industrial and automotive peer group. At the time of vest, RSU awards are net settled (i.e., shares are withheld to cover the employee tax obligation). Stock options ratably vest over a three-year service period and expire ten years from the grant date.

The fair value of both the time-based and the internal performance metrics portion of the performance-based RSUs and RSSs is determined using the closing price of our Common Stock at grant date. The weighted average per unit grant date fair value for the years ended December 31, 2018, 2019, and 2020 was \$9.89, \$8.99, and \$7.11, respectively.

The fair value of time-based RSUs, RSSs, and stock options is expensed over the shorter of the vesting period, using the graded vesting method, or the time period an employee becomes eligible to retain the award at retirement. The fair value of performance-based RSUs and RSSs is expensed when it is probable and estimable as measured against the performance metrics over the shorter of the performance or required service periods. We measure the fair value of our stock options on the date of grant using either the Black-Scholes option-pricing model (for options without a market condition) or a Monte Carlo simulation (for options with a market condition). We have elected to recognize forfeitures as an adjustment to compensation expense for all RSUs, RSSs, and stock options in the same period as the forfeitures occur. Expense is recorded in *Selling, administrative, and other expenses*.

Restricted Stock Units and Restricted Stock Shares

The fair value of vested RSUs and RSSs as well as the compensation cost for the years ended December 31 were as follows (in millions):

	2018	2019	2020
Fair value of vested shares	\$ 187	\$ 231	\$ 264
Compensation cost (a)	162	190	156

(a) Net of tax benefit of \$29 million, \$38 million, and \$31 million in 2018, 2019, and 2020, respectively.

As of December 31, 2020, there was approximately \$73 million in unrecognized compensation cost related to non-vested RSUs and RSSs. This expense will be recognized over a weighted average period of 1.8 years.

The performance-based RSUs granted in March 2018, 2019, and 2020 include a relative Total Shareholder Return (“TSR”) metric. We estimate the fair value of the TSR component of the performance-based RSUs using a Monte Carlo simulation. Inputs and assumptions used to calculate the fair value at grant date were as follows:

	2018	2019	2020
Fair value per stock award	\$ 9.03	\$ 9.66	\$ 7.21
Grant date stock price	10.40	8.81	7.08
Assumptions:			
Ford’s stock price expected volatility (a)	22.9 %	24.1 %	25.4 %
Expected average volatility of peer companies (a)	25.4	25.8	26.4
Risk-free interest rate	2.46	2.57	0.68

(a) Expected volatility based on three years of daily closing share price changes ending on the grant date.

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 6. SHARE-BASED COMPENSATION (Continued)

During 2020, activity for RSUs and RSSs was as follows (in millions, except for weighted-average fair value):

	Shares	Weighted-Average Fair Value
Outstanding, beginning of year	69.3	\$ 9.90
Granted (a)	34.2	7.11
Vested (a)	(25.5)	10.34
Forfeited	(5.8)	9.51
Outstanding, end of year (b)	72.2	8.35

(a) Includes shares awarded to non-employee directors.

(b) Excludes 1,229,124 non-employee director shares that were vested, but unissued at December 31, 2020.

Stock Options

During 2020, 6.6 million stock options were issued to our employees with a weighted-average grant date fair value of \$2.17. The options granted in 2020 contain a performance condition tied to Company stock price and were valued using a Monte Carlo simulation assuming a 0% dividend yield, a volatility rate of 30.4%, a risk-free interest rate of 0.69%, and an expected term of ten years.

For the years ended December 31, 2019 and 2020, stock options outstanding were 25.9 million and 26.9 million, respectively, and stock options exercisable were 25.9 million and 20.3 million, respectively. For the year ended December 31, 2020, the intrinsic value for vested and unvested stock options was \$0 million and \$15.7 million, respectively. The average remaining terms for fully vested stock options and unvested stock options were 1.8 years and 9.5 years, respectively. Compensation cost for stock options for the year ended December 31, 2020 was \$8.7 million, net of a tax benefit of \$2.7 million. As of December 31, 2020, there was approximately \$2.9 million in unrecognized compensation cost related to non-vested stock options.

NOTE 7. INCOME TAXES

We recognize income tax-related penalties in *Provision for/(Benefit from) income taxes* on our consolidated income statements. We recognize income tax-related interest income and interest expense in *Other income/(loss), net* on our consolidated income statements.

We account for U.S. tax on global intangible low-taxed income in the period incurred.

Valuation of Deferred Tax Assets and Liabilities

Deferred tax assets and liabilities are recognized based on the future tax consequences attributable to temporary differences that exist between the financial statement carrying value of assets and liabilities and their respective tax bases, and operating loss and tax credit carryforwards on a taxing jurisdiction basis. We measure deferred tax assets and liabilities using enacted tax rates that will apply in the years in which we expect the temporary differences to be recovered or paid.

Our accounting for deferred tax consequences represents our best estimate of the likely future tax consequences of events that have been recognized on our consolidated financial statements or tax returns and their future probability. In assessing the need for a valuation allowance, we consider both positive and negative evidence related to the likelihood of realization of the deferred tax assets. If, based on the weight of available evidence, it is more likely than not that the deferred tax assets will not be realized, we record a valuation allowance.

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 7. INCOME TAXES (Continued)

Components of Income Taxes

Components of income taxes excluding cumulative effects of changes in accounting principles, other comprehensive income, and equity in net results of affiliated companies accounted for after-tax, for the years ended December 31 were as follows:

	2018	2019	2020
Income/(Loss) before income taxes (in millions)			
U.S.	\$ 2,051	\$ 2,656	\$ (231)
Non-U.S.	2,294	(3,296)	(885)
Total	<u>\$ 4,345</u>	<u>\$ (640)</u>	<u>\$ (1,116)</u>
Provision for/(Benefit from) income taxes (in millions)			
Current			
Federal	\$ 75	\$ (101)	\$ (23)
Non-U.S.	690	738	554
State and local	(6)	33	(45)
Total current	759	670	486
Deferred			
Federal	(360)	(1,190)	(523)
Non-U.S.	239	(70)	168
State and local	12	(134)	29
Total deferred	(109)	(1,394)	(326)
Total	<u>\$ 650</u>	<u>\$ (724)</u>	<u>\$ 160</u>
Reconciliation of effective tax rate			
U.S. statutory rate	21.0 %	21.0 %	21.0 %
Non-U.S. tax rates under U.S. rates	(1.2)	46.9	(2.6)
State and local income taxes	2.0	12.4	8.9
General business credits	(9.2)	67.0	35.1
Dispositions and restructurings	4.6	45.5	(0.4)
U.S. tax on non-U.S. earnings	8.1	(49.2)	27.0
Prior year settlements and claims	1.1	(5.0)	8.3
Tax incentives	—	20.7	(6.0)
Enacted change in tax laws	(3.0)	(12.5)	1.5
Valuation allowances	(9.6)	(18.7)	(108.8)
Other	1.2	(15.0)	1.7
Effective rate	<u>15.0 %</u>	<u>113.1 %</u>	<u>(14.3)%</u>

On December 22, 2017, the Tax Cuts and Jobs Act (H.R. 1) was signed into law. This act includes, among other items, a permanent reduction to the U.S. corporate income tax rate from 35% to 21% effective January 1, 2018, and requires immediate taxation of accumulated, unremitted non-U.S. earnings. For the year ended December 31, 2019, our tax provision includes additional expense of \$95 million related to the impact of the act and subsequently issued Treasury regulations on our global operations.

During 2020, based on all available evidence, we established U.S. valuation allowances of \$1.3 billion, primarily against tax credits, as it is more likely than not that these deferred tax assets will not be realized. In assessing the realizability of deferred tax assets, we consider the trade-offs between cash preservation and cash outlays to preserve tax credits.

At December 31, 2020, \$12 billion of non-U.S. earnings are considered indefinitely reinvested in operations outside the United States, for which deferred taxes have not been provided. Quantification of the deferred tax liability, if any, associated with indefinitely reinvested basis differences is not practicable.

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 7. INCOME TAXES (Continued)

Components of Deferred Tax Assets and Liabilities

The components of deferred tax assets and liabilities at December 31 were as follows (in millions):

	2019	2020
Deferred tax assets		
Employee benefit plans	\$ 4,125	\$ 4,760
Net operating loss carryforwards	1,726	1,584
Tax credit carryforwards	9,335	11,037
Research expenditures	619	1,321
Dealer and dealers' customer allowances and claims	1,724	2,145
Other foreign deferred tax assets	799	729
All other	1,781	2,335
Total gross deferred tax assets	20,109	23,911
Less: Valuation allowances	(843)	(1,981)
Total net deferred tax assets	19,266	21,930
Deferred tax liabilities		
Leasing transactions	2,694	3,299
Depreciation and amortization (excluding leasing transactions)	3,094	3,218
Finance receivables	584	574
Other foreign deferred tax liabilities	608	905
All other	913	2,049
Total deferred tax liabilities	7,893	10,045
Net deferred tax assets/(liabilities)	\$ 11,373	\$ 11,885

Deferred tax assets for net operating losses and other temporary differences related to certain non-U.S. operations have not been recorded as a result of elections to tax these operations simultaneously in U.S. tax returns. Reversal of these elections would result in the recognition of \$10.8 billion of deferred tax assets, subject to valuation allowance testing.

Operating loss carryforwards for tax purposes were \$3.6 billion at December 31, 2020, resulting in a deferred tax asset of \$1.6 billion. There is no expiration date for \$2.1 billion of these losses. A substantial portion of the remaining losses will expire beyond 2023. Tax credits available to offset future tax liabilities are \$11 billion. Approximately half of these credits have a remaining carryforward period of six years or more. Tax benefits of operating loss and tax credit carryforwards are evaluated on an ongoing basis, including a review of historical and projected future operating results, the eligible carryforward period, and available tax planning strategies. In our evaluation, we anticipate making tax elections that change the order of tax credit carryforward utilization on U.S. tax returns.

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 7. INCOME TAXES (Continued)

Other

A reconciliation of the beginning and ending amount of unrecognized tax benefits for the years ended December 31 were as follows (in millions):

	2019	2020
Beginning balance	\$ 2,047	\$ 1,943
Increase – tax positions in prior periods	169	137
Increase – tax positions in current period	24	25
Decrease – tax positions in prior periods	(239)	(131)
Settlements	(57)	(61)
Lapse of statute of limitations	—	—
Foreign currency translation adjustment	(1)	—
Ending balance	<u>\$ 1,943</u>	<u>\$ 1,913</u>

The amount of unrecognized tax benefits that would affect the effective tax rate if recognized was \$1.9 billion at December 31, 2019 and 2020.

Examinations by tax authorities have been completed through 2008 in Germany, 2011 in Canada, 2014 in the United States and the United Kingdom, and 2015 in China. Although examinations have been completed in these jurisdictions, limited transfer pricing disputes exist for years dating back to 2005.

Net interest on income taxes was \$33 million of income, \$29 million of expense, and \$2 million of expense for the years ended December 31, 2018, 2019, and 2020, respectively. These were reported in *Other income/(loss), net* in our consolidated income statements. Net payables for tax related interest were \$58 million and \$36 million as of December 31, 2019 and 2020, respectively.

Cash paid for income taxes was \$821 million, \$599 million, and \$421 million in 2018, 2019, and 2020, respectively.

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 8. CAPITAL STOCK AND EARNINGS/(LOSS) PER SHARE

All general voting power is vested in the holders of Common Stock and Class B Stock. Holders of our Common Stock have 60% of the general voting power and holders of our Class B Stock are entitled to such number of votes per share as will give them the remaining 40%. Shares of Common Stock and Class B Stock share equally in dividends when and as paid, with stock dividends payable in shares of stock of the class held.

If liquidated, each share of Common Stock is entitled to the first \$0.50 available for distribution to holders of Common Stock and Class B Stock, each share of Class B Stock is entitled to the next \$1.00 so available, each share of Common Stock is entitled to the next \$0.50 so available, and each share of Common and Class B Stock is entitled to an equal amount thereafter.

We present both basic and diluted earnings/(loss) per share ("EPS") amounts in our financial reporting. Basic EPS excludes dilution and is computed by dividing *Net income/(loss) attributable to Ford Motor Company* by the weighted-average number of Common and Class B Stock outstanding for the period. Diluted EPS reflects the maximum potential dilution that could occur from our share-based compensation, including "in-the-money" stock options, unvested RSUs, and unvested RSSs. Potentially dilutive shares are excluded from the calculation if they have an anti-dilutive effect in the period.

Earnings/(Loss) Per Share Attributable to Ford Motor Company Common and Class B Stock

Basic and diluted income/(loss) per share were calculated using the following (in millions):

	2018	2019	2020
Basic and Diluted Income/(Loss) Attributable to Ford Motor Company			
Basic income/(loss)	\$ 3,677	\$ 47	\$ (1,279)
Diluted income/(loss)	3,677	47	(1,279)
Basic and Diluted Shares			
Basic shares (average shares outstanding)	3,974	3,972	3,973
Net dilutive options, unvested restricted stock units, and unvested restricted stock shares (a)	24	32	—
Diluted shares	<u>3,998</u>	<u>4,004</u>	<u>3,973</u>

(a) In 2020, there were 29 million shares excluded from the calculation of diluted earnings/(loss) per share, due to their anti-dilutive effect.

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 9. CASH, CASH EQUIVALENTS, AND MARKETABLE SECURITIES

The fair values of cash, cash equivalents, and marketable securities measured at fair value on a recurring basis were as follows (in millions):

		December 31, 2019			
	Fair Value Level	Automotive	Mobility	Ford Credit	Consolidated
Cash and cash equivalents					
U.S. government	1	\$ 520	\$ —	\$ —	\$ 520
U.S. government agencies	2	125	—	—	125
Non-U.S. government and agencies	2	601	—	350	951
Corporate debt	2	642	—	604	1,246
Total marketable securities classified as cash equivalents		1,888	—	954	2,842
Cash, time deposits, and money market funds		6,432	117	8,113	14,662
Total cash and cash equivalents		<u>\$ 8,320</u>	<u>\$ 117</u>	<u>\$ 9,067</u>	<u>\$ 17,504</u>
Marketable securities					
U.S. government	1	\$ 2,930	\$ —	\$ 195	\$ 3,125
U.S. government agencies	2	1,548	—	210	1,758
Non-U.S. government and agencies	2	4,217	—	2,408	6,625
Corporate debt	2	4,802	—	193	4,995
Equities (a)	1	81	—	—	81
Other marketable securities	2	273	—	290	563
Total marketable securities		<u>\$ 13,851</u>	<u>\$ —</u>	<u>\$ 3,296</u>	<u>\$ 17,147</u>
Restricted cash		\$ 15	\$ 21	\$ 139	\$ 175
Cash, cash equivalents, and restricted cash in held-for-sale assets		\$ —	\$ —	\$ 62	\$ 62

		December 31, 2020			
	Fair Value Level	Automotive	Mobility	Ford Credit	Consolidated
Cash and cash equivalents					
U.S. government	1	\$ 2,940	\$ —	\$ 3,255	\$ 6,195
U.S. government agencies	2	850	—	640	1,490
Non-U.S. government and agencies	2	600	—	717	1,317
Corporate debt	2	605	—	970	1,575
Total marketable securities classified as cash equivalents		4,995	—	5,582	10,577
Cash, time deposits, and money market funds		5,830	69	8,767	14,666
Total cash and cash equivalents		<u>\$ 10,825</u>	<u>\$ 69</u>	<u>\$ 14,349</u>	<u>\$ 25,243</u>
Marketable securities					
U.S. government	1	\$ 4,709	\$ —	\$ 1,082	\$ 5,791
U.S. government agencies	2	3,259	—	485	3,744
Non-U.S. government and agencies	2	4,448	—	2,693	7,141
Corporate debt	2	7,095	—	308	7,403
Equities (a)	1	113	—	—	113
Other marketable securities	2	234	—	292	526
Total marketable securities		<u>\$ 19,858</u>	<u>\$ —</u>	<u>\$ 4,860</u>	<u>\$ 24,718</u>
Restricted cash		\$ 38	\$ 7	\$ 647	\$ 692
Cash, cash equivalents, and restricted cash in held-for-sale assets		\$ —	\$ —	\$ —	\$ —

(a) Net unrealized gains/losses incurred during the reporting periods on equity securities still held at December 31, 2019 and 2020 were a \$44 million loss and a \$24 million gain, respectively.

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 9. CASH, CASH EQUIVALENTS, AND MARKETABLE SECURITIES (Continued)

The cash equivalents and marketable securities accounted for as available-for-sale (“AFS”) securities were as follows (in millions):

	December 31, 2019							
					Fair Value of Securities with Contractual Maturities			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value	Within 1 Year	After 1 Year through 5 Years	After 5 Years	
Automotive								
U.S. government	\$ 2,839	\$ 11	\$ (1)	\$ 2,849	\$ 1,028	\$ 1,772	\$ 49	
U.S. government agencies	1,445	2	(1)	1,446	830	589	27	
Non-U.S. government and agencies	3,925	20	(1)	3,944	1,546	2,398	—	
Corporate debt	5,029	53	—	5,082	1,837	3,245	—	
Other marketable securities	230	1	—	231	—	149	82	
Total	\$ 13,468	\$ 87	\$ (3)	\$ 13,552	\$ 5,241	\$ 8,153	\$ 158	
	December 31, 2020							
					Fair Value of Securities with Contractual Maturities			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value	Within 1 Year	After 1 Year through 5 Years	After 5 Years	
Automotive								
U.S. government	\$ 2,894	\$ 44	\$ —	\$ 2,938	\$ 1,649	\$ 1,286	\$ 3	
U.S. government agencies	2,588	15	—	2,603	772	1,629	202	
Non-U.S. government and agencies	2,926	31	—	2,957	1,330	1,617	10	
Corporate debt	7,482	102	(1)	7,583	3,566	3,987	30	
Other marketable securities	212	3	—	215	1	147	67	
Total	\$ 16,102	\$ 195	\$ (1)	\$ 16,296	\$ 7,318	\$ 8,666	\$ 312	

Sales proceeds and gross realized gains/losses from the sale of AFS securities for the years ended December 31 were as follows (in millions):

	2018	2019	2020
Automotive			
Sales proceeds	\$ 5,512	\$ 5,753	\$ 8,574
Gross realized gains	1	13	56
Gross realized losses	21	10	11

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 9. CASH, CASH EQUIVALENTS, AND MARKETABLE SECURITIES (Continued)

The present fair values and gross unrealized losses for cash equivalents and marketable securities accounted for as AFS securities that were in an unrealized loss position, aggregated by investment category and the length of time that individual securities have been in a continuous loss position, were as follows (in millions):

	December 31, 2019					
	Less than 1 Year		1 Year or Greater		Total	
	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses
Automotive						
U.S. government	\$ 183	\$ (1)	\$ 50	\$ —	\$ 233	\$ (1)
U.S. government agencies	370	(1)	344	—	714	(1)
Non-U.S. government and agencies	463	—	390	(1)	853	(1)
Corporate debt	29	—	53	—	82	—
Other marketable securities	59	—	17	—	76	—
Total	<u>\$ 1,104</u>	<u>\$ (2)</u>	<u>\$ 854</u>	<u>\$ (1)</u>	<u>\$ 1,958</u>	<u>\$ (3)</u>

	December 31, 2020					
	Less than 1 Year		1 Year or Greater		Total	
	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses
Automotive						
U.S. government	\$ 181	\$ —	\$ —	\$ —	\$ 181	\$ —
U.S. government agencies	83	—	—	—	83	—
Non-U.S. government and agencies	164	—	10	—	174	—
Corporate debt	1,538	(1)	9	—	1,547	(1)
Other marketable securities	23	—	13	—	36	—
Total	<u>\$ 1,989</u>	<u>\$ (1)</u>	<u>\$ 32</u>	<u>\$ —</u>	<u>\$ 2,021</u>	<u>\$ (1)</u>

We determine credit losses on AFS debt securities using the specific identification method. During the years ended December 31, 2018, 2019, and 2020, we did not recognize any credit loss. The unrealized losses on securities are due to changes in interest rates and market liquidity.

Cash, Cash Equivalents, and Restricted Cash

Cash, cash equivalents, and restricted cash as reported in the consolidated statements of cash flows were as follows (in millions):

	December 31, 2019	December 31, 2020
Cash and cash equivalents	\$ 17,504	\$ 25,243
Restricted cash (a)	175	692
Cash, cash equivalents, and restricted cash in held-for-sale assets	62	—
Total cash, cash equivalents, and restricted cash	<u>\$ 17,741</u>	<u>\$ 25,935</u>

(a) Included in *Other assets* in the non-current assets section of our consolidated balance sheets.

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 10. FORD CREDIT FINANCE RECEIVABLES AND ALLOWANCE FOR CREDIT LOSSES

Ford Credit manages finance receivables as “consumer” and “non-consumer” portfolios. The receivables are generally secured by the vehicles, inventory, or other property being financed.

Consumer Portfolio. Receivables in this portfolio include products offered to individuals and businesses that finance the acquisition of Ford and Lincoln vehicles from dealers for personal or commercial use. Retail financing includes retail installment contracts for new and used vehicles and finance leases with retail customers, government entities, daily rental companies, and fleet customers.

Non-Consumer Portfolio. Receivables in this portfolio include products offered to automotive dealers. Dealer financing includes wholesale loans to dealers to finance the purchase of vehicle inventory, also known as floorplan financing, as well as loans to dealers to finance working capital and improvements to dealership facilities, finance the purchase of dealership real estate, and finance other dealer programs. Wholesale financing is approximately 92% of dealer financing.

Finance receivables are recorded at the time of origination or purchase at fair value and are subsequently reported at amortized cost, net of any allowance for credit losses.

For all finance receivables, Ford Credit defines “past due” as any payment, including principal and interest, that is at least 31 days past the contractual due date.

Finance Receivables Classification

Finance receivables are accounted for as held for investment (“HFI”) if Ford Credit has the intent and ability to hold the receivables for the foreseeable future or until maturity or payoff. The determination of intent and ability to hold for the foreseeable future is highly judgmental and requires Ford Credit to make good faith estimates based on all information available at the time of origination or purchase. If Ford Credit does not have the intent and ability to hold the receivables, then the receivables are classified as HFS.

Each quarter, Ford Credit makes a determination of whether it is probable that finance receivables originated or purchased during the quarter will be held for the foreseeable future based on historical receivables sale experience, internal forecasts and budgets, as well as other relevant, reliable information available through the date of evaluation. For purposes of this determination, probable means at least 70% likely and, consistent with the budgeting and forecasting period, the foreseeable future means twelve months. Ford Credit classifies receivables as HFI or HFS on a receivable-by-receivable basis. Specific receivables included in off-balance sheet sale transactions are generally not identified until the month in which the sale occurs.

Held-for-Investment. Finance receivables classified as HFI are recorded at the time of origination or purchase at fair value and are subsequently reported at amortized cost, net of any allowance for credit losses. Cash flows from finance receivables, excluding wholesale and other receivables, that were originally classified as HFI are recorded as an investing activity since GAAP requires the statement of cash flows presentation to be based on the original classification of the receivables. Cash flows from wholesale and other receivables are recorded as an operating activity.

Held-for-Sale. Finance receivables classified as HFS are carried at the lower of cost or fair value. Cash flows resulting from the origination or purchase and sale of HFS receivables are recorded as an operating activity in *Decrease/(Increase) in finance receivables (wholesale and other)*. Once a decision has been made to sell receivables that were originally classified as HFI, the receivables are reclassified as HFS and carried at the lower of cost or fair value. The valuation adjustment, if applicable, is recorded in *Other income/(loss), net* to recognize the receivables at the lower of cost or fair value.

The value of the finance receivables considered HFS at December 31, 2019 was \$1.5 billion, primarily Forso Nordic AB (“Forso”) related finance receivables of \$1.2 billion. At December 31, 2020, there were \$36 million of certain wholesale finance receivables specifically identified as HFS. These HFS values are reported in *Assets held for sale* on our consolidated balance sheets. See Note 22 for additional information.

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 10. FORD CREDIT FINANCE RECEIVABLES AND ALLOWANCE FOR CREDIT LOSSES (Continued)

Ford Credit finance receivables, net at December 31 were as follows (in millions):

	2019	2020
Consumer		
Retail installment contracts, gross	\$ 68,905	\$ 73,631
Finance leases, gross	8,566	8,431
Retail financing, gross	77,471	82,062
Unearned interest supplements	(3,589)	(3,987)
Consumer finance receivables	73,882	78,075
Non-Consumer		
Dealer financing	33,985	20,908
Non-Consumer finance receivables	33,985	20,908
Total recorded investment	\$ 107,867	\$ 98,983
Recorded investment in finance receivables	\$ 107,867	\$ 98,983
Allowance for credit losses	(513)	(1,305)
Total finance receivables, net	\$ 107,354	\$ 97,678
Current portion	\$ 53,651	\$ 42,401
Non-current portion	53,703	55,277
Total finance receivables, net	\$ 107,354	\$ 97,678
Net finance receivables subject to fair value (a)	\$ 99,168	\$ 89,651
Fair value (b)	99,297	91,238

(a) Net finance receivables subject to fair value exclude finance leases.

(b) The fair value of finance receivables is categorized within Level 3 of the fair value hierarchy.

Ford Credit's finance leases are comprised of sales-type and direct financing leases. These financings include primarily lease plans for terms of 24 to 60 months. Financing revenue from finance leases for the years ended December 31, 2018, 2019, and 2020, was \$375 million, \$380 million, and \$357 million, respectively, and is included in *Ford Credit revenues* on our consolidated income statements.

The amounts contractually due on Ford Credit's finance leases at December 31 were as follows (in millions):

	2020
2021	\$ 1,978
2022	1,751
2023	1,348
2024	555
2025	55
Thereafter	—
Total future cash payments	5,687
Less: Present value discount	(251)
Finance lease receivables	\$ 5,436

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 10. FORD CREDIT FINANCE RECEIVABLES AND ALLOWANCE FOR CREDIT LOSSES (Continued)

The reconciliation from finance lease receivables to finance leases, gross and finance leases, net at December 31 is as follows (in millions):

	2019	2020
Finance lease receivables	\$ 5,651	\$ 5,436
Unguaranteed residual assets	2,795	2,893
Initial direct costs	120	102
Finance leases, gross	8,566	8,431
Unearned interest supplements from Ford and affiliated companies	(363)	(337)
Allowance for credit losses	(17)	(67)
Finance leases, net	<u>\$ 8,186</u>	<u>\$ 8,027</u>

At December 31, 2019 and 2020, accrued interest was \$251 million and \$181 million, respectively, which we report in *Other assets* in the current assets section of our consolidated balance sheets.

Included in the recorded investment in finance receivables at December 31, 2019 and 2020 were consumer receivables of \$38.3 billion and \$43.7 billion, respectively, and non-consumer receivables of \$26.8 billion and \$16.4 billion, respectively, that have been sold for legal purposes in securitization transactions but continue to be reported in our consolidated financial statements. The receivables are available only for payment of the debt issued by, and other obligations of, the securitization entities that are parties to those securitization transactions; they are not available to pay the other obligations or the claims of Ford Credit's other creditors. Ford Credit holds the right to receive the excess cash flows not needed to pay the debt issued by, and other obligations of, the securitization entities that are parties to those securitization transactions (see Note 24).

Credit Quality

Consumer Portfolio

When originating consumer receivables, Ford Credit uses a proprietary scoring system that measures credit quality using information in the credit application, proposed contract terms, credit bureau data, and other information. After a proprietary risk score is generated, Ford Credit decides whether to originate a contract using a decision process based on a judgmental evaluation of the applicant, the credit application, the proposed contract terms, credit bureau information (e.g., FICO score), proprietary risk score, and other information. The evaluation emphasizes the applicant's ability to pay and creditworthiness focusing on payment, affordability, applicant credit history, and stability as key considerations.

After origination, Ford Credit reviews the credit quality of retail financing based on customer payment activity. As each customer develops a payment history, an internally developed behavioral scoring model is used to assist in determining the best collection strategies, which allows Ford Credit to focus collection activity on higher-risk accounts. These models are used to refine Ford Credit's risk-based staffing model to ensure collection resources are aligned with portfolio risk. Based on data from this scoring model, contracts are categorized by collection risk. Ford Credit's collection models evaluate several factors, including origination characteristics, updated credit bureau data, and payment patterns.

Credit quality ratings for consumer receivables are based on aging. Consumer receivables credit quality ratings are as follows:

- *Pass* – current to 60 days past due;
- *Special Mention* – 61 to 120 days past due and in intensified collection status; and
- *Substandard* – greater than 120 days past due and for which the uncollectible portion of the receivables has already been charged off, as measured using the fair value of collateral less costs to sell.

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 10. FORD CREDIT FINANCE RECEIVABLES AND ALLOWANCE FOR CREDIT LOSSES (Continued)

The credit quality analysis of consumer receivables at December 31, 2019 was as follows (in millions):

	Total
Consumer	
31 - 60 days past due	\$ 839
61 - 120 days past due	166
Greater than 120 days past due	35
Total past due	1,040
Current	72,842
Total	<u>\$ 73,882</u>

The credit quality analysis of consumer receivables at December 31, 2020 was as follows (in millions):

	Amortized Cost Basis by Origination Year						
	Prior to 2016	2016	2017	2018	2019	2020	Total
Consumer							
31 - 60 days past due	\$ 45	\$ 62	\$ 103	\$ 162	\$ 166	\$ 143	\$ 681
61 - 120 days past due	7	12	24	44	45	31	163
Greater than 120 days past due	11	6	7	8	7	2	41
Total past due	63	80	134	214	218	176	885
Current	782	2,518	6,648	13,704	20,822	32,716	77,190
Total	<u>\$ 845</u>	<u>\$ 2,598</u>	<u>\$ 6,782</u>	<u>\$ 13,918</u>	<u>\$ 21,040</u>	<u>\$ 32,892</u>	<u>\$ 78,075</u>

Non-Consumer Portfolio

Ford Credit extends credit to dealers primarily in the form of lines of credit to purchase new Ford and Lincoln vehicles as well as used vehicles. Payment is required when the dealer has sold the vehicle. Each non-consumer lending request is evaluated by considering the borrower's financial condition and the underlying collateral securing the loan. Ford Credit uses a proprietary model to assign each dealer a risk rating. This model uses historical dealer performance data to identify key factors about a dealer that are considered most significant in predicting a dealer's ability to meet its financial obligations. Ford Credit also considers numerous other financial and qualitative factors of the dealer's operations, including capitalization and leverage, liquidity and cash flow, profitability, and credit history with Ford Credit and other creditors.

Dealers are assigned to one of four groups according to risk ratings as follows:

- *Group I* – strong to superior financial metrics;
- *Group II* – fair to favorable financial metrics;
- *Group III* – marginal to weak financial metrics; and
- *Group IV* – poor financial metrics, including dealers classified as uncollectible.

Ford Credit generally suspends credit lines and extends no further funding to dealers classified in Group IV.

Ford Credit regularly reviews the model to confirm the continued business significance and statistical predictability of the model and may make updates to improve the performance of the model. In addition, Ford Credit regularly audits dealer inventory and dealer sales records to verify that the dealer is in possession of the financed vehicles and is promptly paying each receivable following the sale of the financed vehicle. The frequency of on-site vehicle inventory audits depends primarily on the dealer's risk rating. Under Ford Credit's policies, on-site vehicle inventory audits of low-risk dealers are conducted only as circumstances warrant. On-site vehicle inventory audits of higher-risk dealers are conducted with increased frequency based primarily on the dealer's risk rating, but also considering the results of electronic monitoring of the dealer's performance, including daily payment verifications and monthly analyses of the dealer's financial statements, payoffs, aged inventory, over credit line, and delinquency reports. Ford Credit typically performs a credit review of each dealer annually and more frequently reviews certain dealers based on the dealer's risk rating and total exposure. Ford Credit adjusts the dealer's risk rating, if necessary.

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 10. FORD CREDIT FINANCE RECEIVABLES AND ALLOWANCE FOR CREDIT LOSSES (Continued)

The credit quality analysis of dealer financing receivables at December 31, 2019 was as follows (in millions):

	2019
Dealer financing	
Group I	\$ 26,281
Group II	5,407
Group III	2,108
Group IV	189
Total (a)	\$ 33,985

(a) Total past due dealer financing receivables at December 31, 2019 were \$62 million.

The credit quality analysis of dealer financing receivables at December 31, 2020 was as follows (in millions):

Amortized Cost Basis by Origination Year								
Dealer Loans								Wholesale Loans
	Prior to 2016	2016	2017	2018	2019	2020	Total	Total
Group I	\$ 503	\$ 129	\$ 110	\$ 188	\$ 70	\$ 248	\$ 1,248	\$ 13,160
Group II	38	20	11	35	3	87	194	4,680
Group III	9	—	3	19	3	35	69	1,533
Group IV	2	—	—	—	2	6	10	83
Total (a)	\$ 552	\$ 149	\$ 124	\$ 242	\$ 78	\$ 376	\$ 1,521	\$ 19,387

(a) Total past due dealer financing receivables at December 31, 2020 were \$99 million.

Non-Accrual of Revenue. The accrual of financing revenue is discontinued at the time a receivable is determined to be uncollectible or when it is 90 days past due. Accounts may be restored to accrual status only when a customer settles all past-due deficiency balances and future payments are reasonably assured. For receivables in non-accrual status, subsequent financing revenue is recognized only to the extent a payment is received. Payments are generally applied first to outstanding interest and then to the unpaid principal balance.

Troubled Debt Restructuring ("TDR"). A restructuring of debt constitutes a TDR if a concession is granted to a debtor for economic or legal reasons related to the debtor's financial difficulties that Ford Credit otherwise would not consider. Consumer and non-consumer receivables that have a modified interest rate below market rate or that were modified in reorganization proceedings pursuant to the U.S. Bankruptcy Code, except non-consumer receivables that are current with minimal risk of loss, are considered to be TDRs. Ford Credit does not grant concessions on the principal balance of the receivables. If a receivable is modified in a reorganization proceeding, all payment requirements of the reorganization plan need to be met before remaining balances are forgiven.

Ford Credit offered various programs to provide relief to customers impacted by COVID-19. These programs, which were broadly available to all customers during the first half of 2020, included payment extensions. Ford Credit concluded that these programs did not meet TDR criteria. As of December 31, 2020, in the United States, Ford Credit has received payments on nearly all of the pandemic extensions offered to its customers. The volume of payment extensions has returned to pre-COVID-19 levels and Ford Credit continues to grant payment extensions to customers and dealers under its normal business practices.

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 10. FORD CREDIT FINANCE RECEIVABLES AND ALLOWANCE FOR CREDIT LOSSES (*Continued*)

Allowance for Credit Losses

The allowance for credit losses represents an estimate of the lifetime expected credit losses inherent in finance receivables as of the balance sheet date. The adequacy of the allowance for credit losses is assessed quarterly.

Additions to the allowance for credit losses are made by recording charges to *Ford Credit interest, operating, and other expenses* on our consolidated income statements. The uncollectible portion of a finance receivable is charged to the allowance for credit losses at the earlier of when an account is deemed to be uncollectible or when an account is 120 days delinquent, taking into consideration the financial condition of the customer or borrower, the value of the collateral, recourse to guarantors, and other factors.

Charge-offs on finance receivables include uncollected amounts related to principal, interest, late fees, and other allowable charges. Recoveries on finance receivables previously charged off as uncollectible are credited to the allowance for credit losses. In the event Ford Credit repossesses the collateral, the receivable is charged off and the collateral is recorded at its estimated fair value less costs to sell and reported in *Other assets* on our consolidated balance sheets.

Consumer Portfolio

For consumer receivables that share similar risk characteristics such as product type, initial credit risk, term, vintage, geography, and other relevant factors, Ford Credit estimates the lifetime expected credit loss allowance based on a collective assessment using measurement models and management judgment. The lifetime expected credit losses for the receivables is determined by applying probability of default and loss given default assumption models to monthly expected exposures, then discounting these cash flows to present value using the receivable's original effective interest rate or the current effective interest rate for a variable rate receivable. Probability of default models are developed from internal risk scoring models taking into account the expected probability of payment and time to default, adjusted for macroeconomic outlook and recent performance. The models consider factors such as risk evaluation at the time of origination, historical trends in credit losses (which include the impact of TDRs), and the composition and recent performance of the present portfolio (including vehicle brand, term, risk evaluation, and new/used vehicles). The loss given default is the percentage of the expected balance due at default that is not recoverable, taking into account the expected collateral value and trends in recoveries (including key metrics such as delinquencies, repossessions, and bankruptcies). Monthly exposures are equal to the receivables' expected outstanding principal and interest balance.

The allowance for credit losses incorporates forward-looking macroeconomic conditions for baseline, upturn, and downturn scenarios. Three separate credit loss allowances are calculated from these scenarios. They are then probability-weighted to determine the quantitative estimate of the credit loss allowance recognized in the financial statements. Ford Credit uses forecasts from a third party that revert to a long-term historical average after a reasonable and supportable forecasting period, which is specific to the particular macroeconomic variable and which varies by market. Ford Credit updates the forward-looking macroeconomic forecasts quarterly.

If management does not believe the models reflect lifetime expected credit losses for the portfolio, an adjustment is made to reflect management judgment regarding qualitative factors, including economic uncertainty, observable changes in portfolio performance, and other relevant factors.

On an ongoing basis, Ford Credit reviews its models, including macroeconomic factors, the selection of macroeconomic scenarios, and their weighting, to ensure they reflect the risk of the portfolio.

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 10. FORD CREDIT FINANCE RECEIVABLES AND ALLOWANCE FOR CREDIT LOSSES (*Continued*)

Non-Consumer Portfolio

Dealer financing is evaluated on an individual dealer basis by segmenting dealers by risk characteristics (such as the amount of the loans, the nature of the collateral, the financial status of the dealer, and any TDR modifications) to determine if an individual dealer requires a specific allowance for credit loss. If required, the allowance is based on the present value of the expected future cash flows of the dealer's receivables discounted at the loans' original effective interest rate or the fair value of the collateral adjusted for estimated costs to sell.

For the remaining dealer financing, Ford Credit estimates an allowance for credit losses on a collective basis.

Wholesale Loans. Ford Credit estimates the allowance for credit losses for wholesale loans based on historical loss-to-receivable ("LTR") ratios, expected future cash flows, and the fair value of collateral. For wholesale loans with similar risk characteristics, the allowance for credit losses is estimated on a collective basis using the LTR model and management judgment. The LTR model is based on the most recent years of history. An LTR ratio is calculated by dividing credit losses (i.e., charge-offs net of recoveries) by average net finance receivables, excluding unearned interest supplements and allowance for credit losses. The average LTR ratio is multiplied by the end-of-period balances, representing the lifetime expected credit loss reserve.

Dealer Loans. Ford Credit uses a weighted-average remaining maturity method to estimate the lifetime expected credit loss reserve for dealer loans. The loss model is based on the industry-wide commercial real estate credit losses, adjusted to factor in the historical credit losses for the dealer loans portfolio. The expected credit loss is calculated under different macroeconomic scenarios that are weighted to provide the total lifetime expected credit loss.

After establishing the collective and specific allowance for credit losses, if management believes the allowance does not reflect all losses inherent in the portfolio due to changes in recent economic trends and conditions, or other relevant forward-looking economic factors, an adjustment is made based on management judgment.

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 10. FORD CREDIT FINANCE RECEIVABLES AND ALLOWANCE FOR CREDIT LOSSES (Continued)

An analysis of the allowance for credit losses related to finance receivables for the years ended December 31 was as follows (in millions):

	2019 (a)		
	Consumer	Non-Consumer	Total
Allowance for credit losses			
Beginning balance	\$ 566	\$ 23	\$ 589
Charge-offs	(527)	(22)	(549)
Recoveries	168	10	178
Provision for credit losses	291	5	296
Other (b)	(2)	1	(1)
Ending balance	<u>\$ 496</u>	<u>\$ 17</u>	<u>\$ 513</u>

	2020		
	Consumer	Non-Consumer	Total
Allowance for credit losses			
Beginning balance	\$ 496	\$ 17	\$ 513
Adoption of ASU 2016-13 (c)	247	5	252
Charge-offs	(441)	(29)	(470)
Recoveries	161	8	169
Provision for credit losses	771	57	828
Other (b)	11	2	13
Ending balance	<u>\$ 1,245</u>	<u>\$ 60</u>	<u>\$ 1,305</u>

(a) The comparative information has not been restated and continues to be reported under the accounting standard in effect during 2019.

(b) Primarily represents amounts related to translation adjustments.

(c) Cumulative pre-tax adjustments recorded to retained earnings as of January 1, 2020. See Note 3 for additional information.

For the year ended December 31, 2020, the allowance for credit losses increased \$792 million. The change reflects an increase to the reserve of \$252 million related to the adoption of ASU 2016-13, with the remainder primarily related to economic conditions attributable to the COVID-19 pandemic. The change to the reserve due to the impact of COVID-19 reflects economic uncertainty which, along with the expectation of continued higher unemployment, has increased the probability of default and loss given default rates used in Ford Credit's estimate of the lifetime expected credit losses for its consumer portfolio, especially in the United States. These economic trends and conditions are also expected to negatively impact dealers. Although net charge-offs for the year ended December 31, 2020 remained low, reflecting government relief programs and customer payment deferral programs, the future impact of COVID-19 on credit losses is expected to be adverse. Ford Credit will continue to monitor economic trends and conditions and will adjust the reserve accordingly.

NOTE 11. INVENTORIES

All inventories are stated at the lower of cost or net realizable value. Cost of our inventories is determined by costing methods that approximate a first-in, first-out ("FIFO") basis. Inventories at December 31 were as follows (in millions):

	2019	2020
Raw materials, work-in-process, and supplies	\$ 4,402	\$ 4,676
Finished products	6,384	6,132
Total inventories	<u>\$ 10,786</u>	<u>\$ 10,808</u>

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 12. NET INVESTMENT IN OPERATING LEASES

Net investment in operating leases consists primarily of lease contracts for vehicles with individuals, daily rental companies, government entities, and fleet customers. Assets subject to operating leases are depreciated using the straight-line method over the term of the lease to reduce the asset to its estimated residual value. Estimated residual values are based on assumptions for used vehicle prices at lease termination and the number of vehicles that are expected to be returned.

The net investment in operating leases at December 31 was as follows (in millions):

	<u>2019</u>	<u>2020</u>
Automotive Segment		
Vehicles, net of depreciation	\$ 1,612	\$ 1,304
Ford Credit Segment		
Vehicles and other equipment, at cost (a)	33,386	32,486
Accumulated depreciation	(5,768)	(5,839)
Total Ford Credit Segment	<u>27,618</u>	<u>26,647</u>
Total	<u>\$ 29,230</u>	<u>\$ 27,951</u>

(a) Includes Ford Credit's operating lease assets of \$14.9 billion and \$12.8 billion at December 31, 2019 and 2020, respectively, that have been included in securitization transactions. These net investments in operating leases are available only for payment of the debt or other obligations issued or arising in the securitization transactions; they are not available to pay other obligations or the claims of other creditors.

Ford Credit Segment

Included in *Ford Credit interest, operating, and other expense* is operating lease depreciation expense, which includes gains and losses on disposal of assets. Operating lease depreciation expense for the years ended December 31 was as follows (in millions):

	<u>2018</u>	<u>2019</u>	<u>2020</u>
Operating lease depreciation expense	\$ 3,972	\$ 3,635	\$ 3,235

The amounts contractually due on operating leases at December 31, 2020 were as follows (in millions):

	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>Thereafter</u>	<u>Total</u>
Operating lease payments	\$ 4,369	\$ 2,530	\$ 878	\$ 98	\$ 4	\$ 7,879

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 13. NET PROPERTY

Net property is reported at cost, net of accumulated depreciation, which includes impairments. We capitalize new assets when we expect to use the asset for more than one year. Routine maintenance and repair costs are expensed when incurred.

Property and equipment are depreciated primarily using the straight-line method over the estimated useful life of the asset. Useful lives range from 3 years to 40 years. The estimated useful lives generally are 14.5 years for machinery and equipment, 8 years for software, 30 years for land improvements, and 40 years for buildings. Tooling generally is amortized over the expected life of a product program using a straight-line method.

Net property at December 31 was as follows (in millions):

	2019	2020
Land	\$ 421	\$ 451
Buildings and land improvements	11,900	12,557
Machinery, equipment, and other	38,939	40,463
Software	3,691	3,900
Construction in progress	1,710	1,718
Total land, plant and equipment, and other	56,661	59,089
Accumulated depreciation	(31,020)	(32,848)
Net land, plant and equipment, and other	25,641	26,241
Tooling, net of amortization	10,828	10,842
Total	<u>\$ 36,469</u>	<u>\$ 37,083</u>

Property-related expenses, excluding net investment in operating leases, for the years ended December 31 were as follows (in millions):

	2018	2019	2020
Depreciation and other amortization	\$ 2,504	\$ 3,449	\$ 2,792
Tooling amortization	2,909	3,409	2,747
Total (a)	<u>\$ 5,413</u>	<u>\$ 6,858</u>	<u>\$ 5,539</u>
Maintenance and rearrangement	\$ 1,994	\$ 1,963	\$ 1,670

(a) Includes impairment of held-for-sale long-lived assets in 2019 and 2020. See Note 22 for additional information.

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 14. EQUITY IN NET ASSETS OF AFFILIATED COMPANIES

We use the equity method of accounting for our investments in entities over which we do not have control, but over whose operating and financial policies we are able to exercise significant influence.

Our carrying value and ownership percentages of our equity method investments at December 31 were as follows (in millions, except percentages):

	Investment Balance		Ownership Percentage
	2019	2020	2020
Argo AI, LLC (see Note 22)	\$ —	\$ 2,368	42 %
Changan Ford Automobile Corporation, Limited (a) (b)	672	691	50
Jiangling Motors Corporation, Limited (b)	544	592	32
AutoAlliance (Thailand) Co., Ltd.	435	428	50
Ford Otomotiv Sanayi Anonim Sirketi	274	328	41
Getrag Ford Transmissions GmbH (b)	209	131	50
FFS Finance South Africa (Pty) Limited	88	76	50
Ford Sollers Netherlands B.V. (see Note 21)	93	75	49
Ionity Holding GmbH & Co. KG	58	52	20
Other	146	160	Various
Total	\$ 2,519	\$ 4,901	

(a) In 2019, Changan Ford Automobile Corporation, Limited recorded a long-lived asset impairment charge, our share of which was \$99 million, and is included in *Equity in net income/(loss) of affiliated companies*.

(b) In 2020, Changan Ford Automobile Corporation, Limited, Jiangling Motors Corporation, Limited, and Getrag Ford Transmissions GmbH recorded restructuring charges, our share of which was \$15 million, \$40 million, and \$91 million, respectively. These charges are included in *Equity in net income/(loss) of affiliated companies*.

We recorded \$330 million, \$244 million, and \$180 million of dividends from these affiliated companies for the years ended December 31, 2018, 2019, and 2020, respectively.

In the ordinary course of business, we buy/sell various products and services including vehicles, parts, and components to/from our equity method investees. In addition, we receive royalty income.

Transactions with equity method investees reported for the years ended or at December 31 were as follows (in millions):

Income Statement	For the years ended December 31,		
	2018	2019	2020
Sales	\$ 4,426	\$ 3,541	\$ 4,126
Purchases	10,477	10,106	8,439
Royalty income	374	250	381

Balance Sheet	2019	2020
Receivables	\$ 785	\$ 795
Payables	694	928

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 15. OTHER INVESTMENTS

We have investments in entities not accounted for under the equity method for which fair values are not readily available. We record these investments at cost (less impairment, if any), adjusted for observable price changes in orderly transactions for the identical or a similar investment of the same issuer. We report the carrying value of these investments in *Other assets* in the non-current assets section of our consolidated balance sheets. These investments were \$1.2 billion and \$1.7 billion at December 31, 2019 and 2020, respectively. The increase from December 31, 2019 primarily reflects our preferred security investments in Argo AI (see Note 22). In the year ended December 31, 2020, there were no material adjustments to the fair values of these investments held at December 31, 2020.

In January 2021, there was an observable event for our investment in Rivian. Using an option pricing model, the observable event will result in an increase to our carrying value of approximately \$900 million and will be recognized in our first quarter 2021 results.

NOTE 16. OTHER LIABILITIES AND DEFERRED REVENUE

Other liabilities and deferred revenue at December 31 were as follows (in millions):

	2019	2020
Current		
Dealer and dealers' customer allowances and claims	\$ 13,113	\$ 12,702
Deferred revenue	2,091	2,161
Employee benefit plans	1,857	1,752
Accrued interest	1,128	1,215
OPEB	332	339
Pension	185	193
Operating lease liabilities	367	323
Other	3,914	4,960
Total current other liabilities and deferred revenue	<u>\$ 22,987</u>	<u>\$ 23,645</u>
Non-current		
Pension	\$ 9,878	\$ 10,738
OPEB	5,740	6,236
Dealer and dealers' customer allowances and claims	1,921	3,072
Deferred revenue	4,191	4,559
Operating lease liabilities	1,047	991
Employee benefit plans	1,104	1,074
Other	1,443	1,709
Total non-current other liabilities and deferred revenue	<u>\$ 25,324</u>	<u>\$ 28,379</u>

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 17. RETIREMENT BENEFITS

Defined benefit pension and OPEB plan obligations are remeasured at least annually as of December 31 based on the present value of projected future benefit payments for all participants for services rendered to date. The measurement of projected future benefits is dependent on the provisions of each specific plan, demographics of the group covered by the plan, and other key measurement assumptions. For plans that provide benefits dependent on salary assumptions, we include a projection of salary growth in our measurements. No assumption is made regarding any potential future changes to benefit provisions beyond those to which we are presently committed (e.g., in existing labor contracts).

Net periodic benefit costs, including service cost, interest cost, and expected return on assets are determined using assumptions regarding the benefit obligation and the fair value of plan assets (where applicable) as of the beginning of each year. We have elected to use a fair value of plan assets to calculate the expected return on assets in net periodic benefit cost. The funded status of the benefit plans, which represents the difference between the benefit obligation and fair value of plan assets, is calculated on a plan-by-plan basis. The benefit obligation and related funded status are determined using assumptions as of the end of each year. Actuarial gains and losses resulting from plan remeasurement are recognized in net periodic benefit cost in the period of the remeasurement. The impact of a retroactive plan amendment is recorded in *Accumulated other comprehensive income/(loss)*, and is amortized as a component of net periodic cost, generally over the remaining service period of the active employees. The service cost component is included in *Cost of sales* and *Selling, administrative and other expenses*. Other components of net periodic benefit cost/(income) are included in *Other income/(loss), net* on our consolidated income statements.

A curtailment results from an event that significantly reduces the expected years of future service or eliminates the accrual of defined benefits for the future services of a significant number of employees. A curtailment gain is recorded when the employees who are entitled to a benefit terminate their employment, or when a plan suspension or amendment that results in a curtailment gain is adopted. A curtailment loss is recorded when it becomes probable a curtailment loss will occur. We recognize settlement expense when the costs associated with all settlements during the year exceed the interest component of net periodic cost for the affected plan. Expense from curtailments and settlements is recorded in *Other income/(loss), net*.

Defined Benefit Pension Plans. We have defined benefit pension plans covering hourly and salaried employees in the United States, Canada, United Kingdom, Germany, and other locations. The largest portion of our worldwide obligation is associated with our U.S. plans. Virtually all of our worldwide defined benefit plans are closed to new participants.

In general, our defined benefit pension plans are funded (i.e., have restricted assets from which benefits are paid). Our unfunded defined benefit pension plans are treated on a "pay as you go" basis with benefit payments from general Company cash. These unfunded plans primarily include certain plans in Germany and the U.S. defined benefit plans for senior management.

OPEB. We have defined benefit OPEB plans, primarily certain health care and life insurance benefits, covering hourly and salaried employees in the United States, Canada, and other locations. The largest portion of our worldwide obligation is associated with our U.S. plans. Our OPEB plans are unfunded and the benefits are paid from general Company cash.

Defined Contribution and Savings Plans. We also have defined contribution and savings plans for hourly and salaried employees in the United States and other locations. Company contributions to these plans, if any, are made from general Company cash and are expensed as incurred. The expense for our worldwide defined contribution and savings plans was \$393 million, \$444 million, and \$398 million for the years ended December 31, 2018, 2019, and 2020, respectively. This includes the expense for Company-matching contributions to our primary employee savings plan in the United States of \$143 million, \$143 million, and \$146 million for the years ended December 31, 2018, 2019, and 2020, respectively. The 2019 expense also reflects a one-time contribution of \$33 million to certain eligible employees as part of the UAW collective bargaining agreement.

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 17. RETIREMENT BENEFITS (Continued)

Defined Benefit Plans – Expense and Status

The assumptions used to determine benefit obligation and net periodic benefit cost/(income) were as follows:

	Pension Benefits					
	U.S. Plans		Non-U.S. Plans		Worldwide OPEB	
	2019	2020	2019	2020	2019	2020
Weighted Average Assumptions at December 31						
Discount rate	3.32 %	2.56 %	1.74 %	1.23 %	3.30 %	2.62 %
Average rate of increase in compensation	3.50	3.50	3.37	3.34	3.44	3.44
Weighted Average Assumptions Used to Determine Net Benefit Cost for the Year Ended December 31						
Discount rate - Service cost	4.17 %	3.55 %	2.52 %	1.75 %	4.34 %	3.57 %
Effective interest rate on benefit obligation	3.75	2.88	2.21	1.46	3.87	2.85
Expected long-term rate of return on assets	6.75	6.50	4.18	3.67	—	—
Average rate of increase in compensation	3.50	3.50	3.37	3.37	3.44	3.44

The pre-tax net periodic benefit cost/(income) for our defined benefit pension and OPEB plans for the years ended December 31 was as follows (in millions):

	Pension Benefits						Worldwide OPEB		
	U.S. Plans			Non-U.S. Plans					
	2018	2019	2020	2018	2019	2020	2018	2019	2020
Service cost	\$ 544	\$ 474	\$ 520	\$ 588	\$ 506	\$ 529	\$ 54	\$ 43	\$ 47
Interest cost	1,466	1,570	1,291	684	691	514	195	211	169
Expected return on assets	(2,887)	(2,657)	(2,795)	(1,295)	(1,124)	(1,067)	—	—	—
Amortization of prior service costs/(credits)	143	87	4	25	33	32	(109)	(70)	(16)
Net remeasurement (gain)/loss	1,294	(135)	377	(76)	2,084	499	(366)	551	556
Separation programs/other	53	22	35	103	398	226	1	—	—
Settlements and curtailments	(15)	(67)	5	(2)	8	103	—	—	(2)
Net periodic benefit cost/(income)	<u>\$ 598</u>	<u>\$ (706)</u>	<u>\$ (563)</u>	<u>\$ 27</u>	<u>\$ 2,596</u>	<u>\$ 836</u>	<u>\$ (225)</u>	<u>\$ 735</u>	<u>\$ 754</u>

In 2019, we recognized additional expense of \$361 million related to separation programs, settlements, and curtailments, which included a \$57 million settlement loss, offset partially by a \$12 million curtailment gain, related to the transfer of our Netherlands pension obligation and related plan assets to an insurance company, and \$415 million of separation expenses, partially offset by \$104 million of settlement and curtailment gains, related to ongoing redesign programs.

In 2020, we recognized additional expense of \$367 million related to separation programs, settlements, and curtailments, which included \$61 million of settlement losses related to a non-U.S. pension plan and \$268 million related to ongoing redesign programs. Until our Global Redesign programs are completed, we anticipate further adjustments to our plans in subsequent periods.

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 17. RETIREMENT BENEFITS (Continued)

The year-end status of these plans was as follows (in millions):

	Pension Benefits				Worldwide OPEB	
	U.S. Plans		Non-U.S. Plans			
	2019	2020	2019	2020	2019	2020
Change in Benefit Obligation						
Benefit obligation at January 1	\$ 42,269	\$ 45,672	\$ 31,079	\$ 35,373	\$ 5,559	\$ 6,072
Service cost	474	520	506	529	43	47
Interest cost	1,570	1,291	691	514	211	169
Amendments	—	—	10	—	—	21
Separation programs/other	(24)	(10)	391	219	3	—
Curtailments	—	—	(43)	—	—	—
Settlements	(966)	(25)	(272)	(189)	—	—
Plan participant contributions	23	23	17	14	3	21
Benefits paid	(2,615)	(3,055)	(1,395)	(1,394)	(367)	(339)
Foreign exchange translation	—	—	501	1,131	69	28
Actuarial (gain)/loss	4,941	4,604	3,888	3,638	551	556
Benefit obligation at December 31	45,672	49,020	35,373	39,835	6,072	6,575
Change in Plan Assets						
Fair value of plan assets at January 1	39,774	44,253	27,273	29,958	—	—
Actual return on plan assets	7,800	7,018	2,935	4,149	—	—
Company contributions	284	186	789	744	—	—
Plan participant contributions	23	23	17	14	—	—
Benefits paid	(2,615)	(3,055)	(1,395)	(1,394)	—	—
Settlements	(966)	(25)	(330)	(189)	—	—
Foreign exchange translation	—	—	678	547	—	—
Other	(47)	(45)	(9)	(9)	—	—
Fair value of plan assets at December 31	44,253	48,355	29,958	33,820	—	—
Funded status at December 31	<u>\$ (1,419)</u>	<u>\$ (665)</u>	<u>\$ (5,415)</u>	<u>\$ (6,015)</u>	<u>\$ (6,072)</u>	<u>\$ (6,575)</u>
Amounts Recognized on the Balance Sheets						
Prepaid assets	\$ 911	\$ 1,578	\$ 2,318	\$ 2,673	\$ —	\$ —
Other liabilities	(2,330)	(2,243)	(7,733)	(8,688)	(6,072)	(6,575)
Total	<u>\$ (1,419)</u>	<u>\$ (665)</u>	<u>\$ (5,415)</u>	<u>\$ (6,015)</u>	<u>\$ (6,072)</u>	<u>\$ (6,575)</u>
Amounts Recognized in Accumulated Other Comprehensive Loss (pre-tax)						
Unamortized prior service costs/(credits)	\$ 8	\$ 4	\$ 274	\$ 206	\$ 29	\$ (11)
Pension Plans in which Accumulated Benefit Obligation Exceeds Plan Assets at December 31						
Accumulated benefit obligation	\$ 2,141	\$ 2,295	\$ 12,421	\$ 14,595		
Fair value of plan assets	156	145	5,948	7,203		
Accumulated Benefit Obligation at December 31	\$ 44,578	\$ 47,848	\$ 32,106	\$ 36,272		
Pension Plans in which Projected Benefit Obligation Exceeds Plan Assets at December 31						
Projected benefit obligation	\$ 22,085	\$ 2,389	\$ 13,864	\$ 15,951		
Fair value of plan assets	19,755	145	6,131	7,264		
Projected Benefit Obligation at December 31	\$ 45,672	\$ 49,020	\$ 35,373	\$ 39,835		

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 17. RETIREMENT BENEFITS (Continued)

The actuarial (gain)/loss for our pension benefit obligations in 2019 and 2020 was primarily related to changes in discount rates.

Pension Plan Contributions

Our policy for funded pension plans is to contribute annually, at a minimum, amounts required by applicable laws and regulations. We may make contributions beyond those legally required.

In 2020, we contributed \$570 million to our global funded pension plans and made \$360 million of benefit payments to participants in unfunded plans. During 2021, we expect to contribute between \$600 million and \$800 million of cash to our global funded pension plans. We also expect to make about \$390 million of benefit payments to participants in unfunded plans. Based on current assumptions and regulations, we do not expect to have a legal requirement to fund our major U.S. pension plans in 2021.

Expected Future Benefit Payments

The expected future benefit payments at December 31, 2020 were as follows (in millions):

	Benefit Payments		
	Pension		Worldwide OPEB
	U.S. Plans	Non-U.S. Plans	
2021	\$ 3,430	\$ 1,480	\$ 340
2022	2,750	1,360	340
2023	2,760	1,370	330
2024	2,790	1,380	330
2025	2,780	1,400	330
2026-2030	13,730	7,210	1,640

Pension Plan Asset Information

Investment Objectives and Strategies. Our investment objectives for the U.S. plans are to minimize the volatility of the value of our U.S. pension assets relative to U.S. pension obligations and to ensure assets are sufficient to pay plan benefits. Our U.S. target asset allocations are 80% fixed income and 20% growth assets (primarily hedge funds, real estate, private equity, and public equity). Our largest non-U.S. plans (United Kingdom and Canada) have similar investment objectives to the U.S. plans.

Investment strategies and policies for the U.S. plans and the largest non-U.S. plans reflect a balance of risk-reducing and return-seeking considerations. The objective of minimizing the volatility of assets relative to obligations is addressed primarily through asset-liability matching, asset diversification, and hedging. The fixed income target asset allocation matches the bond-like and long-dated nature of the pension obligations. Assets are broadly diversified within asset classes to achieve risk-adjusted returns that in total lower asset volatility relative to the obligations. Strategies to address the goal of ensuring sufficient assets to pay benefits include target allocations to a broad array of asset classes, and strategies within asset classes that provide adequate returns, diversification, and liquidity.

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 17. RETIREMENT BENEFITS (*Continued*)

Derivatives are permitted for fixed income investment and public equity managers to use as efficient substitutes for traditional securities and to manage exposure to interest rate and foreign exchange risks. Interest rate and foreign currency derivative instruments are used for the purpose of hedging changes in the fair value of assets that result from interest rate changes and currency fluctuations. Interest rate derivatives also are used to adjust portfolio duration. Derivatives may not be used to leverage or to alter the economic exposure to an asset class outside the scope of the mandate an investment manager has been given. Alternative investment managers are permitted to employ leverage (including through the use of derivatives or other tools) that may alter economic exposure.

Alternative investments execute diverse strategies that provide exposure to a broad range of hedge fund strategies, equity investments in private companies, and investments in private property funds.

Significant Concentrations of Risk. Significant concentrations of risk in our plan assets relate to interest rates, growth assets, and operating risks. In order to minimize asset volatility relative to the obligations, the majority of plan assets are allocated to fixed income investments which are exposed to interest rate risk. Rate increases generally will result in a decline in the value of fixed income assets, while reducing the present value of the obligations. Conversely, rate decreases generally will increase the value of fixed income assets, offsetting the related increase in the obligations.

In order to ensure assets are sufficient to pay benefits, a portion of plan assets is allocated to growth assets that are expected over time to earn higher returns with more volatility than fixed income investments which more closely match pension obligations. Within growth assets, risk is mitigated by constructing a portfolio that is broadly diversified by asset class, investment strategy, manager, style, and process.

Operating risks include the risks of inadequate diversification and weak controls. To mitigate these risks, investments are diversified across and within asset classes in support of investment objectives. Policies and practices to address operating risks include ongoing manager oversight (e.g., style adherence, team strength, firm health, and internal risk controls), plan and asset class investment guidelines and instructions that are communicated to managers, and periodic compliance reviews to ensure adherence.

At year-end 2020, Ford securities comprised less than 1% of our plan assets.

Expected Long-Term Rate of Return on Assets. The long-term return assumption at year-end 2020 is 6.00% for the U.S. plans, 3.25% for the U.K. plans, and 4.25% for the Canadian plans, and averages 3.42% for all non-U.S. plans. A generally consistent approach is used worldwide to develop this assumption. This approach considers primarily inputs from a range of advisors for long-term capital market returns, inflation, bond yields, and other variables, adjusted for specific aspects of our investment strategy by plan. Historical returns also are considered where appropriate. The assumption is based on consideration of all inputs, with a focus on long-term trends to avoid short-term market influences.

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 17. RETIREMENT BENEFITS (Continued)

The fair value of our defined benefit pension plan assets (including dividends and interest receivables of \$322 million and \$102 million for U.S. and non-U.S. plans, respectively) by asset category at December 31 was as follows (in millions):

Asset Category	2019									
	U.S. Plans					Non-U.S. Plans				
	Level 1	Level 2	Level 3	Assets measured at NAV (a)	Total	Level 1	Level 2	Level 3	Assets measured at NAV (a)	Total
Equity										
U.S. companies	\$ 1,542	\$ 20	\$ —	\$ —	\$ 1,562	\$ 1,059	\$ 43	\$ —	\$ —	\$ 1,102
International companies	971	9	1	—	981	850	58	3	—	911
Total equity	2,513	29	1	—	2,543	1,909	101	3	—	2,013
Fixed Income										
U.S. government and agencies	8,965	2,823	—	—	11,788	380	94	—	—	474
Non-U.S. government	—	1,321	16	—	1,337	—	18,256	—	—	18,256
Corporate bonds	—	23,717	—	—	23,717	—	3,089	35	—	3,124
Mortgage/other asset-backed	—	527	—	—	527	—	565	69	—	634
Commingled funds	—	191	—	—	191	—	174	1	—	175
Derivative financial instruments, net	(9)	(147)	—	—	(156)	15	103	(56)	—	62
Total fixed income	8,956	28,432	16	—	37,404	395	22,281	49	—	22,725
Alternatives										
Hedge funds	—	—	—	2,961	2,961	—	—	—	1,207	1,207
Private equity	—	—	—	1,884	1,884	—	—	—	695	695
Real estate	—	—	—	1,193	1,193	—	—	—	325	325
Total alternatives	—	—	—	6,038	6,038	—	—	—	2,227	2,227
Cash, cash equivalents, and repurchase agreements (b)	(195)	—	—	—	(195)	(1,765)	—	—	—	(1,765)
Other (c)	(1,537)	—	—	—	(1,537)	(762)	—	5,520	—	4,758
Total assets at fair value	\$ 9,737	\$ 28,461	\$ 17	\$ 6,038	\$ 44,253	\$ (223)	\$ 22,382	\$ 5,572	\$ 2,227	\$ 29,958

- (a) Certain assets that are measured at fair value using the NAV per share (or its equivalent) practical expedient have not been classified in the fair value hierarchy.
- (b) Primarily short-term investment funds to provide liquidity to plan investment managers, cash held to pay benefits, and repurchase agreements valued at \$(1.9) billion in U.S. plans and \$(2.5) billion in non-U.S. plans.
- (c) For U.S. plans, amounts related to net pending security (purchases)/sales and net pending foreign currency purchases/(sales). For non-U.S. plans, primarily Ford-Werke, plan assets (insurance contract valued at \$4.5 billion at year-end 2019) and amounts related to net pending security (purchases)/sales and net pending foreign currency purchases/(sales).

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 17. RETIREMENT BENEFITS (Continued)

The fair value of our defined benefit pension plan assets (including dividends and interest receivables of \$317 million and \$102 million for U.S. and non-U.S. plans, respectively) by asset category at December 31 was as follows (in millions):

Asset Category	2020									
	U.S. Plans					Non-U.S. Plans				
	Level 1	Level 2	Level 3	Assets measured at NAV (a)	Total	Level 1	Level 2	Level 3	Assets measured at NAV (a)	Total
Equity										
U.S. companies	\$ 2,161	\$ 20	\$ —	\$ —	\$ 2,181	\$ 1,989	\$ 48	\$ —	\$ —	\$ 2,037
International companies	1,346	18	2	—	1,366	1,428	181	4	—	1,613
Total equity	3,507	38	2	—	3,547	3,417	229	4	—	3,650
Fixed Income										
U.S. government and agencies	9,243	2,177	—	—	11,420	—	75	—	—	75
Non-U.S. government	—	1,203	14	—	1,217	—	20,398	—	—	20,398
Corporate bonds	—	26,983	—	—	26,983	—	3,391	53	—	3,444
Mortgage/other asset-backed	—	512	—	—	512	—	515	16	—	531
Commingled funds	—	189	—	—	189	—	111	—	—	111
Derivative financial instruments, net	1	(95)	—	—	(94)	2	80	(118)	—	(36)
Total fixed income	9,244	30,969	14	—	40,227	2	24,570	(49)	—	24,523
Alternatives										
Hedge funds	—	—	—	3,258	3,258	—	—	—	1,259	1,259
Private equity	—	—	—	1,859	1,859	—	—	—	729	729
Real estate	—	—	—	1,220	1,220	—	—	—	323	323
Total alternatives	—	—	—	6,337	6,337	—	—	—	2,311	2,311
Cash, cash equivalents, and repurchase agreements (b)	(605)	—	—	—	(605)	(2,257)	—	—	—	(2,257)
Other (c)	(1,151)	—	—	—	(1,151)	(458)	—	6,051	—	5,593
Total assets at fair value	<u>\$ 10,995</u>	<u>\$ 31,007</u>	<u>\$ 16</u>	<u>\$ 6,337</u>	<u>\$ 48,355</u>	<u>\$ 704</u>	<u>\$ 24,799</u>	<u>\$ 6,006</u>	<u>\$ 2,311</u>	<u>\$ 33,820</u>

(a) Certain assets that are measured at fair value using the NAV per share (or its equivalent) practical expedient have not been classified in the fair value hierarchy.

(b) Primarily short-term investment funds to provide liquidity to plan investment managers, cash held to pay benefits, and repurchase agreements valued at \$(2.4) billion in U.S. plans and \$(2.9) billion in non-U.S. plans.

(c) For U.S. plans, amounts related to net pending security (purchases)/sales and net pending foreign currency purchases/(sales). For non-U.S. plans, primarily Ford-Werke, plan assets (insurance contract valued at \$5 billion at year-end 2020) and amounts related to net pending security (purchases)/sales and net pending foreign currency purchases/(sales).

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 17. RETIREMENT BENEFITS (Continued)

The following table summarizes the changes in Level 3 defined benefit pension plan assets measured at fair value on a recurring basis for the years ended December 31 (in millions):

2019						
	Return on plan assets					Fair Value at December 31
	Fair Value at January 1	Attributable to Assets Held at December 31	Attributable to Assets Sold	Net Purchases/ (Settlements)	Transfers Into/ (Out of) Level 3	
U.S. Plans	\$ 1	\$ 1	\$ —	\$ 15	\$ —	\$ 17
Non-U.S. Plans (a)	5,249	215	(5)	113	—	5,572

2020						
	Return on plan assets					Fair Value at December 31
	Fair Value at January 1	Attributable to Assets Held at December 31	Attributable to Assets Sold	Net Purchases/ (Settlements)	Transfers Into/ (Out of) Level 3	
U.S. Plans	\$ 17	\$ (2)	\$ 1	\$ —	\$ —	\$ 16
Non-U.S. Plans (a)	5,572	473	1	1	(41)	6,006

(a) Primarily Ford-Werke plan assets (insurance contract valued at \$4.5 billion and \$5 billion at year-end 2019 and 2020, respectively).

NOTE 18. LEASE COMMITMENTS

We lease land, dealership facilities, offices, distribution centers, warehouses, and equipment under agreements with contractual periods ranging from less than one year to 40 years. Many of our leases contain one or more options to extend. In certain dealership lease agreements, we are the tenant and we sublease the site to a dealer. In the event the sublease is terminated, we have the option to terminate the head lease. We include options that we are reasonably certain to exercise in our evaluation of the lease term after considering all relevant economic and financial factors.

Leases that are economically similar to the purchase of an asset are classified as finance leases. The leased (“right-of-use”) assets in finance lease arrangements are reported in *Net property* on our consolidated balance sheets. Otherwise, the leases are classified as operating leases and reported in *Other assets* in the non-current assets section of our consolidated balance sheets.

For the majority of our leases, we do not separate the non-lease components (e.g., maintenance and operating services) from the lease components to which they relate. Instead, non-lease components are included in the measurement of the lease liabilities. However, we do separate lease and non-lease components for contracts containing a significant service component (e.g., energy performance contracts). We calculate the initial lease liability as the present value of fixed payments not yet paid and variable payments that are based on a market rate or an index (e.g., CPI), measured at commencement. The majority of our leases are discounted using our incremental borrowing rate because the rate implicit in the lease is not readily determinable. All other variable payments are expensed as incurred.

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 18. LEASE COMMITMENTS (Continued)

Lease right-of-use assets and liabilities at December 31 were as follows (in millions):

	<u>2019</u>	<u>2020</u>
Operating leases		
Other assets, non-current	\$ 1,415	\$ 1,287
Other liabilities and deferred revenue, current	\$ 367	\$ 323
Other liabilities and deferred revenue, non-current	1,047	991
Total operating lease liabilities	<u>\$ 1,414</u>	<u>\$ 1,314</u>
Finance leases		
Property and equipment, gross	\$ 252	\$ 540
Accumulated depreciation	(43)	(50)
Property and equipment, net	<u>\$ 209</u>	<u>\$ 490</u>
Automotive debt payable within one year	\$ 92	\$ 46
Automotive long-term debt	85	368
Total finance lease liabilities	<u>\$ 177</u>	<u>\$ 414</u>

The amounts contractually due on our lease liabilities as of December 31, 2020 were as follows (in millions):

	<u>Operating Leases (a)</u>	<u>Finance Leases</u>
2021	\$ 366	\$ 60
2022	279	54
2023	210	42
2024	156	35
2025	117	30
Thereafter	352	303
Total	<u>1,480</u>	<u>524</u>
Less: Present value discount	166	110
Total lease liabilities	<u>\$ 1,314</u>	<u>\$ 414</u>

(a) Excludes approximately \$101 million in future lease payments for various operating leases commencing in a future period.

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 18. LEASE COMMITMENTS (Continued)

Supplemental cash flow information related to leases for the years ended December 31 was as follows (in millions):

	2019	2020
Cash paid for amounts included in the measurement of lease liabilities		
Operating cash flows from operating leases	\$ 460	\$ 434
Operating cash flows from finance leases	6	15
Financing cash flows from finance leases	35	105
Right-of-use assets obtained in exchange for lease liabilities		
Operating leases	\$ 527	\$ 304
Finance leases (a)	43	306

The components of lease expense for the years ended December 31 were as follows (in millions):

	2019	2020
Operating lease expense	\$ 467	\$ 463
Variable lease expense	53	57
Sublease income	(16)	(14)
Finance lease expense		
Amortization of right-of-use assets	15	27
Interest on lease liabilities	6	15
Total lease expense	\$ 525	\$ 548

The weighted-average remaining lease term and weighted-average discount rate at December 31 were as follows:

	2019	2020
Weighted-average remaining lease term (in years)		
Operating leases	6.3	6.3
Finance leases (a)	3.0	14.8
Weighted-average discount rate		
Operating leases	3.4 %	3.8 %
Finance leases	3.3 %	3.5 %

(a) Includes the addition of a 20-year finance lease for about \$300 million that commenced in January 2020.

NOTE 19. DEBT AND COMMITMENTS

Our debt consists of short-term and long-term secured and unsecured debt securities, and secured and unsecured borrowings from banks and other lenders. Debt issuances are placed directly by us or through securities dealers or underwriters and are held by institutional and retail investors. In addition, Ford Credit sponsors securitization programs that provide short-term and long-term asset-backed financing through institutional investors in the U.S. and international capital markets.

Debt is reported on our consolidated balance sheets at par value adjusted for unamortized discount or premium, unamortized issuance costs, and adjustments related to designated fair value hedging (see Note 20). Discounts, premiums, and costs directly related to the issuance of debt are capitalized and amortized over the life of the debt or to the put date and are recorded in interest expense using the effective interest method. Gains and losses on the extinguishment of debt are recorded in *Other income/(loss), net*.

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 19. DEBT AND COMMITMENTS (Continued)

The carrying value of Automotive, Ford Credit, and Other debt at December 31 was as follows (in millions):

			Interest Rates			
			Average Contractual		Average Effective (a)	
	2019	2020	2019	2020	2019	2020
Automotive						
Debt payable within one year						
Short-term	\$ 315	\$ 613	1.5 %	4.0 %	1.5 %	4.0 %
Long-term payable within one year						
U.S. Department of Energy Advanced Technology Vehicles Manufacturing ("DOE ATVM") Incentive Program	591	148				
Other debt	540	434				
Unamortized (discount)/premium	(1)	(1)				
Total debt payable within one year	1,445	1,194				
Long-term debt payable after one year						
Public unsecured debt securities	10,583	18,583				
Delayed draw term loan	1,500	1,500				
DOE ATVM Incentive Program	880	1,064				
Other debt	547	1,622				
Unamortized (discount)/premium	(161)	(239)				
Unamortized issuance costs	(116)	(188)				
Total long-term debt payable after one year	13,233	22,342	5.2 % (b)	6.3 % (b)	5.3 % (b)	6.5 % (b)
Total Automotive	\$ 14,678	\$ 23,536				
Fair value of Automotive debt (c)	\$ 15,606	\$ 27,209				
Ford Credit						
Debt payable within one year						
Short-term	\$ 13,717	\$ 11,429	2.8 %	1.5 %	2.8 %	1.6 %
Long-term payable within one year						
Unsecured debt	15,062	17,185				
Asset-backed debt	23,609	21,345				
Unamortized (discount)/premium	1	2				
Unamortized issuance costs	(17)	(17)				
Fair value adjustments (d)	(1)	25				
Total debt payable within one year	52,371	49,969				
Long-term debt payable after one year						
Unsecured debt	55,148	54,197				
Asset-backed debt	32,162	32,276				
Unamortized (discount)/premium	6	28				
Unamortized issuance costs	(197)	(235)				
Fair value adjustments (d)	539	1,442				
Total long-term debt payable after one year	87,658	87,708	3.0 % (b)	2.7 % (b)	3.0 % (b)	2.7 % (b)
Total Ford Credit	\$ 140,029	\$ 137,677				
Fair value of Ford Credit debt (c)	\$ 141,678	\$ 139,796				
Other						
Long-term debt payable within one year	\$ 130	\$ 180				
Long-term debt payable after one year						
Unsecured debt	474	294				
Unamortized (discount)/premium and issuance costs	(4)	(3)				
Total long-term debt payable after one year	470	291	9.3 % (b)	9.3 % (b)	9.2 % (b)	9.2 % (b)
Total Other	\$ 600	\$ 471				
Fair value of Other debt	\$ 720	\$ 585				

(a) Average effective rates reflect the average contractual interest rate plus amortization of discounts, premiums, and issuance costs.

(b) Includes interest on long-term debt payable within one year and after one year.

(c) At December 31, 2019 and 2020, the fair value of debt includes \$315 million and \$529 million of Automotive short-term debt and \$12.8 billion and \$10.4 billion of Ford Credit short-term debt, respectively, carried at cost which approximates fair value. All other debt is categorized within Level 2 of the fair value hierarchy.

(d) These adjustments are related to hedging activity and include discontinued hedging relationship adjustments of \$7 million and \$299 million at December 31, 2019 and 2020, respectively. The carrying value of hedged debt was \$39.4 billion and \$45.5 billion at December 31, 2019 and 2020, respectively.

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 19. DEBT AND COMMITMENTS (Continued)

Cash paid for interest was \$1.2 billion, \$1 billion, and \$1.4 billion in 2018, 2019, and 2020, respectively, on Automotive and Other debt. Cash paid for interest was \$3.5 billion, \$4.1 billion, and \$3.4 billion in 2018, 2019, and 2020, respectively, on Ford Credit debt.

Maturities

Debt maturities at December 31, 2020 were as follows (in millions):

	2021	2022	2023	2024	2025	Thereafter	Adjustments	Total Debt Maturities
Automotive								
Public unsecured debt securities	\$ —	\$ 86	\$ 3,500	\$ —	\$ 3,709	\$ 11,288	\$ (290)	\$ 18,293
DOE ATVM Incentive Program	148	1,064	—	—	—	—	3	1,215
Delayed draw term loan	—	1,500	—	—	—	—	—	1,500
Short-term and other debt	1,047	145	175	48	881	373	(141)	2,528
Total	<u>\$ 1,195</u>	<u>\$ 2,795</u>	<u>\$ 3,675</u>	<u>\$ 48</u>	<u>\$ 4,590</u>	<u>\$ 11,661</u>	<u>\$ (428)</u>	<u>\$ 23,536</u>
Ford Credit								
Unsecured debt	\$ 27,583	\$ 13,983	\$ 10,835	\$ 10,323	\$ 9,117	\$ 9,939	\$ 1,313	\$ 83,093
Asset-backed debt	22,376	14,419	7,850	3,148	6,159	700	(68)	54,584
Total	<u>\$ 49,959</u>	<u>\$ 28,402</u>	<u>\$ 18,685</u>	<u>\$ 13,471</u>	<u>\$ 15,276</u>	<u>\$ 10,639</u>	<u>\$ 1,245</u>	<u>\$ 137,677</u>
Other								
Unsecured debt	\$ 180	\$ —	\$ —	\$ —	\$ —	\$ 294	\$ (3)	\$ 471

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 19. DEBT AND COMMITMENTS (Continued)

Automotive Segment

Public Unsecured Debt Securities

Our public unsecured debt securities outstanding at December 31 were as follows (in millions):

Title of Security	Aggregate Principal Amount Outstanding	
	2019	2020
8 7/8% Debentures due January 15, 2022	\$ 86	\$ 86
8.500% Notes due April 21, 2023	—	3,500
9.000% Notes due April 22, 2025	—	3,500
7 1/8% Debentures due November 15, 2025	209	209
7 1/2% Debentures due August 1, 2026	193	193
4.346% Notes due December 8, 2026	1,500	1,500
6 5/8% Debentures due February 15, 2028	104	104
6 5/8% Debentures due October 1, 2028 (a)	638	638
6 3/8% Debentures due February 1, 2029 (a)	260	260
9.625% Notes due April 22, 2030	—	1,000
7.45% GLOBS due July 16, 2031 (a)	1,794	1,794
8.900% Debentures due January 15, 2032	151	151
9.95% Debentures due February 15, 2032	4	4
4.75% Notes due January 15, 2043	2,000	2,000
7.75% Debentures due June 15, 2043	73	73
7.40% Debentures due November 1, 2046	398	398
5.291% Notes due December 8, 2046	1,300	1,300
9.980% Debentures due February 15, 2047	181	181
6.20% Notes due June 1, 2059	750	750
6.00% Notes due December 1, 2059	800	800
7.70% Debentures due May 15, 2097	142	142
Total public unsecured debt securities (b)	<u>\$ 10,583</u>	<u>\$ 18,583</u>

(a) Listed on the Luxembourg Exchange and on the Singapore Exchange.

(b) Excludes 9.215% *Debentures due September 15, 2021* with an outstanding balance at December 31, 2020 of \$180 million. The proceeds from these securities were on-lent by Ford to Ford Holdings and are reported as *Other long-term debt*.

**FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS**

NOTE 19. DEBT AND COMMITMENTS (Continued)

DOE ATVM Incentive Program

In September 2009, we entered into a Loan Arrangement and Reimbursement Agreement with the DOE, under which we borrowed through multiple draws \$5.9 billion to finance certain costs for fuel-efficient, advanced-technology vehicles. At December 31, 2020, an aggregate \$1.2 billion was outstanding. In June 2020, the ATVM loan was modified, reducing quarterly principal payments from \$148 million to \$37 million. The deferred portion of the principal payments will be due upon original maturity in June 2022. The ATVM loan bears interest at a blended rate based on the U.S. Treasury yield curve at the time each draw was made (with the weighted-average interest rate on all such draws being about 2.3% per annum) on the principal amount, and an additional 1.45% per annum on the deferred portion of the principal amount.

U.K. Export Finance Program

In the second quarter of 2020, Ford Motor Company Limited ("Ford of Britain"), our operating subsidiary in the United Kingdom, entered into, and drew in full, a £625 million term loan credit facility with a syndicate of banks to support Ford of Britain's general export activities. Accordingly, U.K. Export Finance ("UKEF") provided a £500 million guarantee of the credit facility under its Export Development Guarantee scheme, which supports high value commercial lending to U.K. exporters. We have also guaranteed Ford of Britain's obligations under the credit facility to the lenders. As of December 31, 2020, the full £625 million remained outstanding. This five-year, non-amortizing loan matures on June 30, 2025.

Automotive Credit Facilities

Total Company committed credit lines, excluding Ford Credit, at December 31, 2020 were \$18.6 billion, consisting of \$13.5 billion of our corporate credit facility, \$2 billion of our supplemental revolving credit facility, \$1.5 billion of our delayed draw term loan facility, and \$1.6 billion of local credit facilities. In the first quarter of 2020, we submitted borrowing notices to our lenders for the full amounts of both our corporate credit facility and our supplemental revolving credit facility, and by the third quarter of 2020, we repaid the full amounts outstanding under each facility. At December 31, 2020, the utilized portion of the corporate credit facility was \$27 million, representing amounts utilized for letters of credit, and no portion of the supplemental revolving credit facility was utilized. The \$1.5 billion delayed draw term loan facility was drawn in full in 2019 and remains outstanding. In addition, about \$700 million of committed Company credit lines, excluding Ford Credit, was available under local credit facilities for our affiliates as of December 31, 2020.

Lenders under our corporate credit facility have \$400 million of commitments maturing on April 30, 2022, \$3 billion of commitments maturing on July 27, 2023, and \$10.1 billion of commitments maturing on April 30, 2024. Lenders under our supplemental revolving credit facility have about \$200 million of commitments maturing on April 30, 2022, and \$1.8 billion of commitments maturing on July 27, 2023.

The corporate credit facility is unsecured and free of material adverse change conditions to borrowing, restrictive financial covenants (for example, interest or fixed-charge coverage ratio, debt-to-equity ratio, and minimum net worth requirements), and credit rating triggers that could limit our ability to obtain funding or trigger early repayment. The corporate credit facility contains a liquidity covenant that requires us to maintain a minimum of \$4 billion in aggregate of domestic cash, cash equivalents, and loaned and marketable securities and/or availability under the facility. Further, the terms of the corporate and supplemental revolving credit facilities prohibit share repurchases (with limited exceptions) while any portion of either facility is outstanding and the payment of dividends on our common or Class B stock while more than 50% of the aggregate amount of commitments under the two facilities is utilized. The terms and conditions of the delayed draw term loan (other than the restrictions on share repurchases and dividends) and the supplemental revolving credit facility are consistent with our corporate credit facility.

Each of the corporate credit facility, supplemental revolving credit facility, delayed draw term loan, and our Loan Arrangement and Reimbursement Agreement with the DOE include a covenant that requires us to provide guarantees from certain of our subsidiaries in the event that our senior, unsecured, long-term debt does not maintain at least two investment grade ratings from Fitch, Moody's, and S&P. The following subsidiaries have provided unsecured guarantees to the lenders under the credit facilities and to the DOE: Ford Component Sales, LLC; Ford European Holdings LLC; Ford Global Technologies, LLC; Ford Holdings LLC (the parent company of Ford Credit); Ford International Capital LLC; Ford Mexico Holdings LLC; Ford Motor Service Company; Ford Smart Mobility LLC; and Ford Trading Company, LLC.

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 19. DEBT AND COMMITMENTS (Continued)

Ford Credit Segment

Asset-Backed Debt

At December 31, 2020, the carrying value of our asset-backed debt was \$54.6 billion. This secured debt is issued by Ford Credit and includes asset-backed securities used to fund operations and maintain liquidity. Assets securing the related debt issued as part of all our securitization transactions are included in our consolidated results and are based upon the legal transfer of the underlying assets in order to reflect legal ownership and the beneficial ownership of the debt holder. The third-party investors in the securitization transactions have legal recourse only to the assets securing the debt and do not have such recourse to us, except for the customary representation and warranty provisions or when we are counterparty to certain derivative transactions of the special purpose entities ("SPEs"). In addition, the cash flows generated by the assets are restricted only to pay such liabilities; Ford Credit retains the right to residual cash flows. See Note 24 for additional information.

Although not contractually required, we regularly support our wholesale securitization programs by repurchasing receivables of a dealer from a SPE when the dealer's performance is at risk, which transfers the corresponding risk of loss from the SPE to us. In order to continue to fund the wholesale receivables, we also may contribute additional cash or wholesale receivables if the collateral falls below required levels. There were no contributions in 2019 and the balance of cash related to these contributions was \$0 throughout 2019. The balances of cash related to these contributions were \$25 million at December 31, 2020, and ranged from \$0 to \$524 million throughout 2020.

SPEs that are exposed to interest rate or currency risk may reduce their risks by entering into derivative transactions. In certain instances, we have entered into derivative transactions with the counterparty to protect the counterparty from risks absorbed through derivative transactions with the SPEs. Derivative income/(expense) related to the derivative transactions that support Ford Credit's securitization programs were \$(17) million, \$(75) million, and \$(234) million for the years ended December 31, 2018, 2019, and 2020, respectively. See Note 20 for additional information regarding the accounting for derivatives.

Interest expense on securitization debt was \$1.4 billion, \$1.6 billion, and \$1.2 billion in 2018, 2019, and 2020, respectively.

The assets and liabilities related to our asset-backed debt arrangements included in our consolidated financial statements at December 31 were as follows (in billions):

	2019	2020
Assets		
Cash and cash equivalents	\$ 3.5	\$ 3.2
Finance receivables, net	64.9	59.6
Net investment in operating leases	14.9	12.8
Liabilities		
Debt (a)	\$ 56.6	\$ 54.6

(a) Debt is net of unamortized discount and issuance costs.

Committed Credit Facilities

At December 31, 2020, Ford Credit's committed capacity totaled \$40.6 billion, compared with \$42.6 billion at December 31, 2019. Ford Credit's committed capacity is primarily comprised of committed asset-backed security facilities from bank-sponsored commercial paper conduits and other financial institutions and unsecured credit facilities with financial institutions.

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 20. DERIVATIVE FINANCIAL INSTRUMENTS AND HEDGING ACTIVITIES

In the normal course of business, our operations are exposed to global market risks, including the effect of changes in foreign currency exchange rates, certain commodity prices, and interest rates. To manage these risks, we enter into highly effective derivative contracts:

- Foreign currency exchange contracts, including forwards, that are used to manage foreign exchange exposure;
- Commodity contracts, including forwards, that are used to manage commodity price risk;
- Interest rate contracts, including swaps, that are used to manage the effects of interest rate fluctuations; and
- Cross-currency interest rate swap contracts that are used to manage foreign currency and interest rate exposures on foreign-denominated debt.

Our derivatives are over-the-counter customized derivative transactions and are not exchange-traded. We review our hedging program, derivative positions, and overall risk management strategy on a regular basis.

Derivative Financial Instruments and Hedge Accounting. Derivative assets are reported in *Other assets* and derivative liabilities are reported in *Payables* and *Other liabilities and deferred revenue*.

We have elected to apply hedge accounting to certain derivatives. Derivatives that are designated in hedging relationships are evaluated for effectiveness using regression analysis at the time they are designated and throughout the hedge period. Some derivatives do not qualify for hedge accounting; for others, we elect not to apply hedge accounting.

Cash Flow Hedges. Our Automotive segment has designated certain forward contracts as cash flow hedges of forecasted transactions with exposure to foreign currency exchange and commodity price risks.

Changes in the fair value of cash flow hedges are deferred in *Accumulated other comprehensive income/(loss)* and are recognized in *Cost of sales* when the hedged item affects earnings. Our policy is to de-designate foreign currency exchange cash flow hedges prior to the time forecasted transactions are recognized as assets or liabilities on our consolidated balance sheets and report subsequent changes in fair value through *Cost of sales*. If it becomes probable that the originally forecasted transaction will not occur, the related amount included in *Accumulated other comprehensive income/(loss)* is reclassified and recognized in earnings. The cash flows associated with hedges designated until maturity are reported in *Net cash provided by/(used in) operating activities* on our consolidated statement of cash flows. Our cash flow hedges mature within three years.

Fair Value Hedges. Our Ford Credit segment uses derivatives to reduce the risk of changes in the fair value of debt. We have designated certain receive-fixed, pay-float interest rate and cross-currency interest rate swaps as fair value hedges of fixed-rate debt. The risk being hedged is the risk of changes in the fair value of the hedged debt attributable to changes in the benchmark interest rate and foreign exchange. We report the change in fair value of the hedged debt related to the change in benchmark interest rate in *Ford Credit debt* and *Ford Credit interest, operating, and other expenses*. We report the change in fair value of the hedged debt and hedging instrument related to foreign currency in *Other income/(loss), net*. Net interest settlements and accruals, and fair value changes on hedging instruments due to the benchmark interest rate change are reported in *Ford Credit interest, operating, and other expenses*. The cash flows associated with fair value hedges are reported in *Net cash provided by/(used in) operating activities* on our consolidated statements of cash flows.

When a fair value hedge is de-designated, or when the derivative is terminated before maturity, the fair value adjustment to the hedged debt continues to be reported as part of the carrying value of the debt and is recognized in *Ford Credit interest, operating, and other expenses* over its remaining life.

Derivatives Not Designated as Hedging Instruments. Our Automotive segment reports changes in the fair value of derivatives not designated as hedging instruments through *Cost of sales*. Cash flows associated with non-designated or de-designated derivatives are reported in *Net cash provided by/(used in) investing activities* on our consolidated statements of cash flows.

Our Ford Credit segment reports the gains/(losses) on derivatives not designated as hedging instruments in *Other income/(loss), net*. Cash flows associated with non-designated or de-designated derivatives are reported in *Net cash provided by/(used in) investing activities* on our consolidated statements of cash flows.

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 20. DERIVATIVE FINANCIAL INSTRUMENTS AND HEDGING ACTIVITIES (Continued)

Normal Purchases and Normal Sales Classification. We have elected to apply the normal purchases and normal sales classification for physical supply contracts that are entered into for the purpose of procuring commodities to be used in production over a reasonable period in the normal course of our business.

Income Effect of Derivative Financial Instruments

The gains/(losses), by hedge designation, reported in income for the years ended December 31 were as follows (in millions):

	2018	2019	2020
Cash flow hedges			
Reclassified from AOCI to Cost of sales			
Foreign currency exchange contracts (a)	\$ 50	\$ 29	\$ (11)
Commodity contracts (b)	—	(32)	(55)
Fair value hedges			
Interest rate contracts			
Net interest settlements and accruals on hedging instruments	10	(16)	290
Fair value changes on hedging instruments	(155)	706	986
Fair value changes on hedged debt	153	(694)	(985)
Cross-currency interest rate swap contracts			
Net interest settlements and accruals on hedging instruments	—	—	(2)
Fair value changes on hedging instruments	—	—	38
Fair value changes on hedged debt	—	—	(37)
Derivatives not designated as hedging instruments			
Foreign currency exchange contracts (c)	398	84	(310)
Cross-currency interest rate swap contracts	(244)	(229)	486
Interest rate contracts	(84)	(13)	(100)
Commodity contracts	(96)	—	47
Total	<u>\$ 32</u>	<u>\$ (165)</u>	<u>\$ 347</u>

(a) For 2018, 2019, and 2020, a \$288 million gain, an \$839 million loss, and a \$198 million gain, respectively, were reported in *Other comprehensive income/(loss), net of tax*.

(b) For 2019 and 2020, a \$36 million loss and a \$9 million gain, respectively, were reported in *Other comprehensive income/(loss), net of tax*.

(c) For 2018, 2019, and 2020, a \$235 million gain, a \$32 million gain, and a \$228 million loss, respectively, were reported in *Cost of sales* and a \$163 million gain, a \$52 million gain, and an \$82 million loss were reported in *Other income/(loss), net*, respectively.

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 20. DERIVATIVE FINANCIAL INSTRUMENTS AND HEDGING ACTIVITIES (Continued)

Balance Sheet Effect of Derivative Financial Instruments

Derivative assets and liabilities are reported on our consolidated balance sheets at fair value and are presented on a gross basis. The notional amounts of the derivative instruments do not necessarily represent amounts exchanged by the parties and are not a direct measure of our financial exposure. We also enter into master agreements with counterparties that may allow for netting of exposures in the event of default or breach of the counterparty agreement. Collateral represents cash received or paid under reciprocal arrangements that we have entered into with our derivative counterparties, which we do not use to offset our derivative assets and liabilities.

The fair value of our derivative instruments and the associated notional amounts at December 31 were as follows (in millions):

	2019			2020		
	Notional	Fair Value of Assets	Fair Value of Liabilities	Notional	Fair Value of Assets	Fair Value of Liabilities
Cash flow hedges						
Foreign currency exchange contracts	\$ 15,349	\$ 47	\$ 493	\$ 15,860	\$ 47	\$ 383
Commodity contracts	673	5	29	703	40	5
Fair value hedges						
Interest rate contracts	26,577	702	19	26,924	1,331	4
Cross-currency interest rate swap contracts	—	—	—	885	46	—
Derivatives not designated as hedging instruments						
Foreign currency exchange contracts	19,350	58	270	25,956	172	399
Cross-currency interest rate swap contracts	5,849	134	67	6,849	557	1
Interest rate contracts	68,914	275	191	70,318	663	439
Commodity contracts	467	9	9	599	74	4
Total derivative financial instruments, gross (a) (b)	<u>\$ 137,179</u>	<u>\$ 1,230</u>	<u>\$ 1,078</u>	<u>\$ 148,094</u>	<u>\$ 2,930</u>	<u>\$ 1,235</u>
Current portion		\$ 390	\$ 772		\$ 974	\$ 859
Non-current portion		840	306		1,956	376
Total derivative financial instruments, gross		<u>\$ 1,230</u>	<u>\$ 1,078</u>		<u>\$ 2,930</u>	<u>\$ 1,235</u>

(a) At December 31, 2019 and 2020, we held collateral of \$18 million and \$9 million, respectively, and we posted collateral of \$78 million and \$96 million, respectively.

(b) At December 31, 2019 and 2020, the fair value of assets and liabilities available for counterparty netting was \$269 million and \$505 million, respectively. All derivatives are categorized within Level 2 of the fair value hierarchy.

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 21. EMPLOYEE SEPARATION ACTIONS AND EXIT AND DISPOSAL ACTIVITIES

We record costs associated with voluntary separations at the time of employee acceptance, unless the acceptance requires explicit approval by the Company. We record costs associated with involuntary separation programs when management has approved the plan for separation, the affected employees are identified, and it is unlikely that actions required to complete the separation plan will change significantly. Costs associated with benefits that are contingent on the employee continuing to provide service are accrued over the required service period.

Automotive Segment

Global Redesign

As previously announced, we are executing a global redesign of our business. Redesign-related activities, including employee separation costs, facility and other asset-related charges (e.g., impairment, accelerated depreciation), dealer and supplier payments, other statutory and contractual obligations, and other expenses, are recorded in *Cost of sales* and *Selling, administrative, and other expenses*. Below are actions we have initiated as part of the redesign.

Brazil. In February 2019, Ford Motor Company Brasil Ltda. ("Ford Brazil"), our subsidiary in Brazil, committed to a plan to exit the commercial heavy truck business in South America. As a result, Ford Brazil ceased production at the São Bernardo do Campo plant in Brazil during 2019. Ford Brazil completed a sale of the plant machinery and equipment in the third quarter of 2020 and the land and buildings in the fourth quarter of 2020.

In December 2020, Ford Brazil committed to a plan to exit manufacturing operations in Brazil, which will result in the closure of facilities in Camaçari, Taubaté, and Troller in 2021. Production in Camaçari and Taubaté to support new vehicle sales ceased in January 2021, with a limited amount of parts production continuing for a few months to support inventories for aftermarket sales. The Troller plant will cease operations in the fourth quarter of 2021. These actions will not result in Ford Brazil being substantially liquidated, as it will continue imported vehicle sales and customer support operations, and maintain the product development center in Bahia, the proving grounds in Tatuí, São Paulo, and the regional headquarters in São Paulo.

Russia. In March 2019, Ford Sollers Netherlands B.V. ("Ford Sollers"), a joint venture between Ford and Sollers PJSC ("Sollers") in which Ford had control, announced its plan to restructure its business in Russia to focus exclusively on commercial vehicles and to exit the passenger car segment. As a result of these actions, Ford acquired 100% ownership of Ford Sollers and ceased production at the Naberezhnye Chelny and St. Petersburg vehicle assembly plants and the Elabuga engine plant during the second quarter of 2019.

Subsequent to completion of the restructuring actions, in July 2019, Ford sold a 51% controlling interest in the restructured entity to Sollers, which resulted in deconsolidation of the Ford Sollers subsidiary. Our continued involvement in Ford Sollers is accounted for as an equity method investment.

In the fourth quarter of 2020, we also completed a sale of certain manufacturing assets.

United Kingdom. In June 2019, Ford of Britain announced its plan to exit the Ford Bridgend plant in South Wales in 2020. Ford of Britain ceased production at the Bridgend plant and the facility was closed in September 2020.

India. In the third quarter of 2019, Ford committed to a plan to sell specific net assets in our India Automotive operations. On December 31, 2020, Ford and Mahindra & Mahindra Limited ("Mahindra") mutually determined that we will not complete the joint venture. See Note 22 for additional information.

Other Global Redesign Actions. In 2018, we announced our plan to end production at the Ford Aquitaine Industries plant in Bordeaux, France. We ceased production and the facility was closed in July 2019. In March 2019, we announced our plan to phase-out the production of the C-Max at the Saarlouis Body and Assembly Plant in Germany. We ceased production of the C-Max in June 2019. In addition, we are continuing to reduce our global workforce and take other restructuring actions.

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 21. EMPLOYEE SEPARATION ACTIONS AND EXIT AND DISPOSAL ACTIVITIES (Continued)

The following table summarizes the redesign-related activities for the years ended December 31, which are recorded in *Other liabilities and deferred revenue* (in millions):

	2019	2020
Beginning balance	\$ 291	\$ 734
Changes in accruals (a)	1,382	1,598
Payments	(911)	(631)
Foreign currency translation	(28)	31
Ending balance	<u>\$ 734</u>	<u>\$ 1,732</u>

(a) Excludes pension costs of \$311 million and \$268 million in 2019 and 2020, respectively.

We also recorded \$1.4 billion of non-cash charges in 2019 for the impairment of our India Automotive operations, accelerated depreciation, and other items. In 2020, we also recorded \$1.4 billion of non-cash charges related to the write-off of certain tax and other assets in South America, accelerated depreciation, and other items. In addition, we recognized a pre-tax net gain on sale of assets in Brazil and Russia of \$39 million, with cash proceeds of \$128 million, in 2020.

We estimate that we will incur total charges in 2021 that range between \$2.2 billion and \$2.7 billion related to the actions above, primarily attributable to employee separations, accelerated depreciation, and dealer and supplier settlements.

Other Actions

United Automobile, Aerospace and Agricultural Implement Workers of America ("UAW") Voluntary Separation Packages. As agreed in the collective bargaining agreement ratified in November 2019, during the first quarter of 2020, we offered voluntary separation packages to our UAW hourly workforce who were eligible for normal or early retirement, and recorded associated costs of \$201 million in *Cost of sales*. All separations occurred during 2020.

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 22. HELD-FOR-SALE OPERATIONS AND CHANGES IN INVESTMENTS IN AFFILIATES

Automotive Segment

India. In the third quarter of 2019, we committed to a plan to sell specific net assets in our India Automotive operations. We entered into a definitive agreement to form a joint venture with Mahindra to sell certain India Automotive operations to the joint venture. Accordingly, we reported the assets and liabilities of these operations as held for sale for the year ended December 31, 2019, as follows (in millions):

	2019
Assets	
Trade and other receivables, net	\$ 269
Inventories	208
Other assets, current	147
Net property	279
Other assets, non-current	10
Total assets of held-for-sale operations	913
Less: Intercompany asset balances	(228)
Automotive segment total assets of held-for-sale operations (a)	\$ 685
Liabilities	
Payables	\$ 461
Other liabilities and deferred revenue, current	71
Automotive debt payable within one year	90
Other liabilities and deferred revenue, non-current	28
Total liabilities of held-for-sale operations	650
Less: Intercompany liability balances	(169)
Automotive segment total liabilities of held-for-sale operations (a)	\$ 481

(a) As of December 31, 2019, intercompany items and transactions have been eliminated on the consolidated balance sheets. We have presented those balances in the table for informational purposes.

We recognized, in *Cost of sales*, pre-tax impairment charges of \$804 million and \$23 million during the years ended December 31, 2019 and 2020, respectively, to adjust the carrying value of the held-for-sale assets to fair value less cost to sell. The value is measured on a nonrecurring basis and categorized within Level 3 of the fair value hierarchy. We determined fair value using a market approach, estimated based on the negotiated value of the assets.

As a result of fundamental changes in global economic and business conditions during 2020, caused in part by the global pandemic, on December 31, 2020, we and Mahindra mutually determined that we will not complete the joint venture. Accordingly, at December 31, 2020, the assets and liabilities of our India Automotive operations have been reclassified and reported as held and used. Because the carrying value of the net assets approximated fair value at December 31, 2020, the pre-tax impairment charges recorded in 2019 and 2020 were not adjusted as a result of the reclassification to held and used.

Mobility Segment

On June 1, 2020, we completed a transaction with VW that reduced our ownership interest in the autonomous vehicle technology company Argo AI and resulted in Ford and VW holding equal interests in Argo AI, with the remaining interests consisting of incentive units and founders' equity. The transaction involved us selling a portion of our Argo AI equity to VW for \$500 million and VW making additional investments in Argo AI, including contributing its Autonomous Intelligent Driving company. As a result of the transaction, we deconsolidated Argo AI, remeasured our retained investment in Argo AI at fair value, and recognized a \$3.5 billion gain in *Other income/(loss)*, of which \$2.9 billion related to our retained investment in Argo AI. We measured the fair value of Argo AI using the income approach. The significant assumptions used in the valuation included Argo AI's projected long-term cash flows and related terminal value, discounted at a rate typically used for a company at Argo AI's stage of development.

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 22. HELD-FOR-SALE OPERATIONS AND CHANGES IN INVESTMENTS IN AFFILIATES (Continued)

Our retained investment in Argo AI immediately after the transaction consisted of an equity method investment of \$2.4 billion and a preferred equity security investment of \$400 million, reflected on our consolidated balance sheets in *Equity in net assets of affiliated companies* and *Other assets*, respectively. The difference between the fair value of our equity method investment and our share of the carrying value of Argo AI's net assets primarily related to indefinite-lived assets. We also agreed to future funding of Argo AI of \$600 million, subject to capital calls, which will increase our preferred equity investment. As of December 31, 2020, \$507 million of the agreed future funding remains.

Ford Credit Segment

In the fourth quarter of 2019, Ford Credit committed to a plan to sell its operations in Forso, a wholly owned subsidiary of Ford Credit, that provided retail and dealer financing in Denmark, Finland, Norway, and Sweden. As a result, we classified the assets and liabilities of these operations as held for sale and recognized a pre-tax fair value impairment charge of \$20 million, reported in *Other income/(loss), net*, in the fourth quarter of 2019.

The assets and liabilities of the Forso operations classified as held for sale for the year ended December 31, 2019 were as follows (in millions):

	December 31, 2019
Assets	
Cash and cash equivalents	\$ 61
Ford Credit finance receivables, net, current	516
Trade and other receivables, net	8
Other assets, current	106
Ford Credit finance receivables, net, non-current	715
Net property	2
Deferred income taxes	9
Other assets, non-current	1
Total assets of held-for-sale operations	1,418
Less: Intercompany asset balances	(2)
Ford Credit segment total assets of held-for-sale operations (a)	<u>\$ 1,416</u>
Liabilities	
Payables	\$ 34
Other liabilities and deferred revenue, current	8
Ford Credit long-term debt	1,254
Deferred income taxes	23
Total liabilities of held-for-sale operations	1,319
Less: Intercompany liability balances	(1,274)
Ford Credit segment total liabilities of held-for-sale operations (a)	<u>\$ 45</u>

(a) As of December 31, 2019, intercompany items and transactions have been eliminated on the consolidated balance sheets. Upon closing, the buyer assumed the intercompany assets and liabilities. Accordingly, we have presented those balances in the table for informational purposes.

In the first quarter of 2020, Ford Credit completed the sale of Forso recognizing a pre-tax loss of \$4 million, reported in *Other income/(loss), net*, and cash proceeds of \$1.3 billion.

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 23. ACCUMULATED OTHER COMPREHENSIVE INCOME/(LOSS)

The changes in the balances for each component of accumulated other comprehensive income/(loss) attributable to Ford Motor Company for the years ended December 31 were as follows (in millions):

	2018	2019	2020
Foreign currency translation			
Beginning balance	\$ (4,277)	\$ (4,800)	\$ (4,626)
Gains/(Losses) on foreign currency translation	(435)	181	(1,107)
Less: Tax/(Tax benefit) (a)	91	6	(206)
Net gains/(losses) on foreign currency translation	(526)	175	(901)
(Gains)/Losses reclassified from AOCI to net income (b)	3	(1)	1
Other comprehensive income/(loss), net of tax (c)	(523)	174	(900)
Ending balance	\$ (4,800)	\$ (4,626)	\$ (5,526)
Marketable securities			
Beginning balance	\$ (48)	\$ (59)	\$ 71
Gains/(Losses) on available for sale securities	(37)	173	155
Less: Tax/(Tax benefit)	(8)	40	37
Net gains/(losses) on available for sale securities	(29)	133	118
(Gains)/Losses reclassified from AOCI to net income	20	(3)	(45)
Less: Tax/(Tax benefit)	2	—	(12)
Net (gains)/losses reclassified from AOCI to net income	18	(3)	(33)
Other comprehensive income/(loss), net of tax	(11)	130	85
Ending balance	\$ (59)	\$ 71	\$ 156
Derivative instruments			
Beginning balance	\$ 18	\$ 201	\$ (488)
Gains/(Losses) on derivative instruments	288	(875)	207
Less: Tax/(Tax benefit)	65	(180)	39
Net gains/(losses) on derivative instruments	223	(695)	168
(Gains)/Losses reclassified from AOCI to net income	(50)	3	66
Less: Tax/(Tax benefit)	(10)	(3)	12
Net (gains)/losses reclassified from AOCI to net income (d)	(40)	6	54
Other comprehensive income/(loss), net of tax	183	(689)	222
Ending balance	\$ 201	\$ (488)	\$ (266)
Pension and other postretirement benefits			
Beginning balance	\$ (2,652)	\$ (2,708)	\$ (2,685)
Prior service (costs)/credits arising during the period	(135)	(15)	(21)
Less: Tax/(Tax benefit)	(23)	(2)	(6)
Net prior service (costs)/credits arising during the period	(112)	(13)	(15)
Amortization and recognition of prior service costs/(credits) (e)	59	50	63
Less: Tax/(Tax benefit)	13	10	10
Net prior service costs/(credits) reclassified from AOCI to net income	46	40	53
Translation impact on non-U.S. plans	10	(4)	(11)
Other comprehensive income/(loss), net of tax	(56)	23	27
Ending balance	\$ (2,708)	\$ (2,685)	\$ (2,658)
Total AOCI ending balance at December 31	\$ (7,366)	\$ (7,728)	\$ (8,294)

- (a) We do not recognize deferred taxes for a majority of the foreign currency translation gains and losses because we do not anticipate reversal in the foreseeable future. However, we have made elections to tax certain non-U.S. operations simultaneously in U.S. tax returns, and have recorded deferred taxes for temporary differences that will reverse, independent of repatriation plans, in U.S. tax returns. Taxes or tax benefits resulting from foreign currency translation of the temporary differences are recorded in *Other comprehensive income/(loss), net of tax*.
- (b) Reclassified to *Other income/(loss), net*.
- (c) In 2020, excludes a loss of \$1 million related to noncontrolling interests.
- (d) Reclassified to *Cost of sales*. During the next twelve months we expect to reclassify existing net losses on cash flow hedges of \$114 million. See Note 20 for additional information.
- (e) *Amortization and recognition of prior service costs/(credits)* is included in the computation of net periodic pension cost/(income). See Note 17 for additional information.

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 24. VARIABLE INTEREST ENTITIES

A VIE is an entity that either (i) has insufficient equity to finance its activities without additional subordinated financial support, or (ii) has equity investors who lack the characteristics of a controlling financial interest. We consolidate VIEs of which we are the primary beneficiary. We consider ourselves the primary beneficiary of a VIE when we have both the power to direct the activities that most significantly impact the entity's economic performance and the obligation to absorb losses or the right to receive benefits from the entity that could potentially be significant to the VIE. Assets recognized as a result of consolidating these VIEs do not represent additional assets that could be used to satisfy claims against our general assets. Liabilities recognized as a result of consolidating these VIEs do not represent additional claims on our general assets; rather, they represent claims against the specific assets of the consolidated VIEs.

We have the power to direct the significant activities of an entity when our management has the ability to make key operating decisions, such as decisions regarding capital investment or manufacturing production schedules. For securitization entities, we have the power to direct significant activities when we have the ability to exercise discretion in the servicing of financial assets, issue additional debt, exercise a unilateral call option, add assets to revolving structures, or control investment decisions.

VIEs of Which We are Not the Primary Beneficiary

Certain of our investments in affiliates are VIEs, in which the power to direct economically significant activities is shared with other investors. Our investments in these affiliates are accounted for as equity method investments and, in the case of Argo AI, also as a preferred equity security investment. Our maximum exposure to any potential losses associated with these affiliates is limited to our investments, including loans, and was \$209 million and \$3 billion at December 31, 2019 and 2020, respectively. The increase from December 31, 2019 primarily reflects our investments in Argo AI in the second quarter of 2020. See Note 22 for additional information.

VIEs of Which We are the Primary Beneficiary

Securitization Entities. Through Ford Credit, we securitize, transfer, and service financial assets associated with consumer finance receivables, operating leases, and wholesale loans. Our securitization transactions typically involve the legal transfer of financial assets to bankruptcy remote SPEs. We generally retain economic interests in the asset-backed securitization transactions, which are retained in the form of senior or subordinated interests, cash reserve accounts, residual interests, and servicing rights. For accounting purposes, we are precluded from recording the transfers of assets in securitization transactions as sales. In most cases, the bankruptcy remote SPEs meet the definition of VIEs for which we are the primary beneficiary and, therefore, are consolidated. We account for all securitization transactions as if they were secured financing and therefore the assets, liabilities, and related activity of these transactions are consolidated in our financial statements. See Note 19 for additional information on the accounting for asset-backed debt and the assets securing this debt.

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 25. COMMITMENTS AND CONTINGENCIES

Commitments and contingencies primarily consist of guarantees and indemnifications, litigation and claims, and warranty and field service actions.

Guarantees and Indemnifications

Financial Guarantees. Financial guarantees and indemnifications are recorded at fair value at their inception. Subsequent to initial recognition, the guarantee liability is adjusted at each reporting period to reflect the current estimate of expected payments resulting from possible default events over the remaining life of the guarantee. The maximum potential payments for financial guarantees were \$162 million and \$346 million at December 31, 2019 and 2020, respectively. The carrying value of recorded liabilities related to financial guarantees was \$33 million and \$46 million at December 31, 2019 and 2020, respectively.

Our financial guarantees consist of debt and lease obligations of certain joint ventures, as well as certain financial obligations of outside third parties, including suppliers, to support our business and economic growth. Expiration dates vary through 2033, and guarantees will terminate on payment and/or cancellation of the underlying obligation. A payment by us would be triggered by failure of the joint venture or other third party to fulfill its obligation covered by the guarantee. In some circumstances, we are entitled to recover from a third party amounts paid by us under the guarantee.

Non-Financial Guarantees. Non-financial guarantees and indemnifications are recorded at fair value at their inception. We regularly review our performance risk under these arrangements, and in the event it becomes probable we will be required to perform under a guarantee or indemnity, the amount of probable payment is recorded. The maximum potential payments for non-financial guarantees were \$587 million and \$245 million at December 31, 2019 and 2020, respectively. The carrying value of recorded liabilities related to non-financial guarantees was \$200 million and \$48 million at December 31, 2019 and 2020, respectively.

We guarantee the resale value of vehicles sold in certain arrangements to daily rental companies. The maximum potential payment of \$240 million as of December 31, 2020 represents the total proceeds we guarantee the rental company will receive on resale. Reflecting our present estimate of proceeds the rental companies will receive on resale from third parties, we have recorded \$47 million as our best estimate of the amount we will have to pay under the guarantee.

In the ordinary course of business, we execute contracts involving indemnifications standard in the industry and indemnifications specific to a transaction, such as the sale of a business. These indemnifications might include and are not limited to claims relating to any of the following: environmental, tax, and shareholder matters; intellectual property rights; power generation contracts; governmental regulations and employment-related matters; dealer, supplier, and other commercial contractual relationships; and financial matters, such as securitizations. Performance under these indemnities generally would be triggered by a breach of contract claim brought by a counterparty, including a joint venture or alliance partner, or a third-party claim. While some of these indemnifications are limited in nature, many of them do not limit potential payment. Therefore, we are unable to estimate a maximum amount of future payments that could result from claims made under these unlimited indemnities.

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 25. COMMITMENTS AND CONTINGENCIES *(Continued)*

Litigation and Claims

Various legal actions, proceedings, and claims (generally, “matters”) are pending or may be instituted or asserted against us. These include, but are not limited to, matters arising out of alleged defects in our products; product warranties; governmental regulations relating to safety, emissions, and fuel economy or other matters; government incentives; tax matters; alleged illegal acts resulting in fines or penalties; financial services; employment-related matters; dealer, supplier, and other contractual relationships; intellectual property rights; environmental matters; shareholder or investor matters; and financial reporting matters. Certain of the pending legal actions are, or purport to be, class actions. Some of the matters involve or may involve claims for compensatory, punitive, or antitrust or other treble damages in very large amounts, or demands for field service actions, environmental remediation programs, sanctions, loss of government incentives, assessments, or other relief, which, if granted, would require very large expenditures.

The extent of our financial exposure to these matters is difficult to estimate. Many matters do not specify a dollar amount for damages, and many others specify only a jurisdictional minimum. To the extent an amount is asserted, our historical experience suggests that in most instances the amount asserted is not a reliable indicator of the ultimate outcome.

We accrue for matters when losses are deemed probable and reasonably estimable. In evaluating matters for accrual and disclosure purposes, we take into consideration factors such as our historical experience with matters of a similar nature, the specific facts and circumstances asserted, the likelihood that we will prevail, and the severity of any potential loss. We reevaluate and update our accruals as matters progress over time.

For the majority of matters, which generally arise out of alleged defects in our products, we establish an accrual based on our extensive historical experience with similar matters. We do not believe there is a reasonably possible outcome materially in excess of our accrual for these matters.

For the remaining matters, where our historical experience with similar matters is of more limited value (i.e., “non-pattern matters”), we evaluate the matters primarily based on the individual facts and circumstances. For non-pattern matters, we evaluate whether there is a reasonable possibility of a material loss in excess of any accrual that can be estimated. Our estimate of reasonably possible loss in excess of our accruals for all material matters currently reflects indirect tax and customs matters, for which we estimate the aggregate risk to be a range of up to about \$400 million, a decrease of about \$500 million from September 30, 2020, primarily reflecting an accrual in the fourth quarter of 2020 for indirect tax matters.

As noted, the litigation process is subject to many uncertainties, and the outcome of individual matters is not predictable with assurance. Our assessments are based on our knowledge and experience, but the ultimate outcome of any matter could require payment substantially in excess of the amount that we have accrued and/or disclosed.

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 25. COMMITMENTS AND CONTINGENCIES (Continued)

Warranty and Field Service Actions

We accrue the estimated cost of both base warranty coverages and field service actions at the time of sale. We establish our estimate of base warranty obligations using a patterned estimation model, using historical information regarding the nature, frequency, and average cost of claims for each vehicle line by model year. We establish our estimates of field service action obligations using a patterned estimation model, using historical information regarding the nature, frequency, severity, and average cost of claims for each model year. In addition, from time to time, we issue extended warranties at our expense, the estimated cost of which is accrued at the time of issuance. Warranty and field service action obligations are reported in *Other liabilities and deferred revenue*. We reevaluate the adequacy of our accruals on a regular basis.

We recognize the benefit from a recovery of the costs associated with our warranty and field service actions when specifics of the recovery have been agreed with our supplier and the amount of recovery is virtually certain. Recoveries are reported in *Trade and other receivables, net* and *Other assets*.

The estimate of our future warranty and field service action costs, net of estimated supplier recoveries, for the years ended December 31 was as follows (in millions):

	2019	2020
Beginning balance	\$ 5,137	\$ 5,702
Payments made during the period	(4,561)	(3,923)
Changes in accrual related to warranties issued during the period	3,182	3,934
Changes in accrual related to pre-existing warranties	1,941	2,403
Foreign currency translation and other	3	56
Ending balance	<u>\$ 5,702</u>	<u>\$ 8,172</u>

Changes in accrual related to pre-existing warranties in the table above includes changes to our estimated costs as well as a \$610 million charge in our fourth quarter 2020 results for a field service action related to three million Takata airbag inflators. Separately, NHTSA and the automotive industry are currently engaged in a study of the safety of approximately 56 million Takata desiccated airbag inflators in the United States. Of these, approximately three and a half million of the inflators are in our vehicles. Should NHTSA determine that the inflators contain a safety defect, Ford and other manufacturers could potentially face significant incremental recall costs.

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 26. SEGMENT INFORMATION

We report segment information consistent with the way our chief operating decision maker (“CODM”) evaluates the operating results and performance of the Company. Accordingly, we analyze the results of our business through the following segments: Automotive, Mobility, and Ford Credit. Effective January 1, 2021, consistent with how our CODM assesses performance of the segments and makes decisions about resource allocations, we are changing the measurement of our segments as follows: (i) costs and benefits related to enterprise connectivity activities included in the Mobility segment will be reported in the Automotive segment; (ii) certain corporate governance expenses that benefit the global enterprise reported in the Automotive segment will be reported as part of Corporate Other; and (iii) cash and other centrally managed corporate assets reported in the Automotive segment will be realigned to Corporate Other.

Below is a description of our reportable segments and other activities as of December 31, 2020.

Automotive Segment

The Automotive segment primarily includes the sale of Ford and Lincoln vehicles, service parts, and accessories worldwide, together with the associated costs to develop, manufacture, distribute, and service the vehicles, parts, and accessories. This segment includes revenues and costs related to our electrification vehicle programs. The segment includes the following regional business units: North America, South America, Europe, China (including Taiwan), and the International Markets Group.

Mobility Segment

The Mobility segment primarily includes development costs for Ford’s autonomous vehicles and related businesses, Ford’s equity ownership in Argo AI (a developer of autonomous driving systems), and other mobility businesses and investments (including Spin, a micro-mobility service provider).

Ford Credit Segment

The Ford Credit segment is comprised of the Ford Credit business on a consolidated basis, which is primarily vehicle-related financing and leasing activities.

Corporate Other

Corporate Other primarily includes corporate governance expenses, interest income (excluding interest earned on our extended service contract portfolio that is included in our Automotive segment) and gains and losses from our cash, cash equivalents, marketable securities and other investments, and foreign exchange derivatives gains and losses associated with intercompany lending. Corporate governance expenses are primarily administrative, delivering benefit on behalf of the global enterprise, and are not allocated to specific Automotive business units or operating segments. These include expenses related to setting and directing global policy, providing oversight and stewardship, and promoting the Company’s interests. The underlying assets and liabilities associated with these activities remain with the respective Automotive and Mobility segments.

Interest on Debt

Interest on Debt is presented as a separate reconciling item and consists of interest expense on Automotive and Other debt. The underlying liability is reported in the Automotive segment and in Corporate Other.

Special Items

Special Items are presented as a separate reconciling item. They consist of (i) pension and OPEB remeasurement gains and losses, (ii) significant personnel expenses, dealer-related costs, and facility-related charges stemming from our efforts to match production capacity and cost structure to market demand and changing model mix, and (iii) other items that we do not necessarily consider to be indicative of earnings from ongoing operating activities. Our management ordinarily excludes these items from its review of the results of the operating segments for purposes of measuring segment profitability and allocating resources. We also report these special items separately to help investors track amounts related to these activities and to allow investors analyzing our results to identify certain infrequent significant items that they may wish to exclude when considering the trend of ongoing operating results.

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 26. SEGMENT INFORMATION

Key financial information for the years ended or at December 31 was as follows (in millions):

	<u>Automotive</u>	<u>Mobility</u>	<u>Ford Credit</u>	<u>Corporate Other</u>	<u>Interest on Debt</u>	<u>Special Items</u>	<u>Adjustments</u>	<u>Total</u>
2018								
Revenues	\$ 148,294	\$ 26	\$ 12,018	\$ —	\$ —	\$ —	\$ —	\$ 160,338
Income/(Loss) before income taxes	5,422	(674)	2,627	(373)	(1,228)	(1,429) (a)	—	4,345
Depreciation and tooling amortization	5,368	16	4,001	—	—	—	—	9,385
Interest expense	—	—	3,929	—	1,228	—	—	5,157
Investment-related interest income	109	—	201	357	—	—	—	667
Equity in net income/(loss) of affiliated companies	95	—	28	—	—	—	—	123
Cash outflow for capital spending	7,677	60	48	—	—	—	—	7,785
Cash, cash equivalents, marketable securities, and restricted cash	22,999	86	11,055	—	—	—	—	34,140
Total assets	100,105	558	161,678	—	—	—	(5,801) (b)	256,540
2019								
Revenues	\$ 143,599	\$ 41	\$ 12,260	\$ —	\$ —	\$ —	\$ —	\$ 155,900
Income/(Loss) before income taxes	4,926	(1,186)	2,998	(359)	(1,020)	(5,999) (c)	—	(640)
Depreciation and tooling amortization	5,520	29	3,666	—	—	1,278 (d)	—	10,493
Interest expense	—	—	4,389	—	1,020	—	—	5,409
Investment-related interest income	167	—	306	336	—	—	—	809
Equity in net income/(loss) of affiliated companies	88	12	31	—	—	(99) (d)	—	32
Cash outflow for capital spending	7,481	99	52	—	—	—	—	7,632
Cash, cash equivalents, marketable securities, and restricted cash	22,186	138	12,564	—	—	—	—	34,888
Total assets	101,348	1,034	160,697	—	—	—	(4,542) (b)	258,537
2020								
Revenues	\$ 115,885	\$ 56	\$ 11,203	\$ —	\$ —	\$ —	\$ —	\$ 127,144
Income/(Loss) before income taxes	1,633	(1,274)	2,608	(188)	(1,649)	(2,246) (e)	—	(1,116)
Depreciation and tooling amortization	5,232	37	3,269	—	—	236	—	8,774
Interest expense	—	—	3,402	—	1,649	—	—	5,051
Investment-related interest income	158	—	94	200	—	—	—	452
Equity in net income/(loss) of affiliated companies	300	(132)	20	—	—	(146)	—	42
Cash outflow for capital spending	5,560	142	40	—	—	—	—	5,742
Cash, cash equivalents, marketable securities, and restricted cash	30,721	76	19,856	—	—	—	—	50,653
Total assets	109,963	4,023	158,524	—	—	—	(5,249) (b)	267,261

(a) Primarily reflects mark-to-market adjustments for our global pension and OPEB plans and Global Redesign actions.

(b) Includes eliminations of intersegment transactions occurring in the ordinary course of business and deferred tax netting.

(c) Primarily reflects Global Redesign actions in Europe and mark-to-market adjustments for our global pension and OPEB plans.

(d) Prior period amounts have been reclassified in accordance with special item reporting.

(e) Primarily reflects Global Redesign actions in South America and Europe, mark-to-market adjustments for our global pension and OPEB plans, and the field service action for Takata airbag inflators, partially offset by the gain on our investment in Argo AI as a result of the transaction with Argo AI and VW in the second quarter of 2020.

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 26. SEGMENT INFORMATION (Continued)

Geographic Information

We report revenue on a “where-sold” basis, which reflects the revenue within the country in which the ultimate sale or financing is made to our external customer.

Total Company revenues and long-lived assets, split geographically by our country of domicile (the United States) and other countries where our major subsidiaries are domiciled, for the years ended December 31 were as follows (in millions):

	2018		2019		2020	
	Revenues	Long-Lived Assets (a)	Revenues	Long-Lived Assets (a)	Revenues	Long-Lived Assets (a)
United States	\$ 97,546	\$ 44,940	\$ 98,729	\$ 46,434	\$ 82,535	\$ 45,360
Canada	10,541	4,604	10,855	4,842	8,711	5,111
Germany	7,894	3,593	7,930	3,225	6,526	3,197
United Kingdom	9,703	1,650	8,899	1,541	6,110	1,401
Mexico	1,853	2,285	1,451	2,909	1,030	3,669
All Other	32,801	8,225	28,036	6,748	22,232	6,296
Total Company	<u>\$ 160,338</u>	<u>\$ 65,297</u>	<u>\$ 155,900</u>	<u>\$ 65,699</u>	<u>\$ 127,144</u>	<u>\$ 65,034</u>

(a) Includes *Net property* and *Net investment in operating leases* from our consolidated balance sheets.

NOTE 27. SELECTED QUARTERLY FINANCIAL DATA (unaudited)

Selected financial data by calendar quarter were as follows (in millions, except per share amounts):

	2019				2020			
	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
Total revenues	\$ 40,342	\$ 38,853	\$ 36,990	\$ 39,715	\$ 34,320	\$ 19,371	\$ 37,501	\$ 35,952
Income/(Loss) before income taxes	1,610	205	(19)	(2,436)	(1,146)	1,084	2,756	(3,810)

Amounts Attributable to Ford Motor Company Common and Class B Shareholders

Net income/(loss)	\$ 1,146	\$ 148	\$ 425	\$ (1,672)	\$ (1,993)	\$ 1,117	\$ 2,385	\$ (2,788)
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Common and Class B per share from income/(loss) from continuing operations

Basic	\$ 0.29	\$ 0.04	\$ 0.11	\$ (0.42)	\$ (0.50)	\$ 0.28	\$ 0.60	\$ (0.70)
Diluted	0.29	0.04	0.11	(0.42)	(0.50)	0.28	0.60	(0.70)

Certain of the quarterly results identified in the table above include material unusual or infrequently occurring items as follows on a pre-tax basis, except for tax items:

The first, second, third, and fourth quarter 2019 results each include Global Redesign related activities, including employee separation costs, payments to dealers and suppliers, and impairment and other charges, of \$514 million, \$1.2 billion, \$1 billion, and \$413 million, respectively.

The third quarter 2019 results include a one-time tax benefit of \$278 million arising from restructuring in our European operations.

The third and fourth quarter 2019 results include pension and OPEB net remeasurement losses of \$306 million and \$2.2 billion, respectively.

The first quarter 2020 results include various adjustments to our assets and liabilities made due to the impact of COVID-19, the most significant of which were valuation allowances of \$855 million on certain deferred tax assets and a charge of \$486 million to the provision for credit losses on Ford Credit's finance receivables.

FORD MOTOR COMPANY AND SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS

NOTE 27. SELECTED QUARTERLY FINANCIAL DATA (unaudited) (Continued)

The second quarter 2020 results include the deconsolidation of Argo AI and remeasurement of our retained investment in Argo AI at fair value, which resulted in the recognition of a \$3.5 billion gain (see Note 22).

The fourth quarter 2020 results include a pension and OPEB net remeasurement loss of \$1.5 billion and a \$610 million charge for a field service action to replace Takata airbag inflators.

The first, second, third, and fourth quarter 2020 results each include Global Redesign related activities, including employee separation costs, payments to dealers and suppliers, and impairment and other charges, of \$106 million, \$119 million, \$268 million, and \$2.9 billion (of which \$2.4 billion related to our South America operations), respectively.

FORD MOTOR COMPANY AND SUBSIDIARIES
Schedule II — Valuation and Qualifying Accounts
(in millions)

Description	Balance at Beginning of Period	Charged to Costs and Expenses	Deductions	Balance at End of Period
For the Year Ended December 31, 2018				
Allowances deducted from assets				
Credit losses	\$ 608	\$ 419	\$ 435 (a)	\$ 592
Doubtful receivables	404	5	315 (b)	94
Inventories (primarily service part obsolescence)	243	130 (c)	—	373
Deferred tax assets	1,492	(519) (d)	—	973
Total allowances deducted from assets	<u>\$ 2,747</u>	<u>\$ 35</u>	<u>\$ 750</u>	<u>\$ 2,032</u>
For the Year Ended December 31, 2019				
Allowances deducted from assets				
Credit losses	\$ 592	\$ 310	\$ 372 (a)	\$ 530
Doubtful receivables	94	18	63 (b)	49
Inventories (primarily service part obsolescence)	373	89 (c)	—	462
Deferred tax assets	973	41 (d)	171	843
Total allowances deducted from assets	<u>\$ 2,032</u>	<u>\$ 458</u>	<u>\$ 606</u>	<u>\$ 1,884</u>
For the Year Ended December 31, 2020				
Allowances deducted from assets				
Credit losses	\$ 530	\$ 840	\$ 38 (a)	\$ 1,332
Doubtful receivables	49	28	20 (b)	57
Inventories (primarily service part obsolescence)	462	226 (c)	—	688
Deferred tax assets	843	1,301 (d)	163	1,981
Total allowances deducted from assets	<u>\$ 1,884</u>	<u>\$ 2,395</u>	<u>\$ 221</u>	<u>\$ 4,058</u>

- (a) Finance receivables deemed to be uncollectible and other changes, principally amounts related to finance receivables sold and translation adjustments. Includes \$(252) million related to the adoption of ASU 2016-13 for cumulative pre-tax adjustments recorded to retained earnings as of January 1, 2020.
- (b) Accounts and notes receivable deemed to be uncollectible as well as translation adjustments.
- (c) Net change in inventory allowances, including translation adjustments.
- (d) Includes \$(101) million, \$(78) million, and \$(77) million in 2018, 2019, and 2020, respectively, of valuation allowances for deferred tax assets through *Accumulated other comprehensive income/(loss)*, including translation adjustments and \$(418) million, \$(52) million, and \$1.2 billion in 2018, 2019, and 2020, respectively, of valuation allowances for deferred tax assets through the income statement.

**DESCRIPTION OF THE REGISTRANT'S SECURITIES
REGISTERED PURSUANT TO SECTION 12 OF THE
SECURITIES EXCHANGE ACT OF 1934**

As of January 29, 2021, Ford Motor Company ("Ford," the "Company," "we," "our," "us") had three securities registered under Section 12 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"): (i) Common Stock, \$0.01 par value per share ("Common Stock"), (ii) 6.200% Notes due June 1, 2059 (the "June 2059 Notes") and (iii) 6.000% Notes due December 1, 2059 (the "December 2059 Notes"). Each of the Company's securities registered under Section 12 of the Exchange Act is listed on The New York Stock Exchange.

DESCRIPTION OF CAPITAL STOCK

This section contains a description of our capital stock. This description includes not only our Common Stock, but also our Class B Stock, par value \$0.01 per share ("Class B Stock") and preferred stock, certain terms of which affect the Common Stock, and the preferred share purchase rights, one of which is attached to each share of our Common Stock. The following summary of the terms of our capital stock is not meant to be complete and is qualified by reference to our restated certificate of incorporation and the preferred share rights plan.

Our authorized capital stock currently consists of 6,000,000,000 shares of Common Stock, 530,117,376 shares of Class B Stock and 30,000,000 shares of preferred stock.

As of January 29, 2021, we had outstanding 3,907,842,941 shares of Common Stock and 70,852,076 shares of Class B Stock. No shares of preferred stock were outstanding.

Common Stock and Class B Stock

Rights to Dividends and on Liquidation. Each share of Common Stock and Class B Stock is entitled to share equally in dividends (other than dividends declared with respect to any outstanding preferred stock) when and as declared by our board of directors, except as stated below under the subheading "Stock Dividends."

Upon liquidation, subject to the rights of any other class or series of stock having a preference on liquidation, each share of Common Stock will be entitled to the first \$.50 available for distribution to common and Class B stockholders, each share of Class B Stock will be entitled to the next \$1.00 so available, each share of Common Stock will be entitled to the next \$.50 available and each share of common and Class B Stock will be entitled to an equal amount after that.

Voting — General. All general voting power is vested in the holders of Common Stock and the holders of Class B stock, voting together without regard to class, except as stated below in the subheading "Voting by Class." The voting power of the shares of stock is determined as described below. However, we could in the future create a series of preferred stock with voting rights equal to or greater than our Common Stock or Class B stock.

Each holder of Common Stock is entitled to one vote per share, and each holder of Class B Stock is entitled to a number of votes per share derived by a formula contained in our restated certificate of incorporation. As long as at least 60,749,880 shares of Class B Stock remain outstanding, the formula will result in holders of Class B Stock having 40% of the general voting power and holders of Common Stock and, if issued, any preferred stock with voting power having 60% of the general voting power.

If the number of outstanding shares of Class B Stock falls below 60,749,880, but remains at least 33,749,932, then the formula will result in the general voting power of holders of Class B Stock declining to 30% and the general voting power of holders of Common Stock and, if issued, any preferred stock with voting power increasing to 70%.

If the number of outstanding shares of Class B Stock falls below 33,749,932, then each holder of Class B Stock will be entitled to only one vote per share.

Based on the number of shares of Class B Stock and Common Stock outstanding as of December 31, 2020, each holder of Class B Stock would be entitled to 36.768 votes per share on any matter submitted for a vote of shareholders. Of the outstanding Class B Stock as of December 31, 2020, 70,778,212 shares were held in a voting trust. The trust requires the trustee to vote all the shares in the trust as directed by holders of a plurality of the shares in the trust.

Non-Cumulative Voting Rights. Our Common Stock and Class B stock do not and will not have cumulative voting rights. This means that the holders who have more than 50% of the votes for the election of directors can elect 100% of the directors if they choose to do so.

Voting by Class. If we want to take any of the following actions, we must obtain the vote of the holders of a majority of the outstanding shares of Class B stock, voting as a class:

- issue any additional shares of Class B Stock (with certain exceptions);
- reduce the number of outstanding shares of Class B Stock other than by holders of Class B Stock converting Class B Stock into Common Stock or selling it to the Company;
- change the capital stock provisions of our restated certificate of incorporation;
- merge or consolidate with or into another corporation;
- dispose of all or substantially all of our property and assets;
- transfer any assets to another corporation and in connection therewith distribute stock or other securities of that corporation to our stockholders; or
- voluntarily liquidate or dissolve.

Voting Provisions of Delaware Law. In addition to the votes described above, any special requirements of Delaware law must be met. The Delaware General Corporation Law contains provisions on the votes required to amend certificates of incorporation, merge or consolidate, sell, lease or exchange all or substantially all assets, and voluntarily dissolve.

Ownership and Conversion of Class B Stock. In general, only members of the Ford family or their descendants or trusts or corporations in which they have specified interests can own or be registered as record holders of shares of Class B stock, or can enjoy for their own benefit the special rights and powers of Class B stock. A holder of shares of Class B Stock can convert those shares into an equal number of shares of Common Stock for the purpose of selling or disposing of those shares. Shares of Class B Stock acquired by the Company or converted into Common Stock cannot be reissued by the Company.

Preemptive and Other Subscription Right. Holders of Common Stock do not have any right to purchase additional shares of Common Stock if we sell shares to others. If, however, we sell Class B Stock or obligations or shares convertible into Class B Stock (subject to the limits on who can own Class B Stock described above), then holders of Class B Stock will have a right to purchase, on a ratable basis and at a price just as favorable, additional shares of Class B Stock or those obligations or shares convertible into Class B stock.

In addition, if shares of Common Stock (or shares or obligations convertible into such stock) are offered to holders of Common Stock, then we must offer to the holders of Class B Stock shares of Class B Stock (or shares or obligations convertible into such stock), on a ratable basis, and at the same price per share.

Stock Dividends. If we declare and pay a dividend in our stock, we must pay it in shares of Common Stock to holders of Common Stock and in shares of Class B Stock to holders of Class B stock.

Ultimate Rights of Holders of Class B Stock. If and when the number of outstanding shares of Class B Stock falls below 33,749,932, the Class B Stock will become freely transferable and will become substantially equivalent to Common Stock. At that time, holders of Class B Stock will have one vote for each share held, will have no special class vote, will be offered Common Stock if Common Stock is offered to holders of Common Stock, will receive Common Stock if a stock dividend is declared, and will have the right to convert such shares into an equal number of shares of Common Stock irrespective of the purpose of conversion.

Miscellaneous; Dilution. If we increase the number of outstanding shares of Class B Stock (by, for example, doing a stock split or stock dividend), or if we consolidate or combine all outstanding shares of Class B Stock so that the number of outstanding shares is reduced, then the threshold numbers of outstanding Class B Stock (that is, 60,749,880 and 33,749,932) that trigger voting power changes will automatically adjust by a proportionate amount.

Preferred Stock

We may issue preferred stock from time to time in one or more series, without stockholder approval. Subject to limitations prescribed by law, our board of directors is authorized to fix for any series of preferred stock the number of shares of such series and the designation, relative powers, preferences and rights, and the qualifications, limitations, or restrictions of such series.

Preferred Share Purchase Rights

On September 11, 2009, we entered into a Tax Benefit Preservation Plan, which Tax Benefit Preservation Plan was amended on September 9, 2015 (as amended, the “Plan”) with Computershare Trust Company, N.A., as rights agent, and our Board of Directors declared a dividend of one preferred share purchase right (the “Rights”) for each outstanding share of Common Stock, and each outstanding share of Class B Stock under the terms of the Plan. Each share of Common Stock we issue will be accompanied by a Right. Each Right entitles the registered holder to purchase from us one one-thousandth of a share of our Series A Junior Participating Preferred Stock, par value \$1.00 per share at a purchase price of \$35.00 per one one-thousandth of a share of Preferred Stock, subject to adjustment. The description and terms of the Rights are set forth in the Plan.

Until the earlier to occur of (i) the close of business on the tenth business day following the public announcement that a person or group has become an “Acquiring Person” by acquiring beneficial ownership of 4.99% or more of the outstanding shares of Common Stock (or the Board becoming aware of an Acquiring Person, as defined in the Plan) or (ii) the close of business on the tenth business day (or, except in certain circumstances, such later date as may be specified by the Board) following the commencement of, or announcement of an intention to make, a tender offer or exchange offer the consummation of which would result in the beneficial ownership by a person or group (with certain exceptions) of 4.99% or more of the outstanding shares of Common Stock (the earlier of such dates being called the “Distribution Date”), the Rights will be evidenced, with respect to Common Stock and Class B Stock certificates outstanding as of the Record Date (or any book-entry shares in respect thereof), by such Common Stock or Class B Stock certificate (or registration in book-entry form) together with the summary of rights (“Summary of Rights”) describing the Plan and mailed to stockholders of record on the Record Date, and the Rights will be transferable only in connection with the transfer of Common Stock or Class B stock. Any person or group that beneficially owned 4.99% or more of the outstanding shares of Common Stock on September 11, 2009 are not deemed an Acquiring Person unless and until such person or group acquires beneficial ownership of additional shares of Common Stock representing one-half of one percent (0.5%) or more of the shares of Common Stock then outstanding. Under the Plan, the Board may, in its sole discretion, exempt any person or group from being deemed an Acquiring Person for purposes of the Plan if the Board determines that such person's or group's ownership of Common Stock will not jeopardize or endanger our availability, or otherwise limit in any way the use of, our net operating losses, tax credits and other tax assets (the “Tax Attributes”).

The Plan provides that, until the Distribution Date (or earlier expiration or redemption of the Rights), the Rights will be attached to and will be transferred with and only with the Common Stock and Class B stock. Until the Distribution Date (or the earlier expiration or redemption of the Rights), new shares of Common Stock and Class B Stock issued after the Record Date upon transfer or new issuances of Common Stock and Class B Stock will contain a notation incorporating the Plan by reference (with respect to shares represented by certificates) or notice thereof will be provided in accordance with applicable law (with respect to uncertificated shares). Until the Distribution Date (or earlier expiration of the Rights), the surrender for transfer of any certificates representing shares of Common Stock and Class B Stock outstanding as of the Record Date, even without such notation or a copy of the Summary of Rights, or the transfer by book-entry of any uncertificated shares of Common Stock and Class B stock, will also constitute the transfer of the Rights associated with such shares. As soon as practicable following the Distribution Date, separate certificates evidencing the Rights (“Right Certificates”) will be mailed to holders of record of the Common Stock and Class B Stock as of the close of business on the Distribution Date and such separate Right Certificates alone will evidence the Rights.

The Rights are not exercisable until the Distribution Date. The Rights will expire upon the earliest of the close of business on September 30, 2018 (unless that date is advanced or extended by the Board), the time at which the Rights are redeemed or exchanged under the Plan, the repeal of Section 382 of the Internal Revenue Code of 1986, as amended, or any successor statute if the Board determines that the Plan is no longer necessary for the preservation of our Tax Attributes, or the beginning of our taxable year to which the Board determines that no Tax Attributes may be carried forward.

The Purchase Price payable, and the number of shares of Preferred Stock or other securities or property issuable, upon exercise of the Rights is subject to adjustment from time to time to prevent dilution (i) in the event of a stock dividend on, or a subdivision, combination or reclassification of, the Preferred Stock, (ii) upon the grant to holders of the Preferred Stock of certain rights or warrants to subscribe for or purchase Preferred Stock at a price, or securities convertible into Preferred Stock with a conversion price, less than the then-current market price of the Preferred Stock or (iii) upon the distribution to holders of the Preferred Stock of evidences of indebtedness or assets (excluding regular periodic cash dividends or dividends payable in Preferred Stock) or of subscription rights or warrants.

The number of outstanding Rights is subject to adjustment in the event of a stock dividend on the Common Stock and Class B Stock payable in shares of Common Stock or Class B Stock or subdivisions, consolidations or combinations of the Common Stock occurring, in any such case, prior to the Distribution Date.

Shares of Preferred Stock purchasable upon exercise of the Rights will not be redeemable. Each share of Preferred Stock will be entitled, when, as and if declared, to a minimum preferential quarterly dividend payment of the greater of (a) \$10.00 per share, and (b) an amount equal to 1,000 times the dividend declared per share of Common Stock. In the event of our liquidation, dissolution or winding up, the holders of the Preferred Stock will be entitled to a minimum preferential payment of the greater of (a) \$1.00 per share (plus any accrued but unpaid dividends), and (b) an amount equal to 1,000 times the payment made per share of Common Stock. Each share of Preferred Stock will have 1,000 votes, voting together with the Common Stock and Class B stock. Finally, in the event of any merger, consolidation or other transaction in which outstanding shares of Common Stock are converted or exchanged, each share of Preferred Stock will be entitled to receive 1,000 times the amount received per share of Common Stock. These rights are protected by customary antidilution provisions.

Because of the nature of the Preferred Stock's dividend, liquidation and voting rights, the value of the one one-thousandth interest in a share of Preferred Stock purchasable upon exercise of each Right should approximate the value of one share of Common Stock.

In the event that any person or group becomes an Acquiring Person, each holder of a Right, other than Rights beneficially owned by the Acquiring Person (which will thereupon become null and void), will thereafter have the right to receive upon exercise of a Right (including payment of the Purchase Price) that number of shares of Common Stock having a market value of two times the Purchase Price.

At any time after any person or group becomes an Acquiring Person but prior to the acquisition by such Acquiring Person of beneficial ownership of 50% or more of the voting power of the shares of Common Stock and Class B Stock then outstanding, the Board may exchange the Rights (other than Rights owned by such Acquiring Person, which will have become null and void), in whole or in part, for shares of Common Stock or Preferred Stock (or a series of our preferred stock having equivalent rights, preferences and privileges), at an exchange ratio of one share of Common Stock or Class B stock, or a fractional share of Preferred Stock (or other stock) equivalent in value thereto, per Right (subject to adjustment for stock splits, stock dividends and similar transactions).

With certain exceptions, no adjustment in the Purchase Price will be required until cumulative adjustments require an adjustment of at least 1% in such Purchase Price. No fractional shares of Preferred Stock, Common Stock or Class B Stock will be issued (other than fractions of Preferred Stock which are integral multiples of one one-thousandth of a share of Preferred Stock, which may, at our election, be evidenced by depositary receipts), and in lieu thereof an adjustment in cash will be made based on the current market price of the Preferred Stock, the Common Stock or Class B stock.

At any time prior to the time an Acquiring Person becomes such, the Board may redeem the Rights in whole, but not in part, at a price of \$0.001 per Right (the "Redemption Price") payable, at our option, in cash, shares of Common Stock or such other form of consideration as the Board shall determine. The redemption of the Rights may be made effective at such time, on such basis and with such conditions as the Board in its sole discretion may establish. Immediately upon any redemption of the Rights, the right to exercise the Rights will terminate and the only right of the holders of Rights will be to receive the Redemption Price.

For so long as the Rights are then redeemable, we may, except with respect to the Redemption Price, amend the Plan in any manner. After the Rights are no longer redeemable, we may, except with respect to the Redemption Price, amend the Plan in any manner that does not adversely affect the interests of holders of the Rights (other than the Acquiring Person).

Until a Right is exercised or exchanged, the holder thereof, as such, will have no rights as our stockholder, including, without limitation, the right to vote or to receive dividends.

DESCRIPTION OF DEBT SECURITIES

We issue debt securities in one or more series under an Indenture dated as of January 30, 2002 (the "Indenture") between us and The Bank of New York Mellon as successor trustee to JPMorgan Chase Bank. The Indenture may be supplemented from time to time.

The Indenture is a contract between us and The Bank of New York Mellon acting as Trustee. The Trustee has two main roles. First, the Trustee can enforce debtholders' rights against us if an "Event of Default" described below occurs. Second, the Trustee performs certain administrative duties for us. The Indenture is summarized below.

The June 2059 Notes

We issued \$750,000,000 aggregate principal amount of the June 2059 Notes on May 28, 2019. The maturity date of the June 2059 Notes is June 1, 2059, and interest at a rate of 6.200% per annum is paid quarterly on March 1, June 1, September 1, and December 1 of each year, beginning on September 1, 2019, and on the maturity date. The June 2059 Notes are redeemable at our option on June 1, 2024 and on any day thereafter, in whole or in part, at 100% of their principal amount plus accrued and unpaid interest. The June 2059 Notes are not subject to repayment at the option of the holder at any time prior to maturity. As of February 1, 2020, \$750,000,000 aggregate principal amount of the June 2059 Notes was outstanding.

The December 2059 Notes

We issued \$800,000,000 aggregate principal amount of the December 2059 Notes on December 11, 2019. The maturity date of the December 2059 Notes is December 1, 2059, and interest at a rate of 6.000% per annum is paid quarterly on March 1, June 1, September 1, and December 1 of each year, beginning on March 1, 2020, and on the maturity date. The December 2059 Notes are redeemable at our option on December 1, 2024 and on any day thereafter, in whole or in part, at 100% of their principal amount plus accrued and unpaid interest. The December 2059 Notes are not subject to repayment at the option of the holder at any time prior to maturity. As of February 1, 2020, \$800,000,000 aggregate principal amount of the December 2059 Notes was outstanding.

General

The Indenture does not limit the amount of debt securities that may be issued under it. Therefore, additional debt securities may be issued under the Indenture.

The debt securities are our unsecured obligations. Senior debt securities rank equally with our other unsecured and unsubordinated indebtedness (parent company only).

Principal (and premium, if any) and interest, if any, will be paid by us in immediately available funds. The Indenture does not contain any provisions that give debtholders protection in the event we issue a large amount of debt or we are acquired by another entity.

Limitation on Liens

The Indenture restricts our ability to pledge some of our assets as security for other debt. Unless we secure the debt securities on an equal basis, the restriction does not permit us to have or guarantee any debt that is secured by (1) any of our principal U.S. plants or (2) the stock or debt of any of our subsidiaries that own or lease one of these plants. This restriction does not apply until the total amount of our secured debt plus the discounted value of the amount of rent we must pay under sale and leaseback transactions involving principal U.S. plants exceeds 5% of our consolidated net tangible automotive assets. This restriction also does not apply to any of the following:

- liens of a company that exist at the time such company becomes our subsidiary;
- liens in our favor or in the favor of our subsidiaries;
- certain liens given to a government;
- liens on property that exist at the time we acquire the property or liens that we give to secure our paying for the property; and
- any extension or replacement of any of the above.

Limitation on Sales and Leasebacks

The Indenture prohibits us from selling and leasing back any principal U.S. plant for a term of more than three years. This restriction does not apply if:

- we could create secured debt in an amount equal to the discounted value of the rent to be paid under the lease without violating the limitation on liens provision discussed above;
- the lease is with or between any of our subsidiaries; or
- within 120 days of selling the U.S. plant, we retire our funded debt in an amount equal to the net proceeds from the sale of the plant or the fair market value of the plant, whichever is greater.

Merger and Consolidation

The Indenture prohibits us from merging or consolidating with any company, or selling all or substantially all of our assets to any company, if after we do so the surviving company would violate the limitation on liens or the limitation on sales and leasebacks discussed above. This does not apply if the surviving company secures the debt securities on an equal basis with the other secured debt of the company.

Events of Default and Notice Thereof

The Indenture defines an "Event of Default" as being any one of the following events:

- failure to pay interest for 30 days after becoming due;
- failure to pay principal or any premium for five business days after becoming due;
- failure to make a sinking fund payment for five days after becoming due;
- failure to perform any other covenant applicable to the debt securities for 90 days after notice;
- certain events of bankruptcy, insolvency or reorganization; and
- any other Event of Default provided in the prospectus supplement.

An Event of Default for a particular series of debt securities will not necessarily constitute an Event of Default for any other series of debt securities issued under the Indenture.

If an Event of Default occurs and continues, the Trustee or the holders of at least 25% of the total principal amount of the series may declare the entire principal amount (or, if they are Original Issue Discount Securities (as defined in the Indenture), the portion of the principal amount as specified in the terms of such series) of all of the debt securities of that series to be due and payable immediately. If this happens, subject to certain conditions, the holders of a majority of the total principal amount of the debt securities of that series can void the declaration.

The Indenture provides that within 90 days after default under a series of debt securities, the Trustee will give the holders of that series notice of all uncured defaults known to it. (The term "default" includes the events specified above without regard to any period of grace or requirement of notice.) The Trustee may withhold notice of any default (except a default in the payment of principal, interest or any premium) if it believes that it is in the interest of the holders.

Annually, we must send to the Trustee a certificate describing any existing defaults under the Indenture.

Other than its duties in case of a default, the Trustee is not obligated to exercise any of its rights or powers under the Indenture at the request, order or direction of any holders, unless the holders offer the Trustee reasonable protection from expenses and liability. If they provide this reasonable indemnification, the holders of a majority of the total principal amount of any series of debt securities may direct the Trustee how to act under the Indenture.

Defeasance and Covenant Defeasance

We have two options to discharge our obligations under a series of debt securities before their maturity date. These options are known as “defeasance” and “covenant defeasance”. Defeasance means that we will be deemed to have paid the entire amount of the applicable series of debt securities and we will be released from all of our obligations relating to that series (except for certain obligations, such as registering transfers of the securities). Covenant defeasance means that as to the applicable series of debt securities we will not have to comply with the covenants described above under Limitation on Liens, Limitation on Sales and Leasebacks and Merger and Consolidation.

To elect either defeasance or covenant defeasance for any series of debt securities, we must deposit with the Trustee an amount of money and/or U.S. government obligations that will be sufficient to pay principal, interest and any premium or sinking fund payments on the debt securities when those amounts are scheduled to be paid. In addition, we must provide a legal opinion stating that as a result of the defeasance or covenant defeasance debtholders will not be required to recognize income, gain or loss for federal income tax purposes and debtholders will be subject to federal income tax on the same amounts, in the same manner and at the same times as if the defeasance or covenant defeasance had not occurred. For defeasance, that opinion must be based on either an Internal Revenue Service ruling or a change in law since the date the debt securities were issued. We must also meet other conditions, such as there being no Events of Default. The amount deposited with the Trustee can be decreased at a later date if in the opinion of a nationally recognized firm of independent public accountants the deposits are greater than the amount then needed to pay principal, interest and any premium or sinking fund payments on the debt securities when those amounts are scheduled to be paid.

Our obligations relating to the debt securities will be reinstated if the Trustee is unable to pay the debt securities with the deposits held in trust, due to an order of any court or governmental authority. It is possible that a series of debt securities for which we elect covenant defeasance may later be declared immediately due in full because of an Event of Default (not relating to the covenants that were defeased). If that happens, we must pay the debt securities in full at that time, using the deposits held in trust or other money.

Modification of the Indenture

With certain exceptions, our rights and obligations and debtholders’ rights under a particular series of debt securities may be modified with the consent of the holders of not less than two-thirds of the total principal amount of those debt securities. No modification of the principal or interest payment terms, and no modification reducing the percentage required for modifications, will be effective against debtholder without debtholders’ consent.

Global Securities

The debt securities of each series has been issued in the form of one or more global certificates which have been deposited with The Depository Trust Company, New York, New York (“DTC”), which acts as depositary for the global certificates. Beneficial interests in global certificates will be shown on, and transfers of global certificates will be effected only through, records maintained by DTC and its participants. Therefore, if debtholders wish to own debt securities that are represented by one or more global certificates, debtholders can do so only indirectly or “beneficially” through an account with a broker, bank or other financial institution that has an account with DTC (that is, a DTC participant) or through an account directly with DTC if such debtholder is a DTC participant.

While the debt securities are represented by one or more global certificates:

- Debtholders will not be able to have the debt securities registered in their name.
- Debtholders will not be able to receive a physical certificate for the debt securities.
- Our obligations, as well as the obligations of the Trustee and any of our agents, under the debt securities will run only to DTC as the registered owner of the debt securities. For example, once we make payment to DTC, we will have no further responsibility for the payment even if DTC or a debtholder's broker, bank or other financial institution fails to pass it on so that such debtholder receives it.
- Debtholders' rights under the debt securities relating to payments, transfers, exchanges and other matters will be governed by applicable law and by the contractual arrangements between the debtholder and such debtholder's broker, bank or other financial institution, and/or the contractual arrangements a debtholder or any debtholder's broker, bank or financial institution has with DTC. Neither we nor the Trustee has any responsibility for the actions of DTC or any debtholder's broker, bank or financial institution.
- Debtholders may not be able to sell their interests in the debt securities to some insurance companies and others who are required by law to own their debt securities in the form of physical certificates.
- Because the debt securities will trade in DTC's Same-Day Funds Settlement System, when a debtholder buys or sells interests in the debt securities, payment for them will have to be made in immediately available funds. This could affect the attractiveness of the debt securities to others.

A global certificate generally can be transferred only as a whole, unless it is being transferred to certain nominees of the depositary or it is exchanged in whole or in part for debt securities in physical form. If a global certificate is exchanged for debt securities in physical form, they will be in denominations of \$1,000 and integral multiples thereof.

**Terms and Conditions of Stock Option Agreement (U.K. Options)
Ford Motor Company Long Term Incentive Plan**

Effective for options granted under the Ford Motor Company Long-Term Incentive Plan.

1. The Option may not be exercised prior to the date one year from the date of the Stock Option Agreement of which these terms and conditions are a part (the "Agreement"). Thereafter, the Option may be exercised in installments as follows:
 - (a) Beginning on the date one year from the date of the Agreement, the Option may be exercised to the extent of 33% of the shares originally covered thereby;
 - (b) Beginning on the date two years from the date of the Agreement, the Option may be exercised to the extent of an additional 33% of the shares originally covered thereby;
 - (c) Beginning on the date three years from the date of the Agreement, the Option may be exercised to the extent of an additional 34% of the shares originally covered thereby;
 - (d) To the extent not exercised installments shall be cumulative and may be exercised in whole or in part; and all subject to the Agreement and these terms and conditions and any rules and regulations established by the Committee pursuant to the Plan or the United Kingdom Rules.

Notwithstanding the foregoing, if your stock option grant included a UK HM Revenue & Customs ("HMRC") approved stock option ("UKA"), the UKA portion of the grant would be maximized within permissible regulatory limits. This could result in a different number of options vesting on the first three anniversary dates of the grant under the unapproved option ("UKU") and/or the UKA portion of the grant than the number indicated by the schedule above. In any event, the total number of UKUs and UKAs in the grant, will, as a whole, vest according to the schedule above. Your grant information (available online via Morgan Stanley's website - www.stockplanconnect.com or through a Morgan Stanley phone representative) will reflect the specific number of UKAs and UKUs vesting on the specific dates.

2. Except as provided in the immediately following two paragraphs, if, prior to the date one year from the date of the Agreement, the Optionee's employment with the Company shall be terminated by the Company, with or without cause, or by the act, death, incapacity or retirement of the Optionee, the Optionee's right to exercise the Option shall terminate on the date of such termination of employment and all rights hereunder and under the Agreement shall cease.

Notwithstanding the provisions of the next preceding paragraph, if the Optionee's employment with the Company shall be terminated by reason of retirement, release because of disability or death, and the Optionee had remained in the employ of the Company for at least six months following the date of the Agreement, and subject to the provisions of Article 3 hereof, all the Optionee's rights hereunder and under the Agreement shall continue in effect or continue to accrue until the date ten years after the date of the Agreement, subject, in the event of the Optionee's death during such ten year period, to the provisions of the sixth paragraph of this Article and subject to any other limitation contained herein or in the Agreement on the exercise of the Option in effect at the date of exercise.

Notwithstanding anything to the contrary set forth herein or in the Agreement, if the Optionee's employment with the Company shall be terminated at any time by reason of a sale or other disposition (including, without limitation, a transfer to a "Joint Venture" (as hereinafter defined)) of the division, operation or subsidiary in which the Optionee was employed or to which the Optionee was assigned, all the Optionee's rights under the Option shall become immediately exercisable and continue in effect until the date five years after the date of such termination (but not later than the date ten years from the date of grant of the Option), provided the Optionee shall satisfy both of the following conditions:

(a) the Optionee, at the date of such termination, had remained in the employ of the Company for at least three months following the grant of the Option, and

(b) the Optionee continues to be or becomes employed in such division, operation or subsidiary following such sale or other disposition and remains in such employ until the date of exercise of the Option (unless the Committee, or any committee appointed by it for the purpose, shall waive this condition (b)).

Upon termination of the Optionee's employment with such (former) division, operation or subsidiary following such sale or other disposition, any then existing right of the Optionee to exercise the Option shall be subject to the following limitations: (i) if the Optionee's employment is terminated by reason of disability, death or retirement with the approval of his or her employer, the Optionee's rights shall continue as provided in the preceding sentence with the same effect as if his or her employment had not terminated; (ii) if the Optionee's employment is terminated by reason of discharge or voluntary quit, the Optionee's rights shall terminate on the date of such termination of employment and all rights under the Option shall cease; and (iii) if the Optionee's employment is terminated for any reason other than a reason set forth in the preceding clauses (i) and (ii), the Optionee shall have the right, within three months after such termination, to exercise the Option to the extent that it or any installment thereof shall have accrued at the date of such termination and shall not have been exercised, subject in the case of any such termination to the provisions of Article 3 hereof and any other limitation on the exercise of the Option in effect at the date of exercise. For purposes of this paragraph, the term "Joint Venture" shall mean any joint venture corporation or partnership, or comparable entity, in which the Company has a substantial equity interest.

If, on or after the date one year from the date of the Agreement, the Optionee's employment with the Company shall be terminated for any reason except retirement, release because of disability, death, release because of a sale or other disposition of the division, operation or subsidiary in which the Optionee was employed or to which the Optionee was assigned, discharge, release in the best interest of the Company or voluntary quit, the Optionee shall have the right, within three months after such termination, to exercise the Option to the extent that it or any installment thereof shall have accrued at the date of such termination of employment and shall not have been exercised, subject to the provisions of Article 3 hereof and any other limitation contained herein or in the Agreement on the exercise of the Option in effect at the date of exercise.

If the Optionee's employment with the Company shall be terminated at any time by reason of discharge, release in the best interest of the Company or voluntary quit, the Optionee's right to exercise the Option shall terminate on the date of such termination of employment and all rights hereunder and under the Agreement shall cease.

If the Optionee shall die within the applicable period specified in the second, third, or fourth paragraph of this Article, the beneficiary designated pursuant to Article 6 hereof or, if no such designation is in effect, the executor or administrator of the estate of the decedent or the person or persons to whom the Option shall have been validly transferred by the executor or the administrator pursuant to will or the laws of descent and distribution shall have the right, within the same period of time as the period during which the Optionee would have been entitled to exercise the Option if the Optionee had not died, to exercise the Option (except that, if the fourth paragraph of this Article shall apply to the Optionee, the Option may be exercised only to the extent that it or any installment thereof shall have accrued at the date of death and shall not have been exercised, and except that the period of time within which the Option shall be exercisable following the date of the Optionee's death shall not be more than one year or less than one year (unless the Option by its terms expires earlier)), subject to the provision that the Option shall not be exercised under any circumstances beyond ten years from the date of the Agreement and to any other limitation on the exercise of the Option in effect at the date of exercise.

Notwithstanding anything to the contrary set forth in the Agreement or in these terms and conditions, the Option shall not be exercised on or after the date ten years from the date of the Agreement.

3. Anything contained herein or in the Agreement to the contrary notwithstanding, the right of the Optionee to exercise the Option following termination of the Optionee's employment with the Company shall remain effective only if, during the entire period from the date of the Optionee's termination to the date of such exercise, the Optionee shall have earned out such right by (i) making himself or herself available, upon request, at reasonable times and upon a reasonable basis, to consult with, supply information to and otherwise cooperate with the Company or any subsidiary thereof with respect to any matter that shall have been handled by him or her or under his or her supervision while he or she was in the employ of the Company or of any subsidiary thereof, and (ii) refraining from engaging in any activity that is directly or indirectly in competition with any activity of the Company or any subsidiary thereof.

In the event of the Optionee's nonfulfillment of the condition set forth in the immediately preceding paragraph, the Optionee's right to exercise the Option shall cease; provided, however, that the nonfulfillment of such condition may at any time (whether before, at the time of or subsequent to termination of his or her employment) be waived in the following manner:

- (1) if the Optionee at any time shall have been subject to the reporting requirements of Section 16(a) of the Securities Exchange Act of 1934, as amended (the "Exchange Act") or the liability provisions of Section 16(b) of the Exchange Act (any such Optionee being hereinafter called a "Section 16 Person"), such waiver may be granted by the Committee upon its determination that in its sole judgment there shall not have been and will not be any substantial adverse effect upon the Company or any subsidiary thereof by reason of the nonfulfillment of such condition; and
- (2) if the Optionee shall not at any time have been a Section 16 Person, such waiver may be granted by the Committee (or any committee appointed by it for the purpose) upon its determination that in its sole judgment there shall not have been and will not be any such substantial adverse effect.

Anything contained herein or in the Agreement to the contrary notwithstanding, the right of the Optionee to exercise the Option following termination of the Optionee's employment with the Company shall cease on and as of the date on which it has been determined by the Committee that the Optionee at any time (whether before or subsequent to termination of the Optionee's employment) acted in a manner inimical to the best interests of the Company. Conduct which constitutes engaging in an activity that is directly or indirectly in competition with any activity of the Company or any subsidiary thereof shall be governed by the four immediately preceding paragraphs of this Article and shall not be subject to any determination under this paragraph.

4. Payment for any shares of Stock purchased upon exercise of the Option shall be made in full at the time of exercise. Such payment must be made in cash.

The Optionee, from time to time during the period when the Option may by its terms be exercised, may exercise the Option in whole or in part by delivering to the Company: (i) a written notice signed by the Optionee stating the number of shares that the Optionee has elected to purchase at that time from the Company, and (ii) a check in an amount equal to the purchase price of the shares then to be purchased. The Committee, if it shall deem it necessary or desirable for any reason connected with any law or regulation of any governmental authority relating to the regulation of securities, may require the Optionee to execute and file with it such evidence as it may deem necessary that the Optionee is acquiring any shares of Stock for investment and not with a view to their distribution.

As soon as practicable after receipt by the Company of such notice and check (if the Option is exercised in whole or in part) and such evidence of intent to acquire for investment as may be required by the Committee, the Company shall issue the appropriate number of shares in the name of the Optionee and deliver the certificate therefore to the Optionee. The number of shares shall be adjusted appropriately, or other appropriate arrangements shall be made, for any taxes required to be withheld by United Kingdom or United States federal, state or local law.

5. As a condition of the granting of the Option, the Optionee and the Optionee's successors and assigns agree that any dispute or disagreement which shall arise under or as a result of the Agreement or these terms and conditions shall be determined by the Committee in its sole discretion and judgment and that any such determination and any interpretation by the Committee of the Agreement or of these terms and conditions shall be final and shall be binding and conclusive for all purposes.
6. The option is not transferable by the Optionee and, during the Optionee's lifetime, the Option is exercisable only by the Optionee or the Optionee's legal representative.
7. The Optionee, or the Optionee's legal representative shall have no rights as a stockholder with respect to any share covered by the Option until such person shall have become the holder of record of such share, and, except as provided in Article 9 hereof, no adjustment shall be made for dividends (ordinary or extraordinary, whether in cash or securities or other property) or distributions or other rights in respect of such share for which the record date is prior to the date upon which such person shall become the holder of record thereof.
8. The existence of the Option shall not affect in any way the right or power of the Company or its stockholders to make or authorize any adjustments, recapitalizations, reorganizations or other changes in the Company's capital structure or its business, or any merger or consolidation of the Company, or any issue of bonds, debentures, preferred or prior preference stocks ahead of or affecting the Stock or the rights thereof, or the dissolution or liquidation of the Company, or any sale or transfer of all or any part of its assets or business, or any other corporate act or proceedings whether of a similar character or otherwise.
9. The shares covered by the Option are shares of Stock as presently constituted, but if, and whenever, prior to the delivery by the Company of all of the shares of Stock deliverable upon exercise of the Option, the Company shall effect the payment of a stock dividend on Stock payable in shares of Stock, a subdivision or combination of the shares of Stock, or a reclassification of Stock, the number and price of shares remaining under the Option shall be appropriately adjusted, provided that the adjustment is permitted by paragraph 29, Schedule 9 to the Income and Corporation Taxes Act 1988 and also provided that the adjustment will not be effective until and unless it is approved by the Board of the Inland Revenue. Such adjustment shall be made by the Committee, whose determination as to what adjustment shall be made, and the extent thereof, shall be final and shall be binding and conclusive for all purposes. Any such adjustment may provide for the elimination of any fractional share which might otherwise become subject to the Option.

10. Except as hereinbefore expressly provided, (a) the issue by the Company of shares of Stock of any class, or securities convertible into shares of Stock of any class, for cash or property or for labor or services, either upon direct sale or upon the exercise of rights or warrants to subscribe therefore, or upon conversion of shares or obligations of the Company convertible into such shares or other securities, or (b) the payment of a stock dividend on any other class of the Company's stock, or (c) any subdivision or combination of the shares of any other class of the Company's stock, or (d) any reclassification of any other class of the Company's stock, shall not affect, and no adjustment by reason thereof shall be made with respect to, the number or price of shares of Stock subject to the Option.
11. Subject to Rule 6 of the United Kingdom Rules, after any merger of one or more corporations into the Company, or after any consolidation of the Company and one or more corporations in which the Company shall be the surviving corporation, the Optionee shall, at no additional cost, be entitled upon any exercise of the Option, to receive (subject to any required action by stockholders), in lieu of the number of shares as to which the Option shall then be so exercised, the number and class of shares of Stock or other securities to which the Optionee would have been entitled pursuant to the terms of the agreement of merger or consolidation if at the time of such merger or consolidation the Optionee had been a holder of record of a number of shares of Stock equal to the number of shares as to which such Option shall then be so exercised. Comparable rights shall accrue to the Optionee in the event of successive mergers or consolidations of the character described above. Anything contained herein or in the Agreement to the contrary notwithstanding, upon the dissolution or liquidation of the Company, or upon any merger or consolidation in which the Company is not the surviving corporation, the Option shall terminate; but if a period of one year from the date of the Agreement shall have expired, the Optionee shall have the right, immediately prior to such dissolution, liquidation, merger or consolidation, to exercise the Option in whole or in part to the extent it shall not have been exercised, without regard to the installment provisions of Article 1 hereof but subject to any other limitation contained herein or in the Agreement on the exercise of the Option in effect on the date of exercise. In the event of any other event affecting Stock, an appropriate adjustment shall be made in the number and price of shares remaining under, and other terms and provisions of, the Option. The foregoing adjustments and the manner of application of the foregoing provisions shall be determined by the Committee in its sole discretion, and such determination shall be final and shall be binding and conclusive for all purposes. Any such adjustment may provide for the elimination of any fractional share which might otherwise become subject to the Option.
12. **Optionee acknowledges and agrees that, in order for the Company to perform its requirements under the Plan, the Company may process, for an indefinite period of time, personal data about Optionee. Such data includes, but is not limited to, the information provided in the Option grant materials and any changes thereto, and other appropriate personal data about Optionee, including information about Optionee's participation in the Plan and options exercised under the Plan from time to time. Optionee also hereby gives for an indefinite period of time Optionee's explicit consent to the Company to collect, use, store and transfer any such personal data for use in the United States of America or any other required location. The legal persons for whom the personal data is intended include Ford and any of its subsidiaries, the outside plan administrator as selected by the Company from time to time and any other person that the Company may deem appropriate in its administration of the Plan. Optionee has been informed of Optionee's right to access and correct Optionee's personal data by contacting Optionee's local Human Resources Representative. Optionee has been informed of Optionee's right to withdraw at any time Optionee's consent to the processing of personal data. Optionee has been informed that the provision of personal data is voluntary. Optionee understands that the transfer of the information outlined here is important to the administration of the Plan. Optionee's consent is given freely and is valid as long as it is needed for administration of the Plan or to comply with applicable legal requirements. Optionee's failure to consent to the Company's collection, use, storage and transfer of such personal data may limit Optionee's right to participate in the Plan. For purposes of this paragraph, the term "Company" shall be deemed to include Ford Motor Company, Optionee's employer, and any other affiliate of Ford Motor Company involved in the administration of the Plan.**

13. Optionee acknowledges that the Company is entitled to terminate the Plan unilaterally, and Optionee hereby waives any right to receive Plan benefits in the event that the Plan is terminated or Optionee's right to exercise the Option otherwise terminates under the terms of the Agreement. Optionee further acknowledges that the Company's grant of the option to Optionee is not an element of the Optionee's compensation and that the option is awarded in the Company's discretion. Optionee further acknowledges that receipt of the Option does not entitle Optionee to any further grants of an Option in the future, and that the Company does not guarantee that benefits under the Plan will have a particular value or be granted to Optionee in the future.
14. Notwithstanding any of the other provisions of the Agreement or these terms and conditions, the Optionee agrees not to exercise the Option, and that the Company will not be obligated to issue any shares pursuant to the Agreement, if the exercise of the Option or the issuance of such shares would constitute a violation by the Optionee or by the Company of any provisions of any law or regulation of any governmental authority. Any determination of the Committee in this connection shall be final and shall be binding and conclusive for all purposes. The Company shall in no event be obligated to take any affirmative action in order to cause the exercise of the Option or the issuance of shares pursuant thereto to comply with any law or any regulation of any governmental authority.
15. Every notice relating to the Agreement shall be in writing and shall be given by registered mail with return receipt requested. All notices to the Company shall be addressed to:

Morgan Stanley
Ford Service Center
1001 Page Mill Road
Bldg. 4, Suite 101
Palo Alto, CA 94304, USA
Phone No.:
877-664-FORD (3673) (U.S.)
212-615-7009 (Non-U.S.)
Fax No.:650-494-2561

All notices by the Company to the Optionee shall be addressed to the current address of the Optionee as shown on the records of the Company. Either party by notice to the other may designate a different address to which notices shall be addressed. Any notice given by the Company to the Optionee at his or her last designated address shall be effective to bind any other person who shall acquire rights under the Agreement.

16. The Agreement has been made in and it and these terms and conditions shall be construed in accordance with the laws of the State of Michigan.
17. No U.K. income tax will be payable on the grant of the Option. The Company will, however, inform HMRC of the grant of the Option. No U.K. income tax should be payable on the exercise of UKA Options, provided that the UKA scheme retains its U.K. HMRC approved status and the Option is exercised at least 3 years and not more than 10 years from the date of grant.

SUBSIDIARIES OF FORD MOTOR COMPANY AS OF JANUARY 31, 2021*

Organization	Jurisdiction
CAB East LLC	Delaware, U.S.A.
CAB West LLC	Delaware, U.S.A.
Canadian Road Leasing Company	Canada
FCE Bank plc	England
FCSH GmbH	Switzerland
FMC Automobiles SAS	France
Ford AI Holdings LLC	Delaware, U.S.A.
Ford Auto Securitization Trust	Canada
Ford Automotive Finance (China) Limited	China
Ford Bank GmbH	Germany
Ford Credit Auto Lease Two LLC	Delaware, U.S.A.
Ford Credit Auto Owner Trust 2016-REV1	Delaware, U.S.A.
Ford Credit Auto Owner Trust 2016-REV2	Delaware, U.S.A.
Ford Credit Auto Owner Trust 2017-REV1	Delaware, U.S.A.
Ford Credit Auto Owner Trust 2017-REV2	Delaware, U.S.A.
Ford Credit Auto Owner Trust 2018-REV1	Delaware, U.S.A.
Ford Credit Auto Owner Trust 2018-REV2	Delaware, U.S.A.
Ford Credit Auto Owner Trust 2019-REV1	Delaware, U.S.A.
Ford Credit Auto Owner Trust 2020-REV1	Delaware, U.S.A.
Ford Credit Auto Owner Trust 2020-REV2	Delaware, U.S.A.
Ford Credit Canada Company	Canada
Ford Credit Canadian Lending, LP	Canada
Ford Credit CP Auto Receivables LLC	Delaware, U.S.A.
Ford Credit Floorplan Corporation	Delaware, U.S.A.
Ford Credit Floorplan Master Owner Trust A	Delaware, U.S.A.
Ford Credit International LLC	Delaware, U.S.A.
Ford Deutschland Holding GmbH	Germany
Ford Espana S.L.	Spain
Ford European Holdings LLC	Delaware, U.S.A.
Ford Holdings LLC	Delaware, U.S.A.
Ford Global Technologies, LLC	Delaware, U.S.A.
Ford India Private Limited	India
Ford International Capital LLC	Delaware, U.S.A.
Ford International Liquidity Management Limited	England
Ford Italia S.p.A.	Italy
Ford Lease Trust	Canada
Ford Mexico Holdings LLC	Delaware, U.S.A.
Ford Motor (China) Ltd.	China
Ford Motor Company Brasil Ltda.	Brazil
Ford Motor Company Limited	England
Ford Motor Company of Australia Pty Ltd	Australia

<u>Organization</u>	<u>Jurisdiction</u>
Ford Motor Company of Canada, Limited	Canada
Ford Motor Company of Southern Africa (Pty) Limited	South Africa
Ford Motor Company, S.A. de C.V.	Mexico
Ford Motor Credit Company LLC	Delaware, U.S.A.
Ford Motor Service Company	Michigan, U.S.A.
Ford Retail Group Limited	England
Ford Romania S.A.	Romania
Ford Smart Mobility LLC	Delaware, U.S.A.
Ford Trading Company, LLC	Delaware, U.S.A.
Ford VH Limited	England
Ford VHC AB	Sweden
Ford-Werke GmbH	Germany
Global Investments 1 Inc.	Delaware, U.S.A.

104	Other U.S. Subsidiaries
156	Other Non-U.S. Subsidiaries

* Other subsidiaries are not shown by name in the above list because, considered in the aggregate as a single subsidiary, they would not constitute a significant subsidiary.

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Ford Motor Company Registration Statement Nos. 33-62227, 333-02735, 333-20725, 333-31466, 333-47733, 333-56660, 333-57596, 333-65703, 333-71380, 333-74313, 333-85138, 333-87619, 333-104063, 333-113584, 333-123251, 333-138819, 333-138821, 333-149453, 333-149456, 333-153815, 333-153816, 333-156630, 333-156631, 333-157584, 333-162992, 333-162993, 333-165100, 333-172491, 333-179624, 333-186730, 333-193999, 333-194000, 333-203697, 333-210978, 333-217494, 333-226348, 333-231058, and 333-240220 on Form S-8 and 333-236450 on Form S-3.

We hereby consent to the incorporation by reference in the aforementioned Registration Statements of Ford Motor Company of our report dated February 4, 2021 relating to the financial statements, financial statement schedule and the effectiveness of internal control over financial reporting, which appears in this Form 10-K.

/s/ PricewaterhouseCoopers LLP

Detroit, Michigan
February 4, 2021

**POWER OF ATTORNEY WITH RESPECT TO
ANNUAL REPORT OF FORD MOTOR COMPANY ON
FORM 10-K FOR THE YEAR ENDED DECEMBER 31, 2020**

Each of the undersigned, a director of Ford Motor Company ("Ford"), appoints each of J. F. Mellen, C. A. O'Callaghan, J. E. Osgood, and C. M. MacGillivray, his or her true and lawful attorney and agent to do any and all acts and things and execute any and all instruments which the attorney and agent may deem necessary or advisable in order to enable Ford to comply with the Securities Exchange Act of 1934, and any requirements of the Securities and Exchange Commission, in connection with the filing of Ford's Annual Report on Form 10-K for the year ended December 31, 2020 and any and all amendments thereto, as authorized at a meeting of the Board of Directors of Ford duly called and held on February 2, 2021 including, but not limited to, power and authority to sign his or her name (whether on behalf of Ford, or as a director or officer of Ford, or by attesting the seal of Ford, or otherwise) to such instruments and to such Annual Report and any amendments thereto, and to file them with the Securities and Exchange Commission. Each of the undersigned ratifies and confirms all that any of the attorneys and agents shall do or cause to be done by virtue hereof. Any one of the attorneys and agents shall have, and may exercise, all the powers conferred by this instrument. Each of the undersigned has signed his or her name as of the 4th day of February, 2021:

/s/ Kimberly A. Casiano

(Kimberly A. Casiano)

/s/ Anthony F. Earley, Jr.

(Anthony F. Earley, Jr.)

/s/ Edsel B. Ford II

(Edsel B. Ford II)

/s/ William W. Helman IV

(William W. Helman IV)

/s/ Jon M. Huntsman, Jr.

(Jon M. Huntsman, Jr.)

/s/ William E. Kennard

(William E. Kennard)

/s/ John C. Lechleiter

(John C. Lechleiter)

/s/ Beth E. Mooney

(Beth E. Mooney)

/s/ John L. Thornton

(John L. Thornton)

/s/ John B. Veihmeyer

(John B. Veihmeyer)

/s/ Lynn M. Vojvodich

(Lynn M. Vojvodich)

/s/ John S. Weinberg

(John S. Weinberg)

CERTIFICATION

I, James D. Farley, Jr., certify that:

1. I have reviewed this Annual Report on Form 10-K for the period ended December 31, 2020 of Ford Motor Company;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Dated: February 4, 2021

/s/ James D. Farley, Jr.

James D. Farley, Jr.

President and Chief Executive Officer

CERTIFICATION

I, John T. Lawler, certify that:

1. I have reviewed this Annual Report on Form 10-K for the period ended December 31, 2020 of Ford Motor Company;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Dated: February 4, 2021

/s/ John T. Lawler

John T. Lawler

Chief Financial Officer

CERTIFICATION OF CHIEF EXECUTIVE OFFICER

I, James D. Farley, Jr., President and Chief Executive Officer of Ford Motor Company (the "Company"), hereby certify pursuant to Rule 13a-14(b) or 15d-14(b) of the Securities Exchange Act of 1934, as amended, and Section 1350 of Chapter 63 of Title 18 of the United States Code that to my knowledge:

1. The Company's Annual Report on Form 10-K for the period ended December 31, 2020, to which this statement is furnished as an exhibit (the "Report"), fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and
2. The information contained in this Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: February 4, 2021

/s/ James D. Farley, Jr.

James D. Farley, Jr.

President and Chief Executive Officer

CERTIFICATION OF CHIEF FINANCIAL OFFICER

I, John T. Lawler, Chief Financial Officer of Ford Motor Company (the “Company”), hereby certify pursuant to Rule 13a-14(b) or Rule 15d-14(b) of the Securities Exchange Act of 1934, as amended, and Section 1350 of Chapter 63 of Title 18 of the United States Code that to my knowledge:

1. The Company’s Annual Report on Form 10-K for the period ended December 31, 2020, to which this statement is furnished as an exhibit (the “Report”), fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and
2. The information contained in this Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: February 4, 2021

/s/ John T. Lawler

John T. Lawler

Chief Financial Officer