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 183,000 employees worldwide, the Company is committed to helping build a better world, where every person is free to move and pursue their dreams. The Company's Ford+ plan for growth and value creation combines existing strengths, new capabilities, and always-on relationships with customers to enrich experiences for and deepen the loyalty of those customers. Ford designs, manufactures, markets, and services a full line of connected, increasingly electrified passenger and commercial vehicles: Ford trucks, utility vehicles, vans, and cars, and Lincoln luxury vehicles. The Company is pursuing leadership positions in electrification, connected vehicle services, and mobility solutions, including self-driving technology, and provides financial services through Ford Motor Credit Company LLC ("Ford Credit").

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, 2021 ("2021 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 Integrated Sustainability and Financial 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 2021, we sold approximately 3,942,000 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	2020	2021
Ford	9,618	8,900
Ford-Lincoln (combined)	707	654
Lincoln	392	401
Total	10,717	9,955

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.

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, and our ability to maintain sufficient production levels to support desired dealer inventory in the event of supplier disruptions or other types of disruptions affecting our production. 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). Because of constraints related to COVID-19 in 2020 and, more recently, due to the semiconductor shortage, production has been higher in the second half of the year.

Backlog Orders. During the past year, gross stock levels at dealers were lower than normal due largely to the semiconductor shortage, and the amount of time required to fill orders for certain vehicles increased.

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). As we transition to a greater mix of battery electric vehicles, we expect to increase our reliance on lithium, cobalt, and nickel for batteries. 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.

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 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)		
	2019	**2020**	**2021**
United States	2,412	1,826	1,716
Canada	289	210	233
Mexico	53	34	40
North America	2,765	2,081	2,006
Brazil	218	135	27
Argentina	47	31	26
South America	295	185	81
United Kingdom	367	208	227
Germany	328	211	152
EU20 (b)	1,317	904	806
Turkey	47	102	72
Europe	1,390	1,020	891
China (c)	535	617	649
Australia	64	57	70
India	73	46	34
ASEAN (d)	102	67	75
Russia	28	14	22
International Markets Group	401	284	315
Total Company	5,386	4,187	3,942

(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, local brand units produced by our unconsolidated Chinese joint venture Jiangling Motors Corporation, Ltd. ("JMC") that are sold to dealerships, and from the second quarter of 2021, Ford badged vehicles produced in Taiwan by Lio Ho Group. 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)		
	2019	2020	2021	2019	2020	2021	2019	2020	2021
United States	2.4	2.0	1.9	17.5	14.9	15.4	13.8 %	13.7 %	12.4 %
Canada	0.3	0.2	0.2	2.0	1.6	1.7	14.6	15.1	14.3
Mexico	0.1	—	—	1.4	1.0	1.0	4.4	4.0	4.0
North America	2.8	2.3	2.2	21.1	17.6	18.4	13.2	13.2	12.0
Brazil	0.2	0.1	—	2.8	2.1	2.1	8.1	6.8	1.7
Argentina	0.1	—	—	0.5	0.3	0.4	11.4	9.7	7.9
South America	0.3	0.2	0.1	4.3	3.1	3.6	7.2	6.2	2.6
United Kingdom	0.4	0.2	0.2	2.7	1.9	2.0	13.0	12.9	11.8
Germany	0.3	0.2	0.2	4.0	3.3	3.0	8.3	7.4	5.7
EU20 (d)	1.3	1.0	0.9	17.9	13.7	13.7	7.4	7.1	6.4
Turkey	—	0.1	0.1	0.5	0.8	0.8	10.1	12.4	9.7
Europe	1.4	1.1	1.0	19.2	15.1	15.1	7.3	7.2	6.4
China (e)	0.6	0.6	0.6	26.1	25.2	26.3	2.2	2.4	2.4
Australia	0.1	0.1	0.1	1.1	0.9	1.1	6.0	6.5	6.8
India	0.1	0.1	—	3.8	2.8	3.5	2.0	1.7	1.0
ASEAN (f)	0.1	0.1	0.1	1.8	1.3	1.4	5.9	5.3	5.3
Russia	—	—	—	1.8	1.5	1.7	1.6	0.9	1.2
International Markets Group	0.4	0.3	0.3	21.2	17.5	18.7	1.9	1.7	1.8
Global / Total Company	5.5	4.5	4.2	91.9	78.5	82.1	6.0 %	5.8 %	5.1 %

(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	
	2020	2021	2020	2021
Trucks	1,102,097	1,011,198	953,165	942,472
SUVs	749,583	827,278	712,623	724,539
Cars	193,064	67,479	160,449	49,470
Total Vehicles	2,044,744	1,905,955	1,826,237	1,716,481

MOBILITY SEGMENT

Effective January 1, 2021, we realigned the costs and benefits related to enterprise connectivity activities previously included in the Mobility segment to the Automotive segment. Accordingly, 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.

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, and marketable securities (excluding gains and losses on investments in equity securities), 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, that are not allocated to 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 were realigned to Corporate Other, and (ii) certain corporate governance expenses that benefit the global enterprise previously reported in the Automotive segment are reported as part of Corporate Other.

INTEREST ON DEBT

Interest on Debt consists of interest expense on Company debt excluding Ford Credit.

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. Fifteen states have adopted California's light-duty standards, other states may join them, and states may also adopt California's heavy-duty standards. 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 has adopted new emissions regulations applicable to model year 2024 heavy-duty engines, as well as extended heavy-duty warranty requirements for the 2022 model year, and EPA has announced that it intends to adopt more stringent heavy-duty standards beginning with the 2027 model year. These rules include more stringent emissions standards, as well as new requirements affecting durability testing, warranty, and OBD. CARB has also proposed new light-duty emissions standards applicable to 2026 model year vehicles that include a more stringent fleet-average emissions standard and other new emissions requirements. 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% of a manufacturer's California light-duty vehicle sales volume. California is in the process of adopting new ZEV regulations applicable to model years 2026-2035. The proposed regulations include substantial annual increases in required sales volumes, significant restrictions on credit usage, and new requirements for EV battery durability. 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") and U.K. regulations, directives, and related legislation limit the amount of regulated pollutants that may be emitted by new motor vehicles and engines sold in the EU and the United Kingdom. Regulatory stringency has increased significantly since Stage VI emission standards were introduced, with the subsequent implementation of a laboratory test cycle for CO_2 and emissions and 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. In addition, new requirements for tailpipe and non-tailpipe emissions will be included in the upcoming Euro 7 regulation. The costs associated with complying with all of 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, these challenges will continue in European markets, including the United Kingdom. In addition, the Whole Vehicle Type Approval ("WVTA") regulation has been updated to increase the stringency of in-market surveillance. Moreover, following the U.K.'s withdrawal from the European Union, 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 CO_2 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 light duty vehicle 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. Under the level one (VI(a)) standard, which is currently in place nationwide in China, the emissions limits are comparable to the EU Stage VI limits, except for CO, which is 30% lower than the EU Stage VI limit. The more stringent level two (VI(b)) standard's emissions limits are approximately 30-50% lower than the EU Stage VI limits, depending on the pollutant. While level two (VI(b)) is not slated for nationwide implementation until July 2023, the government has encouraged the more economically developed cities and provinces to pull ahead implementation. For example, Shanghai, Tianjin, Hebei province, and Guangdong province have all begun implementing level two (VI(b)). Both China Stage VII light duty vehicle and heavy duty vehicle emission regulations are currently under evaluation, 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 CO_2) 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. The federal government has started preliminary consultations on a potential ZEV mandate.

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.

Beginning with the 2012 model year, EPA and NHTSA 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. In 2020, EPA introduced significantly less stringent fuel economy and GHG standards applicable to model years 2021-2026. The federal government also revoked California's authority to set and enforce its own vehicle GHG standards, as well as the authority of other states that opted in to California's standards. California continued to assert its authority to regulate vehicle GHGs, challenged in court the federal government's preemption actions, withdrew from ONP, and planned to return to enforcing its own state-specific GHG standards.

The litigation over both standards and preemption, with uncertain outcomes, created difficulty for purposes of Ford's future product planning. To avoid a "bifurcated" regulatory scenario in which California and the 15 other states that adopted California's GHG standards enforce one set of rules, while a different set of rules applies in the rest of the country, Ford reached an agreement with California on a set of terms for an alternative framework in which Ford committed to meet a designated set of standards on a national basis in lieu of the California regulatory program. This framework enabled Ford to continue its product planning on a nationwide basis, while being consistent with Ford's environmental goals. Ford finalized its agreement with California in 2020, and other states that adopted the California standards indicated they would respect the agreement.

In 2021, EPA again re-evaluated the stringency of fuel economy and GHG standards through the 2026 model year and whether to restore the stringency to the previous ONP levels, or greater. Final GHG standards applicable to model years 2023-2026 were finalized in December 2021, with increased stringency. These standards, along with more stringent fuel economy standards for model years 2024-2026 that are expected to be finalized in 2022, could increase costs and complexity for Ford. The federal government also acted in December 2021 to repeal its rule blocking California's authority to set and enforce its own vehicle GHG standards, as well as the authority of other states that adopted California's standards. EPA is expected to take similar action in early 2022 under the Clean Air Act. 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 its 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.

European Requirements. The European Union regulates passenger car and light commercial vehicle CO_2 emissions using sliding scales with different CO_2 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 CO_2 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 CO_2 performance. For "multi-stage vehicles" (e.g., Ford's Transit chassis cabs), the base manufacturer (e.g., Ford) is fully responsible for the CO_2 performance of the final up-fitted vehicles. The initial target levels get significantly more stringent every five years (2025, 2030, 2035), requiring significant investments in propulsion technologies and extensive fleet management forcing low CO_2 emissions. Delayed launches, supply shortages, or lower demand for low CO_2 emission vehicles, as well as a limited charging infrastructure, can trigger compliance risks.

The EU Commission is investigating the introduction of Real Driving CO_2 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 CO_2 emissions (including stricter CO_2 fleet regulations) and other regulated emissions and include recycling and substance restrictions. While the EU Commission targets net climate neutrality by 2050 and a more ambitious 2030 interim target (a 55% instead of 40% CO_2 reduction compared to 1990), several countries, such as Germany, have adopted stricter interim targets and earlier net climate neutrality targets.

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 CO_2. This world light duty test procedure ("WLTP") is focused primarily on better aligning laboratory CO_2 and fuel consumption figures with customer-reported figures. The introduction of WLTP in Europe started in September 2017 and requires updates to CO_2 labeling, thereby impacting taxes in countries with a CO_2 tax scheme as well as CO_2 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 CO_2 vehicle emissions, including fiscal measures and CO_2 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 CO_2 emissions. The EU CO_2 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 also undertook a mid-term evaluation of the standards for the 2022 model year and beyond, which concluded in 2021 and sought to align with the most stringent standards in the United States (federal or state). When U.S. EPA's final rule goes into effect, Canada will automatically adopt the new standards by reference to the U.S. Code of Federal Regulations. However, consultation is now underway for the few standalone elements that are not automatically adopted by reference for the 2023-2025 model years, and these draft amendments are expected in 2022. 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 current U.S. presidential administration.

China's Corporate Average Fuel Consumption and New Energy Vehicle ("NEV") Credit Administrative Rules contain fuel consumption requirements as well as credit mandates for NEV passenger vehicles, i.e., plug-in hybrids, battery electric vehicles, or fuel cell vehicles. The fuel consumption requirement uses a weight-based approach to establish targets, with year-over-year target reductions. China set a target of 5.0L/100km for the 2020 passenger vehicle industry fuel consumption fleet average, which lowers to 4.0L/100km by 2025 based on the New European Driving Cycle ("NEDC") system. The government is projecting a further fuel consumption reduction in 2030 and is targeting 3.2L/100km. The NEV mandate requires that OEMs generate a specific amount of NEV credits each year, with NEV credits of at least 14%, 16%, and 18% of the annual ICE passenger vehicle production or import volume required in 2021, 2022, and 2023, respectively. Future percentages are currently under consideration.

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 ("GCC") countries 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 2021, Canada started preliminary consultations on several new proposed regulations, including an Administrative Monetary Penalties ("AMPs") Regulation. Draft language for the AMPs regulation is expected in 2022. In China, a new mandatory Event Data Recorder regulation that is more comprehensive 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, and is expected to become mandatory in a number of other GCC countries within five years.

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. These protocols impose additional requirements relating to testing, evaluation, and mandatory safety features, and compliance with them (or any subsequent updates to them) may be costly.

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 monthly 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, Organization Design & Workforce Planning, Talent Planning & Development, and Leadership Development & 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, Talent and Culture Committee maintains responsibility to review, discuss, and set strategic direction for various people-related business strategies, including: compensation and benefit programs; leadership succession planning; culture; diversity, equity, and inclusion ("DEI"); and talent development programs. The Sustainability, Innovation and Policy Committee is responsible for discussing and advising management on maintaining and improving sustainability strategies, the implementation of which creates value consistent with the long-term preservation and enhancement of shareholder value and social wellbeing, 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 both foundational to achieving our Ford+ plan and 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 Ford Advocacy for Belonging ("FAB") Councils in every region. Our ERGs and FAB Councils are instrumental in providing a voice to our globally diverse workforce as well as sharing valuable insights into the development of products, services, and experiences.

In 2020 and 2021, we conducted comprehensive DEI Audits in the United States and seven major markets. The purpose of the audits, 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. Each of our global Business Units has developed action plans specific to its unique needs and culture. From an enterprise perspective, we have taken several concrete steps to further these efforts, including embedding DEI into our corporate strategy and governance and establishing objectives for progress for every salaried employee. This holistic DEI strategy includes a strong focus on racial equity and DEI education.

Our diversity statistics include the following as of December 31, 2021 (based on self-reporting at the date of hire): 28.1% of our salaried employees worldwide are females (excludes certain employees in Europe in accordance with the European Union's General Data Protection Regulation); 25.0% of our total salaried and hourly employees in the United States are females; and 34.9% 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). Since January 2020, we have added a substantial number of employees to our salaried workforce to support these emerging areas of our business, and have dedicated more resources to recruiting these employees.

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. In 2021, we established Leadership+, a new mechanism for developing People Leaders and delivering key messages related to that role, including demonstrating care, fostering psychological safety, instilling a challenger mindset, and leading through the evolution of work. Through Leadership+, we have activated People Leaders – quickly and at scale – to help deliver Ford+.

Employee Health and Safety

Nothing is more important than the health, safety, and wellbeing of our people, and we consistently strive to achieve world-class levels of safety through the application of sound policies and best practices. We maintain a robust safety culture to reduce workplace injuries, supported by effective communication, reporting, and external benchmarking. We verify compliance with regulatory requirements as well as our internal safety standards and regularly report to Company management on key safety issues, including significant incidents and high potential 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. Unfortunately, there were three fatal incidents in 2021 in our North American manufacturing facilities. Another key safety indicator is our global lost-time case rate ("LTCR"), which 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. Our LTCR increased to 0.35 in 2021 from 0.31 in 2020, primarily due to high variations in production schedules and employee turnover.

We continue to address the complexity of the global COVID-19 pandemic, including how we support and protect our employees, the communities in which we operate, and our Company assets. The COVID-19 Business Resumption Plan, i.e., "The Return-To-Work Playbook," continues to guide our efforts to protect our employees as the pandemic continues. 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 certain 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, build capability, and meet individual and organizational wellbeing needs and goals. Wellbeing 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 understand employee needs and prioritize our wellbeing efforts. Through our global wellbeing programs, which include enhanced childcare and parental resources, Mental Health First Aid, mindfulness clubs, and World Mental Health Day observances, among other things, we provide employees with experiences, self-guided tools, and access to the professional support and resources they need to achieve their own sense of wellbeing. We are committed to creating an environment where employees and People Leaders care for each other as we deliver Ford+.

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, DEI, Leadership, and Strategic Alignment. Our efforts to drive change in these areas are paying off. For example, we began surveying our employees about their work-life balance at the onset of the COVID-19 pandemic; in 2021, 87% of the respondents, which were primarily salaried employees, indicated that they have the flexibility to balance the needs of their work and personal lives. In 2021, employee responses also indicated that 84% of respondents understand corporate strategy and their role in it, and 85% are excited about what Ford can accomplish in the future.

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):

	2020 (a)	2021
North America	100	99
South America	8	4
Europe	42	42
China (including Taiwan)	4	3
International Markets Group	14	16
Total Automotive	168	164
Ford Credit	6	5
Mobility	2	2
Corporate and Other	10	12
Total Company	186	183

(a) Effective with 2021 reporting, certain costs for the benefit of the global enterprise previously reported in Automotive are now reported in Corporate Other, and costs and benefits related to connectivity previously reported in Mobility are now reported in Automotive. Prior period totals have been updated to be consistent with 2021 reporting.

The reduction in employees in 2021 is primarily a result of our global redesign efforts, primarily in South America and Europe, partially offset by the addition of employees in growth areas, including software and electrification.

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, 2021, approximately 56,000 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 periodically created significant volatility in the global economy. 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. For example, in 2020, consistent with the actions taken by governmental authorities, we idled our manufacturing operations in regions around the world before ultimately resuming our manufacturing operations taking a phased approach and after introducing new safety protocols at our plants. 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 or variants of COVID-19 develop or sufficient amounts of vaccines or treatments 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.

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, COVID-19 has had a significant negative impact on many businesses and unemployment rates increased from pre-COVID-19 levels. Economic uncertainty and higher unemployment may result in higher defaults in Ford Credit's consumer portfolio, and prolonged unemployment may 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 values have increased significantly, 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 variants, 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 remains uncertain and will depend on future developments, such as the ultimate duration and scope of the outbreak (including any potential future waves, the emergence or re-emergence of variants and their transmissibility, and the success of vaccination programs and treatments), 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, regionally or globally, 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 2021 Form 10-K Report, including, but not limited to, our competitiveness, demand or market acceptance for our products and services, and shifting consumer preferences, and our ability to successfully execute our strategy.

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, or raw materials 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 continues to face a significant shortage of semiconductors, which has a complex supply chain with long lead times required to increase production and capacity. The shortage is due in large part to strong cross-industry demand, which has presented challenges and production disruptions globally, including at our assembly plants. In addition, Renesas Electronics Corporation, a key supplier of semiconductors for the automotive industry and for us in particular, experienced a significant fire at its Naka Factory in March 2021, and COVID-related work restrictions in Southeast Asia have further impacted semiconductor production. With up to fifty modules on a vehicle, we and our competitors who need integrated circuits are experiencing various levels of semiconductor impact. A shortage of key components or raw materials as a result of disruptions in the supply chain, capacity constraints, competition for those items within the automotive industry and other sectors, or otherwise 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 Ford+. We previously announced our plan for growth and value creation – Ford+. Ford+ is focused on delivering distinctive and increasingly electric products plus "Always-On" customer relationships and user experiences. Our Ford+ plan is designed to leverage our foundational strengths to build new capabilities – enriching customer experiences and deepening loyalty. As we undertake this transformation of our business, we must integrate our strategic initiatives into a cohesive business model, and balance competing priorities, or we will not be successful. To facilitate this transformation, we are making substantial investments, recruiting new talent, and optimizing our business model, management system, and organization. Accordingly, maintaining discipline in our capital allocation continues to be important, as a strong core business and a balance sheet that provides the flexibility to invest in these new growth opportunities is critical to the success of our Ford+ plan. If we are unable to optimize our capital allocation among vehicles, services, technology, and other calls on capital, or we are otherwise not successful in executing Ford+ (or are delayed for reasons outside of our control), we may not be able to realize the full benefits of our plan, which could have an adverse effect on our financial condition or results of operations. Furthermore, if we fail to make progress on our plan at the pace that shareholders expect, it may lead to an increase in shareholder activism, which may disrupt the conduct of our business and divert management's attention and resources.

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 resulted in significant civil penalties being 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. 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, digital and physical services, and mobility services are subject to market acceptance and face significant competition from existing and new entrants in the automotive, mobility, and digital services 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 may involve a lengthy regulatory approval process. As a result, 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, which may be significant, in that strategy. Moreover, we may continue to have financial exposure following a strategic divestiture or cessation of operations in a market, and restructuring actions may subject us to potential claims from employees, suppliers, dealers, or governmental authorities or harm our reputation. 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, vehicles, and services could be affected by cyber incidents, ransomware attacks, 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, our vehicles, and the services we offer. 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 ransomware or other 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 or services we offer; 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, or a data breach may result from, 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, cause customers to lose trust in our security measures, and/or subject us to regulatory actions or litigation, and a cyber incident involving us or one of our suppliers could impact production, our internal operations, or our ability to deliver products and services to our customers.

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, capacity limitations, 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, capacity limitations, or other difficulties; as a result of a natural disaster (including climate-related physical risk); cyber incidents; 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), marketing, and finance, among other areas. Competition for such employees is intense, which has led to an increase in compensation throughout the labor market, and, accordingly, may increase costs for employers. In addition to compensation considerations, potential employees are increasingly placing a premium on various intangibles, such as working for companies with a clear purpose, flexible work arrangements, and other considerations. If we are not perceived as an employer of choice, we may be unable to recruit highly skilled employees. Further, if we lose existing employees with needed skills or we are unable to upskill and develop existing employees, particularly with the introduction of new technologies, it could have a substantial adverse effect on our business.

Macroeconomic, Market, and Strategic Risks

Ford's new and existing products, digital and physical services, and mobility services are subject to market acceptance and face significant competition from existing and new entrants in the automotive, mobility, and digital services 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 or identify emerging 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 and recoup investment costs. 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 and services from those of our competitors, develop innovative new products and services, or sufficiently tailor our products and services to customers in other markets, there could be insufficient demand for our products and services, 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 capacity expansion and investments in the areas of electrification, connectivity, digital and physical services, and mobility depends on many factors, including advancements in technology, regulatory changes, infrastructure development (e.g., a widespread vehicle charging network), and other factors that are difficult to predict, that may significantly affect the future of electric and autonomous vehicles, digital and physical services, and mobility services. The automotive, mobility, and digital service 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 of our ability 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 Lightning and E-Transit. 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, there is a negative perception of our vehicles or about electric vehicles in general, 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 electric and 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 near-term 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 with internal combustion engines (including trucks and utilities) to battery electric or other vehicles in our portfolio that may be less profitable could result in an adverse effect on our financial condition or results of operations in the near term. In the longer term, if demand for battery electric vehicles grows at a rate greater than our ability to increase our production capacity for those vehicles, lower market share and revenue, as well as facility and other asset-related charges (e.g., accelerated depreciation) associated with the production of internal combustion vehicles, may result.

With a global footprint, Ford's results could be adversely affected by economic, geopolitical, protectionist trade policies, or other events, including tariffs. With the interconnectedness of the global economy, the challenges of a pandemic, 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. 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, and may lead to other countries attempting to retaliate by imposing tariffs, which would make our products more expensive for customers in other markets, and, in turn, could make our products less competitive. China presents unique risks to U.S. automakers due to the strain in U.S.-China relations and China's unique regulatory landscape.

We have operations in various markets with volatile economic or political environments. This 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 and developing trends such as shared vehicle ownership and the transportation as a service model, e.g., ridesharing services. 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 being a temporary exception). Historically, 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. As the automotive industry transitions to battery electric vehicles, excess capacity, particularly for internal combustion engine trucks and utilities, may continue or increase. This excess capacity may further increase price competition in that segment of the market, which could have a substantial adverse effect on our financial condition or results of operations.

Inflationary pressure and fluctuations in commodity prices, foreign currency exchange rates, interest rates, and market value of Ford or Ford Credit's investments, including marketable securities, can have a significant effect on results. We are exposed to inflationary pressure and 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, including our Rivian marketable securities, with unrealized gains and losses that could be material in any period.

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. The discontinuance of LIBOR is one such risk that could cause market volatility or disruption and could adversely affect Ford Credit's access to the debt, securitization, or derivative markets and increase 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 the State of São Paulo has 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 industry-wide, 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. In 2021, Ford Credit experienced lower-than-expected return volumes. If auction values decrease significantly in the future, return volumes could exceed Ford Credit's expectations. 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 and Ford Credit could experience unusual or significant litigation, governmental investigations, or adverse publicity arising out of alleged defects in products, services, perceived environmental impacts, or otherwise. We spend substantial resources ensuring that we comply with governmental safety regulations, mobile and stationary source emissions regulations, consumer and automotive financial 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*" and "*Ford Credit could be subject to new or increased credit regulations, consumer protection regulations, or 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 civil actions even where our vehicles, services, and financial products 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, services, 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 Obama administration GHG standards through the 2026 model year and sought to block 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 challenged both of those Trump administration actions in court. The Biden administration has completed actions to reverse the rollback of GHG emissions standards and repeal a NHTSA rule blocking California and other states' authority, and the administration is expected to reverse NHTSA''s rollback of fuel economy standards and EPA's action blocking California and other states' authority. California has an ambitious plan to reduce overall GHG emissions to 40% below 1990 levels by 2030 and EPA is also developing new and more stringent GHG emissions standards after the 2026 model year. 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, digital and physical services, and mobility services are subject to market acceptance and face significant competition from existing and new entrants in the automotive, mobility, and digital services 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 are 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, limited availability of necessary components, e.g., batteries, 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 non-governmental organizations, 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 90% 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, 2021 use eight regional engineering, research, and development centers, and 48 manufacturing and assembly plants, which includes plants that are operated by us or our consolidated joint venture that support our Automotive segment.

We have one significant consolidated joint venture in our Automotive segment:

- *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 venture, 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 41% of the ownership interests in Argo AI, with the remaining interests held by employees, founders, and Lyft.

- *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 four assembly plants, an engine plant, and a transmission plant in China where it produces and distributes a variety of Ford passenger vehicle models.

- *Ford Lio Ho Motor Company Ltd. ("FLH")* — a joint venture in Taiwan between Ford (26% partner) and local partners (74% 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 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.

- *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.

- *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.

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 that have more than a remote risk of loss and such loss would likely be significant if the matter is resolved unfavorably to us 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 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 breach of warranty and claiming damages based on state and federal consumer protection laws. Remedies under these statutes may include vehicle repurchase, civil penalties, and payment by Ford of the plaintiff's attorneys' 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 litigation 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 few of the purported class actions filed against us in the past have 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) have more than a remote risk of loss, and such loss would likely be significant if the action is resolved unfavorably to us. 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 São Paulo assessment is 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 outstanding assessments have been appealed to the relevant administrative court of each jurisdiction. 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, and a hearing on the appeal was held on January 13, 2022. On February 1, 2022, the Italian Council of State dismissed the ICA's appeal.

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 EPA, CARB, and DOJ that these agencies have closed their inquiries into the matter and do not intend to take any further action. Environment and Climate Change Canada's request for information has been completed.

Transit Connect Customs Penalty Notice. U.S. Customs and Border Protection ("CBP") ruled in 2013 that Transit Connects imported as passenger wagons and later converted into cargo vans are subject to the 25% duty applicable to cargo vehicles, rather than the 2.5% duty applicable to passenger vehicles. We filed a challenge in the U.S. Court of International Trade ("CIT"), and CIT ruled in our favor in 2017. CBP subsequently filed a notice of appeal to the U.S. Court of Appeals for the Federal Circuit, which ruled in favor of CBP. Following the U.S. Supreme Court's denial of our petition for a writ of certiorari in 2020, we paid the increased duties for certain prior imports, plus interest, and disclosed that CBP might assert a claim for penalties. Subsequently, CBP issued a penalty notice to us dated July 22, 2021, and on November 18, 2021, CBP assessed against us a monetary penalty of $1.3 billion and additional duties of $181 million, plus interest. We intend to vigorously defend our actions and contest payment of the penalty and the additional duties.

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, 2022:

Name	Position	Position Held Since	Age
William Clay Ford, Jr. (a)	Executive Chair and Chair of the Board	September 2006	64
James D. Farley, Jr. (b)	President and Chief Executive Officer	October 2020	59
Jon M. Huntsman, Jr. (c)	Vice Chair, Policy	May 2021	61
John Lawler	Chief Financial Officer	October 2020	55
Hau Thai-Tang	Chief Product Platform and Operations Officer	October 2020	55
Michael Amend	Chief Digital & Information Officer	September 2021	44
Steven P. Croley	Chief Policy Officer and General Counsel	July 2021	56
J. Doug Field	Chief Advanced Technology and Embedded Systems Officer	September 2021	56
Kiersten Robinson	Chief People and Employee Experience Officer	October 2020	51
Anning Chen	President and Chief Executive Officer, Ford of China	December 2018	60
Ashwani ("Kumar") Galhotra	President, Americas and International Markets Group	April 2020	56
Stuart Rowley	President, Ford of Europe	April 2019	54
Cathy O'Callaghan	Controller	June 2018	53

(a) Also a Director, Chair of the Office of the Chair and Chief Executive, Chair of the Finance Committee, and a member of the Sustainability, Innovation and Policy Committee of the Board of Directors. Mr. Ford's daughter, Alexandra Ford English, is a member of the Board of Directors.
(b) Also a Director and member of the Office of the Chair and Chief Executive.
(c) Also a Director and member of the Sustainability, Innovation and Policy Committee of the Board of Directors.

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 Vice Chair, Policy, Governor Huntsman was re-elected a member of Ford's Board of Directors in October 2020 after previously serving as a director from 2012 to 2017. Governor Huntsman served as the U.S. Ambassador to Russia from 2017 through 2019. He served as the Chairman of the Atlantic Council of the United States from 2014 until 2017 and Chairman of the Huntsman Cancer Foundation from 2012 until 2017. He has previously served as U.S. ambassador to China, U.S. ambassador to Singapore, and as Deputy U.S. Trade Representative. Governor Huntsman was twice elected Governor of Utah.

Prior to becoming Chief Digital & Information Officer, Michael Amend was President, Online, at Lowe's from 2018 to 2021. From 2015 to 2018, Mr. Amend served as Executive Vice President, Omnichannel, at JCPenney.

Prior to becoming Chief Policy Officer and General Counsel, Steven Croley was a partner in the Washington, D.C., office of Latham & Watkins from 2017 to 2021. From 2014 to 2017, Mr. Croley served as General Counsel for the U.S. Department of Energy.

Prior to becoming Chief Advanced Technology and Embedded Systems Officer, J. Doug Field was Vice President, Special Projects Group, at Apple from 2018 to 2021. From 2013 to 2018, Mr. Field served as Tesla's Senior Vice President of Engineering.

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

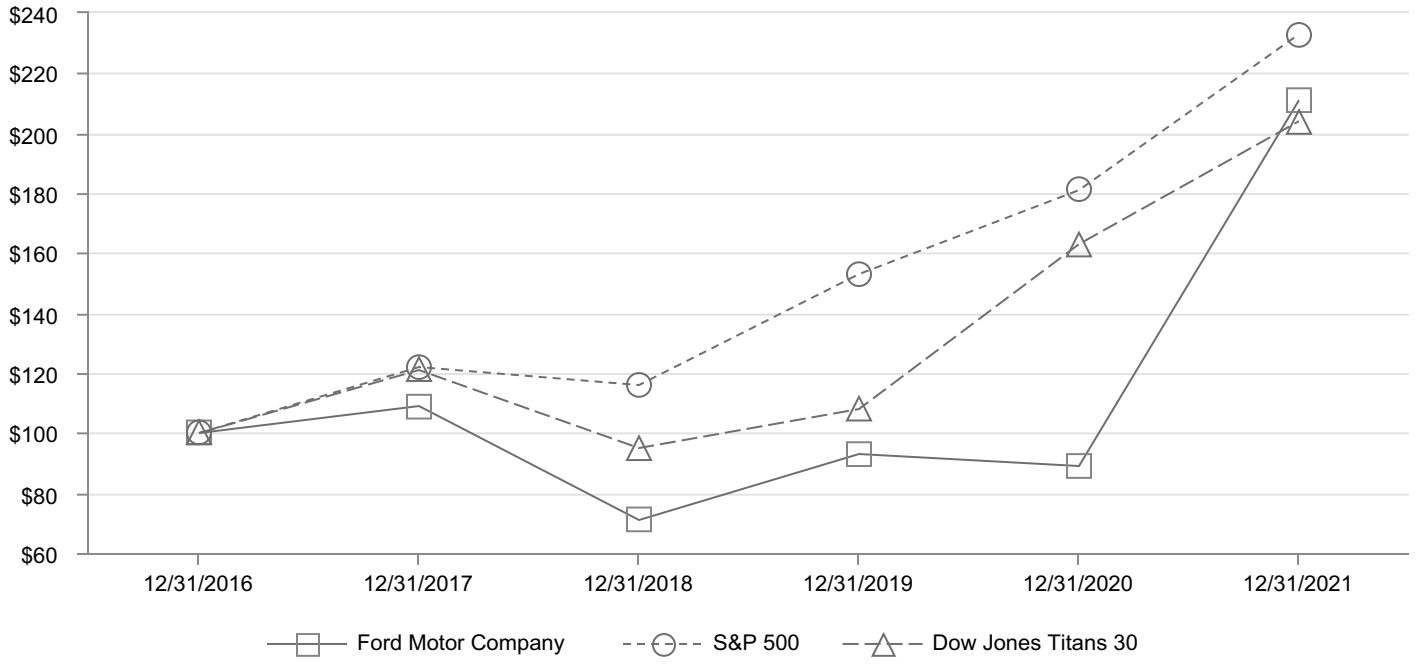
Our Common Stock is listed on the New York Stock Exchange in the United States under the symbol F. As of January 31, 2022, stockholders of record of Ford included approximately 107,225 holders of Common Stock and 3 holders of Class B Stock. We believe that the number of beneficial owners is substantially 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, 2021. It shows the growth of a $100 investment on December 31, 2016, including the reinvestment of all dividends.

COMPARISON OF CUMULATIVE FIVE-YEAR TOTAL RETURN



	Base Period	Years Ending				
Company/Index	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**
Ford Motor Company	100	109	71	93	89	211
S&P 500	100	122	116	153	181	233
Dow Jones Automobiles & Parts Titans 30	100	121	95	108	163	204

Issuer Purchases of Securities

In the fourth quarter of 2021, we repurchased shares of Ford Common Stock from our employees related to certain exercises of stock options in accordance with our various compensation plans.

Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly-Announced Plans or Programs	Maximum Number (or Approximate Dollar Value) of Shares that May Yet Be Purchased Under the Plans or Programs
October 1, 2021 through October 31, 2021	1,593,054	$ 16.02	—	—
November 1, 2021 through November 30, 2021	4,096,030	19.69	—	—
December 1, 2021 through December 31, 2021	373,535	20.28	—	—
Total / Average	6,062,619	$ 18.76	—	—

Dividends

The table below shows the dividends we paid per share of Common and Class B Stock for each quarterly period in 2020 and 2021:

	2020				2021			
	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	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.10

On October 27, 2021, we announced the reinstatement of a regular quarterly dividend of $0.10 per share on our Common and Class B Stock starting in the fourth quarter of 2021, and we intend to continue paying a quarterly cash dividend on our outstanding Common Stock and Class B Stock. 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 7. *Management's Discussion and Analysis of Financial Condition and Results of Operations.*

Key Trends and Economic Factors Affecting Ford and the Automotive Industry

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 can disrupt production. Since early 2021, we and others in the automotive industry have faced a significant shortage of semiconductors. The global semiconductor shortage is due in large part to makers of semiconductors having allocated their capacity to meet surging demand for consumer electronics during the COVID-19 pandemic while 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, 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 ongoing shortage of semiconductors. For additional information on the impact of the semiconductor shortage, see the Outlook section on page 73.

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. 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. The full impact of COVID-19 on future results depends on future developments, such as the ultimate duration and scope of outbreaks (including any potential future waves due to variants or otherwise, and the success of vaccination programs) and their impact on our customers, dealers, and suppliers. Despite the successful restart of our manufacturing operations in 2020, we continue to experience 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 17.

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, with about $7 billion of cash effects, related to our global redesign efforts. During the 2018 through 2022 period, we expect to have incurred the vast majority of the $11 billion of EBIT charges. For additional information on Global Redesign, see the Outlook section on page 73.

Currency Exchange Rate Volatility. After aggressively easing monetary policy in response to the COVID-19 pandemic, the Federal Reserve, and other central banks around the world, are poised to withdraw monetary stimulus by raising interest rates. The last time the Fed shifted from easing to tightening, from 2013 through 2017, the U.S. dollar strengthened, and financial markets became more volatile. Increased volatility in both developed and emerging market currencies may again be a result of policy tightening. 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 global production capacity for light vehicles of about 124 million units exceeded global production by just under 41 million units in 2021. Actual global production is projected to have risen by 8.9 million units in 2021, while capacity rose by just under 2 million units, leading excess capacity to decline by just under 7 million units. Part of the decline was due to the impact of COVID-19-related production disruptions, but the rebound in 2021 production still left global excess capacity 1% above 2019. In North America, the amount of excess capacity rose from 4.8 million units in 2019 to 7.5 million units in 2020, but then fell to 5.7 million units in 2021. Europe followed a similar pattern, with excess capacity rising from 6.2 million units in 2019 to 10.6 million in 2020, but then declining to 8.6 million in 2021. In Asia, however, excess capacity declined from 19.3 million units in 2019 to 15.9 million in 2020 and to 15.2 million units in 2021, coming off a weak base for China's economy and automotive sector during 2018 and 2019. After the pandemic-related disruptions ease, IHS projects that global excess capacity will trend lower, from around 49% of capacity in 2021 to just under 30% in 2028. Despite the projected gradual decline, the amount of excess capacity will remain substantial and represents a risk to automotive prices and revenue.

Pricing Pressure. Over the last year, prices of both new and used vehicles have increased substantially due to both rising demand and supply shortages. It is likely that the rate of price increases will slow down as auto production slowly recovers from the semiconductor shortage, but it is unclear whether prices will decline fully to pre-COVID-19 pandemic levels. Over the long term, intense competition and excess capacity are likely to put downward pressure on inflation-adjusted prices for similarly-contented vehicles and contribute to a challenging pricing environment for the automotive industry in most major markets.

Commodity and Energy Price Changes. The recovery from the COVID-19 pandemic has driven energy prices higher over the last year. Oil prices are expected to remain volatile, and are likely to rise in the near term because of low global stocks. In the long term, the outcome of de-carbonization may depress oil demand, but the global energy transition will also contribute to volatility of oil and other energy prices. Prices for other commodities have also been volatile though generally higher, as fluctuating global demand and differences in output across sectors due to the pandemic have generated divergence in price movements across different commodities. For additional information on commodity costs, see the Outlook section on page 73.

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 118% 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, have remained lower than expected. At the same time, inflation has accelerated and government deficits and debt remain at high levels in many major markets. The eventual implications of higher government deficits and debt, tighter monetary policy, and 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.

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. However, we defer a portion of the consideration received when there is a separate future or stand-ready performance obligation, such as extended service contracts or ongoing vehicle connectivity. Revenue related to extended service contracts is recognized over the term of the agreement in proportion to the costs we expect to incur in satisfying the contract obligations; revenue related to other future or stand-ready performance obligations is generally recognized on a straight-line basis over the period in which services are expected to be performed. Vehicles sold to daily rental car companies with an obligation to repurchase for a guaranteed amount, exercisable at the option of the customer, 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 and connectivity, 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; vehicle and software engineering; spending-related; advertising and sales promotion; administrative, information technology, 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 2021 were $126.6 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 - 2021

The net income attributable to Ford Motor Company was $17,937 million in 2021. Company adjusted EBIT was $10,000 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):

	2020	2021
Global Redesign		
Europe	$ (727)	$ (530)
India	(23)	(468)
South America	(2,486)	(803)
Russia	18	5
China (including Taiwan)	(56)	150
Separations and Other (not included above)	(94)	(74)
Subtotal Global Redesign	$ (3,368)	$ (1,720)
Other Items		
Gain on transaction with Argo AI	$ 3,454	$ —
Gain on Rivian IPO and mark-to-market	143	9,096
Gains and losses on investments in equity securities (excl. Rivian)	100	92
Debt extinguishment premium	—	(1,692)
Takata field service action	(610)	—
Ford Credit - Brazil and Argentina	—	14
Other	(226)	(10)
Subtotal Other Items	$ 2,861	$ 7,500
Pension and OPEB Gain/(Loss)		
Pension and OPEB remeasurement	$ (1,435)	$ 3,873
Pension settlements and curtailments	(61)	(70)
Subtotal Pension and OPEB Gain/(Loss)	$ (1,496)	$ 3,803
Total EBIT Special Items	$ (2,003)	$ 9,583
Cash effect of Global Redesign (incl. separations)	$ (503)	$ (1,935)
Provision for/(Benefit from) tax special items (a)	$ 721	$ (1,924)

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

Effective with the reporting of our fourth quarter 2021 results, pre-tax special items now include gains and losses on investments in equity securities. For the full year, we recorded $9.6 billion of pre-tax special items, primarily reflecting gains on our equity investment in Rivian in connection with Rivian's initial public offering and mark-to-market valuation adjustments during the year, as well as a remeasurement gain associated with our global pension and OPEB plans. The gains were partially offset by costs associated with our Global Redesign actions and a debt extinguishment premium associated with the repurchase and redemption of $7.6 billion of our higher-coupon debt.

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 2021 key metrics for the Company compared to a year ago.

	2020	2021	H / (L)
GAAP Financial Measures			
Cash Flows from Operating Activities ($B)	$ 24.3	$ 15.8	$ (8.5)
Revenue ($M)	127,144	136,341	7 %
Net Income/(Loss) ($M)	(1,279)	17,937	$ 19,216
Net Income/(Loss) Margin (%)	(1.0)%	13.2 %	14.2 ppts
EPS (Diluted)	$ (0.32)	$ 4.45	$ 4.77
Non-GAAP Financial Measures (a)			
Company Adj. Free Cash Flow ($B)	$ 1.3	$ 4.6	$ 3.3
Company Adj. EBIT ($M)	2,536	10,000	7,464
Company Adj. EBIT Margin (%)	2.0 %	7.3 %	5.3 ppts
Adjusted EPS (Diluted)	$ 0.36	$ 1.59	$ 1.23
Adjusted ROIC (Trailing Four Qtrs)	0.7 %	9.8 %	9.1 ppts

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

In 2021, our diluted earnings per share of Common and Class B Stock was $4.45 and our diluted adjusted earnings per share was $1.59.

Net income/(loss) margin was 13.2% in 2021, up from negative 1.0% a year ago. Company adjusted EBIT margin was 7.3% in 2021, up from 2.0% a year ago.

The table below shows our full year 2021 net income/(loss) attributable to Ford and Company adjusted EBIT by segment (in millions).

	2020	2021	H / (L)
Automotive	$ 1,706	$ 7,397	$ 5,691
Mobility	(1,052)	(1,030)	22
Ford Credit	2,608	4,717	2,109
Corporate Other	(726)	(1,084)	(358)
Company Adjusted EBIT (a)	2,536	10,000	7,464
Interest on Debt	(1,649)	(1,803)	154
Special Items	(2,003)	9,583	(11,586)
Taxes / Noncontrolling Interests	(163)	157	(320)
Net Income/(Loss)	$ (1,279)	$ 17,937	$ 19,216

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

The year-over-year increase of $19.2 billion in net income/(loss) in 2021 includes the effect of special items, including the Rivian IPO and mark-to-market gain, as well as higher Automotive EBIT and Ford Credit EBT. The year-over-year increase of $7.5 billion in Company adjusted EBIT was driven by higher Automotive EBIT and Ford Credit EBT.

Automotive Segment

The table below shows our full year 2021 Automotive segment EBIT by business unit (in millions).

	2020	2021	H / (L)
North America	$ 3,710	$ 7,377	$ 3,667
South America	(490)	(121)	369
Europe	(851)	(154)	697
China (including Taiwan)	(499)	(327)	172
International Markets Group	(164)	622	786
Automotive Segment	$ 1,706	$ 7,397	$ 5,691

The tables below and on the following pages provide full year 2021 key metrics and the change in full year 2021 EBIT compared with full year 2020 by causal factor for our Automotive segment and its regional business units: North America, South America, Europe, China (including Taiwan), and the International Markets Group. For a description of these causal factors, see *Definitions and Information Regarding Automotive Causal Factors.*

	2020	2021	H / (L)
Key Metrics			
Market Share (%)	5.8%	5.1%	(0.6) ppts
Wholesale Units (000)	4,187	3,942	(245)
Revenue ($M)	$ 115,894	$ 126,150	$ 10,256
EBIT ($M)	1,706	7,397	5,691
EBIT Margin (%)	1.5%	5.9%	4.4 ppts

Change in EBIT by Causal Factor (in millions)	
2020 Full Year EBIT	$ 1,706
Volume / Mix	(2,853)
Net Pricing	9,700
Cost	(2,173)
Exchange	524
Other	493
2021 Full Year EBIT	**$ 7,397**

In 2021, wholesales in our Automotive segment declined 6% from a year ago, reflecting semiconductor-related production constraints and the shift to a new business model in South America. Full year 2021 Automotive revenue increased 9%, driven by higher net pricing, favorable mix, and stronger currencies, partially offset by lower wholesales.

Our full year 2021 Automotive segment EBIT increased $5.7 billion from a year ago with an EBIT margin of 5.9 percent. The EBIT improvement was driven by higher net pricing (reflecting the strength of our product portfolio and lower incentives in response to reduced dealer stock levels), lower warranty expense, favorable mix, higher profits from our Ford Customer Service Division business, and stronger currencies, partially offset by lower wholesales and increased commodity costs.

North America

	2020	2021	H / (L)
Key Metrics			
Market Share (%)	13.2%	12.0%	(1.2) ppts
Wholesale Units (000)	2,081	2,006	(75)
Revenue ($M)	$ 80,044	$ 87,783	$ 7,739
EBIT ($M)	3,710	7,377	3,667
EBIT Margin (%)	4.6%	8.4%	3.8 ppts

Change in EBIT by Causal Factor (in millions)	
2020 Full Year EBIT	$ 3,710
Volume / Mix	(1,661)
Net Pricing	7,858
Cost	(2,672)
Exchange	220
Other	(78)
2021 Full Year EBIT	**$ 7,377**

In North America, 2021 wholesales declined 4% from a year ago, primarily reflecting the impact of semiconductor-related production constraints. Full year 2021 revenue increased 10%, driven by higher net pricing, favorable mix, and stronger currencies, partially offset by lower wholesales.

North America's 2021 EBIT increased $3.7 billion from a year ago with an EBIT margin of 8.4%. The EBIT improvement was driven by higher net pricing, lower warranty expense, and favorable mix, partially offset by increased commodity prices, lower volume, and higher structural costs.

South America

	2020	2021	H / (L)
Key Metrics			
Market Share (%)	6.2 %	2.6 %	(3.7) ppts
Wholesale Units (000)	185	81	(104)
Revenue ($M)	$ 2,463	$ 2,399	$ (64)
EBIT ($M)	(490)	(121)	369
EBIT Margin (%)	(19.9)%	(5.1)%	14.8 ppts

Change in EBIT by Causal Factor (in millions)	
2020 Full Year EBIT	$ (490)
Volume / Mix	(210)
Net Pricing	602
Cost	(12)
Exchange	2
Other	(13)
2021 Full Year EBIT	**$ (121)**

In South America, 2021 wholesales declined 56% from a year ago, primarily reflecting the shift to the region's new business model and the impact of semiconductor-related production constraints. Full year 2021 revenue declined 3%, driven by lower volume and weaker currencies, partially offset by higher net pricing and favorable mix.

South America's 2021 EBIT loss improved $369 million from a year ago with an EBIT margin of negative 5.1%. The EBIT improvement was driven by higher net pricing, partially offset by lower volume.

Europe

	2020	2021	H / (L)
Key Metrics			
Market Share (%)	7.2 %	6.4 %	(0.8) ppts
Wholesale Units (000) (a)	1,020	891	(128)
Revenue ($M)	$ 22,644	$ 24,466	$ 1,822
EBIT ($M)	(851)	(154)	697
EBIT Margin (%)	(3.8)%	(0.6)%	3.2 ppts

(a) Includes Ford brand vehicles produced and sold by our unconsolidated affiliate in Turkey (about 72,000 units in 2020 and 61,000 units in 2021); revenue does not include these sales.

Change in EBIT by Causal Factor (in millions)	
2020 Full Year EBIT	$ (851)
Volume / Mix	(941)
Net Pricing	949
Cost	472
Exchange	(112)
Other	329
2021 Full Year EBIT	**$ (154)**

In Europe, 2021 wholesales declined 13% from a year ago, primarily reflecting the impact of semiconductor-related production constraints. Full year 2021 revenue improved 8%, driven by favorable mix, stronger currencies, and higher net pricing, partially offset by lower volume.

Europe's 2021 EBIT loss improved $697 million from a year ago with an EBIT margin of negative 0.6%. The EBIT improvement was driven by higher net pricing, lower material and warranty expenses, and lower structural costs, partially offset by lower volume and increased commodity prices.

China (Including Taiwan)

	2020	2021	H / (L)
Key Metrics			
Market Share (%)	2.4 %	2.4 %	— ppts
Wholesale Units (000) (a)	617	649	31
Revenue ($M)	$ 3,202	$ 2,547	$ (655)
EBIT ($M)	(499)	(327)	172
EBIT Margin (%)	(15.6)%	(12.8)%	2.8 ppts
China Unconsolidated Affiliates			
Wholesale Units (000) (b)	564	633	69
Ford Equity Income/(Loss) ($M)	$ 49	$ 165	$ 116

(a) Includes vehicles produced and sold by our unconsolidated affiliates. Revenue does not include these sales.
(b) Includes Ford and Lincoln brand and JMC brand vehicles produced and sold in China and, from second quarter 2021, Ford brand vehicles produced in Taiwan by Lio Ho Group.

Change in EBIT by Causal Factor (in millions)	
2020 Full Year EBIT	$ (499)
Volume / Mix	(190)
Net Pricing	73
Cost	16
Exchange	69
Other	204
2021 Full Year EBIT	**$ (327)**

In China, 2021 wholesales increased 5% from a year ago, driven by higher joint venture volumes. Full year 2021 consolidated revenue declined 20%, driven by product localization and the de-consolidation of our operations in Taiwan, partially offset by favorable import mix, higher component sales to our joint ventures in China, and stronger currencies.

China's 2021 EBIT loss improved $172 million from a year ago with an EBIT margin of negative 12.8%. The EBIT improvement was driven by favorable mix of imported vehicles, higher joint venture profits and royalties, and higher net pricing, partially offset by lower volume at our consolidated operations.

International Markets Group

	2020	2021	H / (L)
Key Metrics			
Market Share (%)	1.7 %	1.8 %	— ppts
Wholesale Units (000) (a)	284	315	31
Revenue ($M)	$ 7,541	$ 8,955	$ 1,414
EBIT ($M)	(164)	622	786
EBIT Margin (%)	(2.2)%	6.9 %	9.1 ppts

(a) Includes Ford brand vehicles produced and sold by our unconsolidated affiliate in Russia (about 14,000 units in 2020 and 22,000 units in 2021). Revenue does not include these sales.

Change in EBIT by Causal Factor (in millions)	
2020 Full Year EBIT	$ (164)
Volume / Mix	150
Net Pricing	218
Cost	24
Exchange	344
Other	50
2021 Full Year EBIT	**$ 622**

In our International Markets Group, 2021 wholesales increased 11% from a year ago, reflecting the non-recurrence of the COVID-related production suspension and higher industry volumes, partially offset by the impact of semiconductor-related supply constraints. Full year 2021 revenue increased 19%, driven by higher volume and mix, higher net pricing, and stronger currencies.

Our International Market Group's 2021 EBIT improved $786 million from a year ago with an EBIT margin of 6.9%. The EBIT improvement was driven by stronger currencies, higher net pricing and volume, and lower warranty expense.

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 and Connectivity* – consists primarily of costs for vehicle and software engineering personnel, prototype materials, testing, and outside engineering and software 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, Information Technology, and Selling* – includes primarily costs for salaried personnel and purchased services related to our staff activities, information technology, and selling functions
    - *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

Effective January 1, 2021, we realigned the costs and benefits related to enterprise connectivity activities previously included in the Mobility segment to the Automotive segment. Accordingly, beginning in 2021, 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.

In our Mobility segment, our 2021 EBIT loss improved $22 million from a year ago. The $1 billion EBIT loss reflects our strategic investments in 2021 as we continued to expand our capabilities in autonomous vehicles and mobility businesses.

Ford Credit Segment

The tables below provide full year 2021 key metrics and the change in full year 2021 EBT compared with full year 2020 by causal factor for the Ford Credit segment. For a description of these causal factors, see *Definitions and Information Regarding Ford Credit Causal Factors*.

	2020	2021	H / (L)
GAAP Financial Measures			
Total Net Receivables ($B)	$ 132	$ 118	(11)%
Loss-to-Receivables (bps) (a)	36	6	(30)
Auction Values (b)	$ 20,600	$ 25,800	25 %
EBT ($M)	2,608	4,717	$ 2,109
ROE (%) (c)	15 %	32 %	17 ppts
Other Balance Sheet Metrics			
Debt ($B)	$ 138	$ 118	(15)%
Net Liquidity ($B)	35	32	(10)%
Financial Statement Leverage (to 1) (c)	8.8	9.5	0.7

(a) U.S. retail financing only.
(b) U.S. 36-month off-lease auction values at full year 2021 mix.
(c) Prior period amounts have been updated as a result of the adoption of ASU 2019-12, *Simplifying the Accounting for Income Taxes*. For additional information, see Note 3 of the Notes to the Financial Statements.

	2020	2021	H / (L)
Non-GAAP Financial Measures			
Managed Receivables ($B) (a)	$ 141	$ 123	(12)%
Managed Leverage (to 1) (b) (c)	7.5	8.4	0.9

(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.
(c) Prior period amount has been updated as a result of the adoption of ASU 2019-12, *Simplifying the Accounting for Income Taxes*. For additional information, see Note 3 of the Notes to the Financial Statements.

Change in EBT by Causal Factor (in millions)	
2020 Full Year EBT	$ 2,608
Volume / Mix	(243)
Financing Margin	(206)
Credit Loss	1,136
Lease Residual	1,494
Exchange	27
Other	(99)
2021 Full Year EBT	**$ 4,717**

Total net receivables at December 31, 2021 were $14 billion lower than a year ago, primarily reflecting lower wholesale receivables as a result of lower dealer inventories due to the semiconductor shortage. Ford Credit's loss metrics reflected healthy and stable consumer credit conditions and strong auction values. Ford Credit's U.S. 36-month auction values for off-lease vehicles were up 25% from a year ago, reflecting strong demand for used vehicles, including the impact of lower new vehicle production due to the semiconductor shortage. We are planning for full year 2022 auction values to remain strong.

Ford Credit's 2021 EBT increased $2,109 million from a year ago, explained primarily by favorable operating lease residual performance, the non-recurrence of the 2020 increase to the credit loss reserve due to deterioration in macroeconomic conditions related to COVID-19, and reductions in the credit loss reserve in 2021, partially offset by lower volume driven by the impact of the global semiconductor shortage and lower financing margin.

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 2021 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 2021 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, and marketable securities (excluding gains and losses on investments in equity securities), 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, that are not allocated to 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 2021, Corporate Other had a $1,084 million loss, compared with a $726 million loss in 2020. The higher loss was driven by lower interest income and higher administrative and IT-related expenses.

Interest on Debt

Interest on Debt consists of interest expense on Company debt excluding Ford Credit. Our full year 2021 interest expense on Company debt excluding Ford Credit was $1,803 million, $154 million higher than in 2020, primarily explained by higher U.S. unsecured debt interest expense.

Taxes

Our *Provision for/(Benefit from) income taxes* for full year 2021 was a $130 million benefit, resulting in an effective tax rate of negative 0.7%. This includes a benefit of $2.9 billion to recognize deferred tax assets resulting from changes in our global tax structure and a $918 million benefit from the reversal of U.S. valuation allowances.

Our full year 2021 adjusted effective tax rate, which excludes special items, was 21.9%.

We regularly review our organizational structure and income tax elections for affiliates in non-U.S. and U.S. tax jurisdictions, which may result in changes in affiliates that are included in or excluded from our U.S. tax return. Any future changes to our structure, as well as any changes in income tax laws in the countries that we operate, could cause increases or decreases to our deferred tax balances and related valuation allowances.

RESULTS OF OPERATIONS - 2020

The net loss attributable to Ford Motor Company was $1,279 million in 2020. Company adjusted EBIT was $2,536 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	$ (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	$ —	$ 3,454
Gain on Rivian mark-to-market	94	143
Gains and losses on investments in equity securities (excl. Rivian)	28	100
Takata field service action	—	(610)
Other incl. Focus cancellation, Transit Connect customs ruling, North America hourly buyouts, and Chariot	(273)	(226)
Subtotal Other Items	$ (151)	$ 2,861
Pension and OPEB Gain/(Loss)		
Pension and OPEB remeasurement	$ (2,500)	$ (1,435)
Pension curtailment	(45)	(61)
Subtotal Pension and OPEB Gain/(Loss)	$ (2,545)	$ (1,496)
Total EBIT Special Items	$ (5,877)	$ (2,003)
Cash effect of Global Redesign (incl. separations)	$ (911)	$ (503)
Provision for/(Benefit from) tax special items (a)	$ (1,298)	$ 721

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

We recorded $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 with full year 2019.

	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) ppts
EPS (Diluted)	$ 0.01	$ (0.32)	$ (0.33)
Non-GAAP Financial Measures (a)			
Company Adj. Free Cash Flow ($B)	$ 2.9	$ 1.3	$ (1.6)
Company Adj. EBIT ($M)	6,257	2,536	(3,721)
Company Adj. EBIT Margin (%)	4.0 %	2.0 %	(2.0) ppts
Adjusted EPS (Diluted)	$ 1.16	$ 0.36	$ (0.80)
Adjusted ROIC (Trailing Four Qtrs)	7.6 %	0.7 %	(6.9) ppts

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

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 $0.36.

Net income/(loss) margin was negative 1.0% in 2020, down from 0.0% a year ago. Company adjusted EBIT margin was 2.0% in 2020, down from 4.0% in 2019.

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	$ 4,888	$ 1,706	$ (3,182)
Mobility	(941)	(1,052)	(111)
Ford Credit	2,998	2,608	(390)
Corporate Other	(688)	(726)	(38)
Company Adjusted EBIT (a)	6,257	2,536	(3,721)
Interest on Debt	(1,020)	(1,649)	629
Special Items	(5,877)	(2,003)	(3,874)
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 $3.7 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	$ 6,545	$ 3,710	$ (2,835)
South America	(696)	(490)	206
Europe	124	(851)	(975)
China (including Taiwan)	(762)	(499)	263
International Markets Group	(323)	(164)	159
Automotive Segment	$ 4,888	$ 1,706	$ (3,182)

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)	$ 143,604	$ 115,894	$ (27,710)
EBIT ($M)	4,888	1,706	(3,182)
EBIT Margin (%)	3.4%	1.5%	(1.9) ppts

Change in EBIT by Causal Factor (in millions)	
2019 Full Year EBIT	$ 4,888
Volume / Mix	(9,417)
Net Pricing	4,985
Cost	904
Exchange	(312)
Other	658
2020 Full Year EBIT	**$ 1,706**

In 2020, wholesales in our Automotive segment declined 22% from 2019, reflecting a decrease in each business unit other than China. Full year 2020 Automotive revenue decreased 19% from 2019.

Our full year 2020 Automotive segment EBIT decreased $3.2 billion from 2019 with an EBIT margin of 1.5 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 F-150. Structural costs were significantly lower, primarily reflecting the impact of our suspension of production earlier in the 2020 due to COVID-19.

North America

	2019	2020	H / (L)
Key Metrics			
Market Share (%)	13.2%	13.2%	— ppts
Wholesale Units (000)	2,765	2,081	(684)
Revenue ($M)	$ 98,058	$ 80,044	$ (18,014)
EBIT ($M)	6,545	3,710	(2,835)
EBIT Margin (%)	6.7%	4.6%	(2.0) ppts

Change in EBIT by Causal Factor (in millions)	
2019 Full Year EBIT	$ 6,545
Volume / Mix	(6,776)
Net Pricing	3,041
Cost	366
Exchange	(64)
Other	598
2020 Full Year EBIT	**$ 3,710**

In North America, 2020 wholesales declined 25% from 2019, driven by COVID-related lower industry volume and the changeover to the F-150. Full year 2020 revenue decreased 18% from 2019, driven by lower volume, partially offset by higher net pricing and favorable series and option mix.

North America's 2020 EBIT decreased $2.8 billion from 2019 with an EBIT margin of 4.6%. 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) ppts
Wholesale Units (000)	295	185	(111)
Revenue ($M)	$ 3,893	$ 2,463	$ (1,430)
EBIT ($M)	(696)	(490)	206
EBIT Margin (%)	(17.9)%	(19.9)%	(2.0) ppts

Change in EBIT by Causal Factor (in millions)	
2019 Full Year EBIT	$ (696)
Volume / Mix	(143)
Net Pricing	513
Cost	89
Exchange	(232)
Other	(21)
2020 Full Year EBIT	**$ (490)**

In South America, 2020 wholesales declined 38% from 2019, driven by COVID-related lower industry volume. Full year 2020 revenue declined 37% from 2019, driven by lower volume and weaker currencies, partially offset by higher net pricing and favorable vehicle mix.

South America's 2020 EBIT loss improved $206 million from 2019 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) ppts
Wholesale Units (000) (a)	1,390	1,020	(370)
Revenue ($M)	$ 28,150	$ 22,644	$ (5,506)
EBIT ($M)	124	(851)	(975)
EBIT Margin (%)	0.4 %	(3.8)%	(4.2) ppts

(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	$ 124
Volume / Mix	(1,973)
Net Pricing	1,354
Cost	(190)
Exchange	74
Other	(240)
2020 Full Year EBIT	**$ (851)**

In Europe, 2020 wholesales declined 27% from 2019, driven by COVID-19 related lower industry volume. Full year 2020 revenue declined 20% from 2019, driven by lower volume, partially offset by higher net pricing and favorable series and option mix.

Europe's 2020 EBIT decreased $974 million from 2019 with an EBIT margin of negative 3.8%. 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 ppts
Wholesale Units (000) (a)	535	617	83
Revenue ($M)	$ 3,615	$ 3,202	$ (413)
EBIT ($M)	(762)	(499)	263
EBIT Margin (%)	(21.1)%	(15.6)%	5.5 ppts
China Unconsolidated Affiliates			
Wholesale Units (000) (b)	462	564	102
Ford Equity Income/(Loss) ($M)	$ (161)	$ 49	$ 210

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

Change in EBIT by Causal Factor (in millions)	
2019 Full Year EBIT	$ (762)
Volume / Mix	(137)
Net Pricing	(15)
Cost	193
Exchange	(113)
Other	335
2020 Full Year EBIT	**$ (499)**

In China, 2020 wholesales increased 16% from 2019, driven by higher joint venture volumes. Full year 2020 consolidated revenue declined 11% from 2019, 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 $263 million from 2019 with an EBIT margin of negative 15.6%. 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) ppts
Wholesale Units* (000)	401	284	(117)
Revenue ($M)	$ 9,888	$ 7,541	$ (2,347)
EBIT ($M)	(323)	(164)	159
EBIT Margin (%)	(3.3)%	(2.2)%	1.1 ppts

(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	$ (323)
Volume / Mix	(388)
Net Pricing	91
Cost	446
Exchange	22
Other	(12)
2020 Full Year EBIT	**$ (164)**

In our International Markets Group, 2020 wholesales declined 29% from 2019, driven by COVID-related lower industry volume. Full year 2020 revenue declined 24% from 2019, 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 $159 million from 2019 with an EBIT margin of negative 2.2%. The improved EBIT was driven by cost reductions, higher net pricing, and favorable mix, partially offset by lower volume.

Mobility Segment

In our Mobility segment, our 2020 EBIT loss was $111 million higher than 2019. The $1.1 billion EBIT loss reflected 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.

	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)	$ 19,955	$ 20,600	3 %
EBT ($M)	2,998	2,608	$ (390)
ROE (%) (c)	16 %	15 %	(1) ppt
Other Balance Sheet Metrics			
Debt ($B)	$ 140	$ 138	(1)%
Net Liquidity ($B)	33	35	6 %
Financial Statement Leverage (to 1) (c)	8.5	8.8	0.3

(a) U.S. retail financing only.
(b) U.S. 36-month off-lease auction values at full year 2021 mix.
(c) Prior period amounts have been updated as a result of the adoption of ASU 2019-12, *Simplifying the Accounting for Income Taxes*. For additional information, see Note 3 of the Notes to the Financial Statements.

	2019	2020	H / (L)
Non-GAAP Financial Measures			
Managed Receivables ($B) (a)	$ 152	$ 141	(7)%
Managed Leverage (to 1) (b) (c)	7.8	7.5	(0.3)

(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.
(c) Prior period amounts have been updated as a result of the adoption of ASU 2019-12, *Simplifying the Accounting for Income Taxes*. For additional information, see Note 3 of the Notes to the Financial Statements.

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 in 2020 reflected healthy and stable consumer credit conditions, and auction values for off-lease vehicles were 3% higher than 2019.

Ford Credit's 2020 EBT decreased $390 million from 2019, 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.

Corporate Other

For full year 2020, Corporate Other had a $726 million loss, compared with a $688 million loss in 2019. The year-over-year decline is more than explained by lower interest income.

Interest on Debt

Our full year 2020 interest expense on Company excluding Ford Credit 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 63.2%.

LIQUIDITY AND CAPITAL RESOURCES

At December 31, 2021, total balance sheet cash, cash equivalents, marketable securities, and restricted cash (including Ford Credit) was $49.8 billion.

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, 2020	December 31, 2021
Balance Sheet ($B)		
Company Cash	$ 30.8	$ 36.5
Liquidity	46.9	52.4
Debt	(24.0)	(20.4)
Cash Net of Debt	6.8	16.1
Pension Funded Status ($B)		
Funded Plans	$ 0.3	$ 5.8
Unfunded Plans	(7.0)	(6.1)
Total Global Pension	$ (6.7)	$ (0.3)
Total Funded Status OPEB	$ (6.6)	$ (6.0)

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, 2021, we had Company cash of $36.5 billion, an increase of $5.7 billion compared with December 31, 2020, primarily reflecting the inclusion of the Rivian marketable securities of $10.6 billion. Excluding the Rivian marketable securities, Company cash at December 31, 2021 was $26.0 billion. At December 31, 2021, Company liquidity was $52.4 billion. Company cash and liquidity include marketable securities, such as our Rivian shares. Accordingly, as marketable securities increase or decrease in value, Company cash and liquidity will likewise increase or decrease. In addition, about 92% of Company cash was held by consolidated entities domiciled in the United States at December 31, 2021.

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 (excluding the Rivian marketable securities) 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.

Material Cash Requirements. Our material cash requirements include: (1) capital expenditures (for additional information, see the "Changes in Company Cash" section below) and other payments for engineering, software, product development, and implementation of our plans for battery electric vehicles; (2) the purchase of raw materials and components to support the manufacturing and sale of vehicles (including electric vehicles), parts, and accessories (for additional information, see the Aggregate Contractual Obligations table and accompanying description of our "Purchase obligations" below); (3) marketing incentive payments to dealers; (4) payments for warranty and field service actions (for additional information, see Note 25 of the Notes to the Financial Statements); (5) debt repayments (for additional information, see the Aggregate Contractual Obligations table below and Note 19 of the Notes to the Financial Statements); (6) discretionary and mandatory payments to our global pension plans (for additional information, see the Aggregate Contractual Obligations table below, the "Changes in Company Cash" section below, and Note 17 of the Notes to the Financial Statements); (7) employee wages, benefits, and incentives; (8) operating lease payments (for additional information, see the Aggregate Contractual Obligations table below and Note 18 of the Notes the Financial Statements); (9) cash effects related to the global redesign of our business (for additional information, see the "Changes in Company Cash" section below); and (10) strategic acquisitions and investments to grow our business, including electrification. In addition, subject to approval by our Board of Directors, shareholder distributions in the form of dividend payments and/or a share repurchase program may require the expenditure of a material amount of cash. Moreover, we may be subject to additional material cash requirements that are contingent upon the occurrence of certain events, e.g., legal contingencies, uncertain tax positions, and other matters.

We are party to many contractual obligations involving commitments to make payments to third parties, and, as noted above, such commitments require a material amount of cash. Most of these are debt obligations incurred by our Ford Credit segment. 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" in the Aggregate Contractual Obligations table below 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; however, as we purchase raw materials and components beyond the minimum amounts required by the "Purchase obligations," our material cash requirements for these items are higher than what is reflected in the Aggregate Contractual Obligations table. For additional information on the timing of these payments and the impact on our working capital, see the "Changes in Company Cash" section below.

The table below summarizes our aggregate contractual obligations as of December 31, 2021 (in millions):

	Payments Due by Period				
	2022	2023 - 2024	2025 - 2026	Thereafter	Total
Company excluding Ford Credit					
On-balance sheet					
Long-term debt (a)	$ 2,811	$ 134	$ 6,069	$ 10,862	$ 19,876
Interest payments relating to long-term debt (b)	855	1,650	1,442	8,970	12,917
Finance leases (c)	94	157	119	289	659
Operating leases (d)	370	504	270	326	1,470
Pension funding (e)	171	357	366	—	894
Off-balance sheet					
Purchase obligations	1,476	1,143	604	132	3,355
Total Company excluding Ford Credit	5,777	3,945	8,870	20,579	39,171
Ford Credit					
On-balance sheet					
Long-term debt (a)	31,709	39,047	22,976	8,968	102,700
Interest payments relating to long-term debt (b)	2,408	3,212	1,415	838	7,873
Operating leases	15	26	19	9	69
Off-balance sheet					
Purchase obligations	31	29	3	—	63
Total Ford Credit	34,163	42,314	24,413	9,815	110,705
Total Company	$ 39,940	$ 46,259	$ 33,283	$ 30,394	$ 149,876

(a) Excludes unamortized debt discounts/premiums, unamortized debt issuance costs, and fair value adjustments.
(b) 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.
(c) Includes interest payments of $94 million.
(d) Excludes approximately $252 million in future lease payments for various operating leases commencing in a future period.
(e) 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 2021 pension contributions and funded status.

We plan to utilize our liquidity (as described above) and our cash flows from business operations to fund our material cash requirements.

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, interest on debt, cash taxes, and all other and timing differences (including timing differences between accrual-based EBIT and associated cash flows). Non-operating items include: global redesign (including separation payments), changes in Company debt excluding Ford Credit, contributions to funded pension plans, shareholder distributions, and other items (including gains and losses on investments in equity securities, 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 about 45 days. As a result, our cash flow deteriorates if wholesale volumes (and the corresponding revenue) decrease while trade payables continue to become due. Conversely, our cash flow improves if wholesale volumes (and the corresponding revenue) increase while new trade payables are generally not due for about 45 days. For example, the suspension of production at most of our assembly plants and lower industry volumes due to COVID-19 in early 2020 resulted in an initial deterioration of our cash flow, while the subsequent resumption of manufacturing operations and return to pre-COVID-19 production levels at most of our assembly plants resulted in a subsequent improvement of our cash flow. 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.

Our inventory includes vehicles completed but awaiting installation of components affected by the semiconductor supply shortage. As a result of the shortage, our inventory in 2021 was higher than in prior years.

In response to, or in anticipation of, supplier disruptions, we may stockpile certain components or raw materials to help prevent disruption in our production of vehicles. Such actions could have an adverse impact on our cash and increase our inventory.

Financial institutions participate in 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 institutions 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 institutions. Moreover, we do not provide any guarantees in connection with the SCF program. As of December 31, 2021, the outstanding amount of Ford receivables that suppliers elected to sell to the SCF financial institutions was $178 million. The amount settled through the SCF program during 2021 was $1.0 billion.

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

	December 31, 2019	December 31, 2020	December 31, 2021
Company Excluding Ford Credit			
Company Adjusted EBIT excluding Ford Credit (a)	$ 3.3	$ (0.1)	$ 5.3
Capital spending	$ (7.6)	$ (5.7)	$ (6.2)
Depreciation and tooling amortization	5.5	5.3	5.1
Net spending	$ (2.1)	$ (0.4)	$ (1.1)
Receivables	$ (0.1)	$ 0.4	$ (0.2)
Inventory	0.1	0.3	(1.8)
Trade Payables	(0.6)	1.3	0.3
Changes in working capital	$ (0.6)	$ 2.0	$ (1.7)
Ford Credit distributions	$ 2.9	$ 3.3	$ 7.5
Interest on debt and cash taxes	(1.5)	(1.8)	(2.3)
All other and timing differences	0.9	(1.7)	(3.1)
Company adjusted free cash flow (a)	$ 2.9	$ 1.3	$ 4.6
Global Redesign (including separations)	$ (0.9)	$ (0.5)	$ (1.9)
Changes in debt	1.1	8.4	(3.7)
Funded pension contributions	(0.7)	(0.6)	(0.8)
Shareholder distributions	(2.6)	(0.6)	(0.4)
All other (b)	(0.4)	0.5	7.9
Change in cash	$ (0.8)	$ 8.5	$ 5.7

(a) See *Non-GAAP Financial Measure Reconciliations* section for reconciliation to GAAP.
(b) 2021 includes our investment in Rivian of $10.6 billion and cash premium paid of $(1.6) billion associated with repurchasing and redeeming $7.6 billion of higher-coupon debt.
Note: Numbers may not sum due to rounding.

Our full year 2021 *Net cash provided by/(used in) operating activities* was positive $15.8 billion, a decrease of $8.5 billion from a year ago (see page 78 for additional information). The year-over-year decrease was driven by adverse working capital and a decrease in Ford Credit operating cash flow. Company adjusted free cash flow was $4.6 billion, $3.3 billion higher than a year ago, driven by higher Ford Credit distributions and Company adjusted EBIT.

Capital spending was $6.2 billion in 2021, $0.5 billion higher than a year ago, and is expected to be in the range of $7.0 billion to $8.0 billion in 2022.

The full year 2021 working capital impact was $1.7 billion negative, driven by higher inventory. All other and timing differences were negative $3.1 billion, reflecting assorted differences including differences between accrual-based EBIT and the associated cash flows (e.g., marketing incentive and warranty payments to dealers; pension and OPEB income or expense). We expect the working capital and timing differences to normalize when supply is restored, dealer stocks rebound, and incentives potentially increase.

Shareholder distributions were $400 million in 2021, all of which were attributable to the reinstatement of our regular quarterly dividend in the fourth 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 $3.5 billion through December 31, 2021. For additional information on Global Redesign, see the Outlook section on page 73.

Available Credit Lines. Total Company committed credit lines, excluding Ford Credit, at December 31, 2021 were $18.3 billion, consisting of $13.5 billion of our corporate credit facility, $2.0 billion of our supplemental revolving credit facility, $1.5 billion of our delayed draw term loan facility, and $1.3 billion of local credit facilities. At December 31, 2021, the utilized portion of the corporate credit facility was $25 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, $847 million of committed Company credit lines, excluding Ford Credit, was utilized under local credit facilities for our affiliates as of December 31, 2021.

Lenders under our corporate credit facility have $3.4 billion of commitments maturing on September 29, 2024 and $10.1 billion of commitments maturing on September 29, 2026. Lenders under our supplemental revolving credit facility have $2.0 billion of commitments maturing on September 29, 2024.

In September 2021, we amended the corporate and supplemental credit agreements to remove the restrictions on our ability to repurchase shares or pay dividends. In addition, the agreements include certain sustainability-linked targets, pursuant to which the applicable margin and facility fees may be adjusted if Ford achieves, or fails to achieve, the specified targets related to global manufacturing facility greenhouse gas emissions, renewable electricity consumption, and Ford Europe CO_2 tailpipe emissions. Further, interest on any U.S. dollar borrowings under both the corporate and supplemental revolving credit facilities will be calculated using daily simple SOFR. Prior to the amendments, such interest was calculated using LIBOR.

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. The terms and conditions of the delayed draw term loan (other than the sustainability-linked provisions and the transition from LIBOR to SOFR) 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 Next LLC (formerly known as Ford Autonomous Vehicles LLC); Ford Smart Mobility LLC; and Ford Trading Company, LLC.

Debt. As shown in Note 19 of the Notes to the Financial Statements, at December 31, 2021, Company debt excluding Ford Credit was $20.4 billion. This balance is $3.6 billion lower than at December 31, 2020, primarily reflecting our repurchase and redemption of $7.6 billion of higher-coupon debt in the fourth quarter of 2021, partially offset by our convertible notes issuance in March 2021 and our green bond issuance in November 2021.

In March 2021, we issued $2.3 billion aggregate principal amount of unsecured 0% Convertible Senior Notes due 2026. The notes are convertible, at the option of the noteholders, on or after December 15, 2025. Prior to December 15, 2025, the notes are convertible under certain circumstances. Upon conversion, we will pay cash up to the aggregate principal amount of the notes to be converted and cash, shares of our Common Stock, or a combination of cash and shares of our Common Stock, at our election, for the remainder of our obligation in excess, if any, of the aggregate principal amount of the notes being converted. See Note 19 of the Notes to the Financial Statements for additional information regarding the convertible notes, including a description of the circumstances that allow the noteholders to convert prior to December 15, 2025.

In 2021, we introduced our sustainable financing framework, which covers a variety of potential unsecured and securitization funding transactions, including ESG bonds issued by both Ford and Ford Credit to finance environmental and social projects. Net proceeds from sustainable financing transactions will be invested and expended in four areas: Clean Transportation, Clean Manufacturing, Making Lives Better, and Community Revitalization. Our $2.5 billion green bond issuance in November 2021 was the first financing transaction under our sustainable financing framework. We are allocating the net proceeds from that issuance to the design, development, and manufacturing of our battery electric vehicles.

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. 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 Company debt excluding Ford Credit.

Ford Credit Segment

Ford Credit ended 2021 with $32 billion of liquidity. During the year, Ford Credit completed $14 billion of public term funding.

Key elements of Ford Credit's funding strategy include:

- Maintain strong liquidity
- Prudently access public markets, including retail deposits in Europe
- 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 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, 2021, 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 $12.9 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, 2019	December 31, 2020	December 31, 2021
Funding Structure			
Term unsecured debt	$ 75.5	$ 73.3	$ 59.4
Term asset-backed securities	56.6	54.6	45.4
Ford Interest Advantage / Retail Deposits	8.0	9.8	12.9
Other (a)	6.9	5.7	5.7
Equity (a)	16.4	15.6	12.4
Adjustments for cash	(11.7)	(18.5)	(12.4)
Total Managed Receivables (b)	**$ 151.7**	**$ 140.5**	**$ 123.4**
Securitized Funding as Percent of Managed Receivables	37.3%	38.8%	36.7%

(a) Prior period amounts have been updated as a result of the adoption of ASU 2019-12, *Simplifying the Accounting for Income Taxes*. For additional information, see Note 3 of the Notes to the Financial Statements.
(b) See *Non-GAAP Financial Measure Reconciliations* section for reconciliation to GAAP.

Managed receivables were $123.4 billion at December 31, 2021 and were funded primarily with term debt and term asset-backed securities. Securitized funding as a percent of managed receivables was 36.7%.

Public Term Funding Plan. The following table shows Ford Credit's issuances for full year 2019, 2020, and 2021, and planned issuances for full year 2022, excluding short-term funding programs (in billions):

	2019 Actual	2020 Actual	2021 Actual	2022 Forecast
Unsecured	$ 17	$ 14	$ 5	$ 8 - 11
Securitizations (a)	14	13	9	6 - 9
Total public	$ 31	$ 27	$ 14	$ 14 - 20

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

In 2021, Ford Credit completed $14 billion of public term funding. For 2022, Ford Credit projects full year public term funding in the range of $14 billion to $20 billion. Through February 2, 2022, Ford Credit has completed $3 billion of public term issuances.

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

	December 31, 2019	December 31, 2020	December 31, 2021
Liquidity Sources (a)			
Cash	$ 11.7	$ 18.5	$ 12.4
Committed asset-backed facilities	36.6	38.1	37.1
Other unsecured credit facilities	3.0	2.5	2.7
Ford corporate credit facility allocation	3.0	—	—
Total liquidity sources	$ 54.3	$ 59.1	$ 52.2
Utilization of Liquidity (a)			
Securitization cash and restricted cash	$ (3.6)	$ (3.9)	$ (3.9)
Committed asset-backed facilities	(17.3)	(16.7)	(12.5)
Other unsecured credit facilities	(0.8)	(0.5)	(1.0)
Ford corporate credit facility allocation	—	—	—
Total utilization of liquidity	$ (21.7)	$ (21.1)	$ (17.4)
Gross liquidity	$ 32.6	$ 38.0	$ 34.8
Asset-backed capacity in excess of eligible receivables and other adjustments	0.4	(2.6)	(2.8)
Net liquidity available for use	$ 33.0	$ 35.4	$ 32.0

(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 decline, and timing of funding transactions. At December 31, 2021, Ford Credit's net liquidity available for use was $32 billion, $3.4 billion lower than year-end 2020. Ford Credit's sources of liquidity include cash, committed asset-backed facilities, and unsecured credit facilities. At December 31, 2021, Ford Credit's liquidity sources totaled $52.2 billion, down $6.9 billion from year-end 2020.

Material Cash Requirements. Ford Credit's material cash requirements include: (1) the purchase of retail financing and operating lease contracts from dealers and providing wholesale financing for dealers to finance new and used vehicles; and (2) debt repayments (for additional information on debt, see the "Balance Sheet Liquidity Profile" section below, the "Material Cash Requirements" section in "Liquidity and Capital Resources - Company excluding Ford Credit" above, and Note 19 of the Notes to the Financial Statements). In addition, subject to approval by Ford Credit's Board of Directors, shareholder distributions may require the expenditure of a material amount of cash. Moreover, Ford Credit may be subject to additional material cash requirements that are contingent upon the occurrence of certain events, e.g., legal contingencies, uncertain tax positions, and other matters.

Ford Credit plans to utilize its liquidity (as described above) and its cash flows from business operations to fund its material cash requirements.

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 liquidity available to protect for stress scenarios.

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):

	2022	2023	2024	2025 and Beyond
Balance Sheet Liquidity Profile				
Assets (a)	$ 64	$ 92	$ 113	$ 135
Total debt (b)	53	76	92	118
Memo: Unsecured long-term debt maturities	14	11	11	22

(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 2022. 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, 2021, Ford Credit had $135 billion of assets, $74 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.

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, 2019	December 31, 2020	December 31, 2021
Leverage Calculation			
Debt	$ 140.0	$ 137.7	$ 117.7
Adjustments for cash	(11.7)	(18.5)	(12.4)
Adjustments for derivative accounting (a)	(0.5)	(1.5)	(0.4)
Total adjusted debt	$ 127.8	$ 117.7	$ 104.9
Equity (b)	$ 16.4	$ 15.6	$ 12.4
Adjustments for derivative accounting (a)	—	0.1	0.1
Total adjusted equity	$ 16.4	$ 15.7	$ 12.5
Financial statement leverage (to 1) (GAAP) (c)	8.5	8.8	9.5
Managed leverage (to 1) (Non-GAAP) (c)	7.8	7.5	8.4

(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.
(c) Prior period amounts have been updated as a result of the adoption of ASU 2019-12, *Simplifying the Accounting for Income Taxes*. For additional information, see Note 3 of the Notes to the Financial Statements.

Ford Credit plans its managed leverage by considering market conditions and the risk characteristics of its business. At December 31, 2020 and 2021, Ford Credit's financial statement leverage was 8.8:1 and 9.5:1, respectively, and managed leverage was 7.5:1 and 8.4:1, respectively. 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;
- Minimize the volatility of the value of our pension assets relative to pension obligations and ensure assets are sufficient to pay plan benefits; and
- Evaluate strategic actions to reduce pension liabilities, such as plan design changes, curtailments, or settlements

	2020	2021	2021 H / (L) 2020
Pension Funded Status ($B)			
U.S. Plans	$ (0.7)	$ 1.0	$ 1.7
Non-U.S. Plans	(6.0)	(1.3)	4.7
Total Global Pension	$ (6.7)	$ (0.3)	$ 6.4
Year-End Discount Rate (Weighted Average)			
U.S. Plans	2.56%	2.91%	0.35 ppts
Non-U.S. Plans	1.23%	1.75%	0.52 ppts
Actual Asset Returns			
U.S. Plans	16.44%	2.82%	(13.62) ppts
Non-U.S. Plans	10.96%	2.69%	(8.27) ppts
Pension - Funded Plans Only ($B)			
Funded Status	$ 0.3	$ 5.8	$ 5.5
Contributions for Funded Plans	0.6	0.8	0.2

Worldwide, our defined benefit pension plans were underfunded by $0.3 billion at December 31, 2021, an improvement of $6.4 billion from December 31, 2020, primarily reflecting the impact of higher discount rates and continued strong asset performance relative to changes in discount rates. Of the $0.3 billion underfunded status at year-end 2021, our funded plans were $5.8 billion overfunded and our unfunded plans were $6.1 billion underfunded. These unfunded plans are "pay as you go" with benefits paid from Company cash and primarily include certain plans in Germany and U.S. defined benefit plans for senior management.

The fixed income mix was 81% in our U.S. plans and 83% in our non-U.S. plans at year-end 2021.

In 2021, we contributed $773 million to our global funded pension plans, an increase of $203 million compared with 2020. During 2022, 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 2022. 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, refer to the "Critical Accounting Estimates - Pensions and Other Postretirement Employee Benefits" section of Item 7 of Part II of our 2021 Form 10-K Report and Note 17 of the Notes to the Financial Statements.

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, 2019	December 31, 2020	December 31, 2021
Adjusted Net Operating Profit/(Loss) After Cash Tax			
Net income/(loss) attributable to Ford	$ —	$ (1.3)	$ 17.9
Add: Noncontrolling interest	—	—	—
Less: Income tax	0.7	(0.2)	0.1
Add: Cash tax	(0.6)	(0.4)	(0.6)
Less: Interest on debt	(1.0)	(1.6)	(1.8)
Less: Total pension / OPEB income / (cost)	(2.6)	(1.0)	4.9
Add: Pension / OPEB service costs	(1.0)	(1.1)	(1.1)
Net operating profit/(loss) after cash tax	$ 1.4	$ 0.1	$ 13.0
Less: Special items (excl. pension / OPEB) pre-tax	(3.3)	(0.4)	5.9
Adjusted net operating profit/(loss) after cash tax	$ 4.7	$ 0.5	$ 7.1
Invested Capital			
Equity	$ 33.2	$ 30.8	$ 48.6
Redeemable noncontrolling interest	—	—	—
Debt (excl. Ford Credit)	15.3	24.0	20.4
Net pension and OPEB liability	12.9	13.3	6.4
Invested capital (end of period)	$ 61.4	$ 68.1	$ 75.4
Average invested capital	$ 61.7	$ 70.7	$ 72.1
ROIC (a)	2.2%	0.1%	18.0%
Adjusted ROIC (Non-GAAP) (b)	7.6%	0.7%	9.8%

(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.

The following rating actions were taken by these NRSROs since the filing of our Quarterly Report on Form 10-Q for the quarter ended September 30, 2021:

- On November 18, 2021, S&P affirmed the credit ratings for Ford and Ford Credit at BB+ and revised the outlook for each to positive, from negative.

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)	Stable	BB (high)	R-4	Stable	BBB (low)
Fitch	BB+	BB+	Stable	BB+	B	Stable	BBB-
Moody's	N/A	Ba2	Stable	Ba2	NP	Stable	Baa3
S&P	BB+	BB+	Positive	BB+	B	Positive	BBB-

OUTLOOK

We provided 2022 Company guidance in our earnings release furnished on Form 8-K dated February 3, 2022. The guidance is based on our expectations as of February 3, 2022, and 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.

	2022 Guidance
Total Company	
Adjusted EBIT (a)	$11.5 - $12.5 billion
Adjusted Free Cash Flow (a)	$5.5 - $6.5 billion
Capital spending	$7.0 - $8.0 billion
Pension contributions	$0.6 - $0.8 billion
Global Redesign EBIT charges	$1.8 - $2.4 billion
Global Redesign cash effects	$2.0 - $2.5 billion
Ford Credit	
EBT	Strong but lower than 2021

(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.

Our outlook for 2022 assumes the following operating environment:

- Supply constraints will remain fluid reflecting a variety of factors, including semiconductor availability and COVID-19 impacts
- Wholesales are expected to be up about 10% - 15% year over year
- Pricing environment is expected to remain strong, although the interplay between volume and pricing will be dynamic
- Inflationary pressures will impact a broad range of costs
- Commodity costs will be $1.5 - $2.0 billion higher year over year

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, or raw materials can disrupt Ford's production of vehicles;
- Ford's long-term competitiveness depends on the successful execution of Ford+;
- 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, vehicles, and services could be affected by cyber incidents, ransomware attacks, 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, capacity limitations, 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, digital and physical services, and mobility services are subject to market acceptance and face significant competition from existing and new entrants in the automotive, mobility, and digital services industries;
- Ford's near-term 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;
- Inflationary pressure and fluctuations in commodity prices, foreign currency exchange rates, interest rates, and market value of Ford or Ford Credit's investments, including marketable securities, 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 and Ford Credit could experience unusual or significant litigation, governmental investigations, or adverse publicity arising out of alleged defects in products, services, 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 operating results and trends, and a means to compare 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 focuses on underlying operating results and trends, and improves comparability of our period-over-period results. 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	Significance Guideline
◦ Pension and OPEB remeasurement gains and losses	◦ No minimum
◦ Gains and losses on investments in equity securities	◦ No minimum
◦ 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	◦ Generally $100 million or more
◦ Other items that we do not necessarily consider to be indicative of earnings from ongoing operating activities	◦ $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, including gains and losses on pension and OPEB remeasurements and on investments in equity securities.

- *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.