UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-Q

☒ QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the quarterly period ended March 31, 2022

OR

☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from to

Commission File Number: 1-768

CATERPILLAR INC.

(Exact name of registrant as specified in its charter)

Delaware	**37-0602744**
(State or other jurisdiction of incorporation)	(IRS Employer I.D. No.)
510 Lake Cook Road, Suite 100, Deerfield, Illinois	**60015**
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number, including area code: **(224) 551-4000**

Former Name, Former Address and Former Fiscal Year, if Changed Since Last Report: **N/A**

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

Title of each class	Trading Symbol (s)	Name of each exchange on which registered
Common Stock ($1.00 par value)	CAT	New York Stock Exchange [1]
8% Debentures due February 15, 2023	CAT23	New York Stock Exchange
5.3% Debentures due September 15, 2035	CAT35	New York Stock Exchange

[1] In addition to the New York Stock Exchange, Caterpillar common stock is also listed on stock exchanges in France and Switzerland.

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

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

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

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

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

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

At March 31, 2022, 533,353,205 shares of common stock of the registrant were outstanding.

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* Item omitted because no answer is called for or item is not applicable.

Part I. FINANCIAL INFORMATION

Item 1. Financial Statements

Caterpillar Inc.
Consolidated Statement of Results of Operations
(Unaudited)
(Dollars in millions except per share data)

	Three Months Ended March 31	
	2022	**2021**
Sales and revenues:		
Sales of Machinery, Energy & Transportation	$ 12,886	$ 11,191
Revenues of Financial Products	703	696
Total sales and revenues	13,589	11,887
Operating costs:		
Cost of goods sold	9,559	8,012
Selling, general and administrative expenses	1,346	1,239
Research and development expenses	457	374
Interest expense of Financial Products	106	125
Other operating (income) expenses	266	323
Total operating costs	11,734	10,073
Operating profit	1,855	1,814
Interest expense excluding Financial Products	109	142
Other income (expense)	253	325
Consolidated profit before taxes	1,999	1,997
Provision (benefit) for income taxes	469	475
Profit of consolidated companies	1,530	1,522
Equity in profit (loss) of unconsolidated affiliated companies	7	9
Profit of consolidated and affiliated companies	1,537	1,531
Less: Profit (loss) attributable to noncontrolling interests	—	1
Profit [1]	$ 1,537	$ 1,530
Profit per common share	$ 2.88	$ 2.80
Profit per common share – diluted [2]	$ 2.86	$ 2.77
Weighted-average common shares outstanding (millions)		
– Basic	534.5	546.4
– Diluted [2]	538.3	551.4

[1] Profit attributable to common shareholders.
[2] Diluted by assumed exercise of stock-based compensation awards using the treasury stock method.

See accompanying notes to Consolidated Financial Statements.

Caterpillar Inc.
Consolidated Statement of Comprehensive Income
(Unaudited)
(Dollars in millions)

	Three Months Ended March 31	
	2022	**2021**
Profit of consolidated and affiliated companies	$ 1,537	$ 1,531
Other comprehensive income (loss), net of tax (Note 13):		
Foreign currency translation:	(115)	(347)
Pension and other postretirement benefits:	(1)	(8)
Derivative financial instruments:	23	(31)
Available-for-sale securities:	(64)	(16)
Total other comprehensive income (loss), net of tax	(157)	(402)
Comprehensive income	1,380	1,129
Less: comprehensive income attributable to the noncontrolling interests	—	1
Comprehensive income attributable to shareholders	$ 1,380	$ 1,128

See accompanying notes to Consolidated Financial Statements.

Caterpillar Inc.
Consolidated Statement of Financial Position
(Unaudited)
(Dollars in millions)

	March 31, 2022	December 31, 2021
Assets		
Current assets:		
Cash and cash equivalents	$ 6,526	$ 9,254
Receivables – trade and other	9,135	8,477
Receivables – finance	9,003	8,898
Prepaid expenses and other current assets	2,868	2,788
Inventories	15,038	14,038
Total current assets	42,570	43,455
Property, plant and equipment – net	11,932	12,090
Long-term receivables – trade and other	1,204	1,204
Long-term receivables – finance	12,665	12,707
Noncurrent deferred and refundable income taxes	1,973	1,840
Intangible assets	967	1,042
Goodwill	6,293	6,324
Other assets	4,672	4,131
Total assets	$ 82,276	$ 82,793
Liabilities		
Current liabilities:		
Short-term borrowings:		
Machinery, Energy & Transportation	$ —	$ 9
Financial Products	4,501	5,395
Accounts payable	8,361	8,154
Accrued expenses	3,846	3,757
Accrued wages, salaries and employee benefits	1,275	2,242
Customer advances	1,388	1,087
Dividends payable	—	595
Other current liabilities	2,355	2,256
Long-term debt due within one year:		
Machinery, Energy & Transportation	127	45
Financial Products	7,679	6,307
Total current liabilities	29,532	29,847
Long-term debt due after one year:		
Machinery, Energy & Transportation	9,636	9,746
Financial Products	15,641	16,287
Liability for postemployment benefits	5,363	5,592
Other liabilities	5,007	4,805
Total liabilities	65,179	66,277
Commitments and contingencies (Notes 11 and 14)		
Shareholders' equity		
Common stock of $1.00 par value:		
Authorized shares: 2,000,000,000 Issued shares: (3/31/22 and 12/31/21 – 814,894,624) at paid-in amount	6,281	6,398
Treasury stock (3/31/22 – 281,541,419 shares; 12/31/21 – 279,006,573 shares) at cost	(28,326)	(27,643)
Profit employed in the business	40,820	39,282
Accumulated other comprehensive income (loss)	(1,710)	(1,553)
Noncontrolling interests	32	32
Total shareholders' equity	17,097	16,516
Total liabilities and shareholders' equity	$ 82,276	$ 82,793

See accompanying notes to Consolidated Financial Statements.

Caterpillar Inc.
Consolidated Statement of Changes in Shareholders' Equity
(Unaudited)
(Dollars in millions)

	Common stock	Treasury stock	Profit employed in the business	Accumulated other comprehensive income (loss)	Noncontrolling interests	Total
Three Months Ended March 31, 2021						
Balance at December 31, 2020	$ 6,230	$ (25,178)	$ 35,167	$ (888)	$ 47	$ 15,378
Profit of consolidated and affiliated companies	—	—	1,530	—	1	1,531
Foreign currency translation, net of tax	—	—	—	(347)	—	(347)
Pension and other postretirement benefits, net of tax	—	—	—	(8)	—	(8)
Derivative financial instruments, net of tax	—	—	—	(31)	—	(31)
Available-for-sale securities, net of tax	—	—	—	(16)	—	(16)
Distribution to noncontrolling interests	—	—	—	—	(2)	(2)
Common shares issued from treasury stock for stock-based compensation: 2,459,683	(63)	128	—	—	—	65
Stock-based compensation expense	42	—	—	—	—	42
Other	6	1	—	—	(2)	5
Balance at March 31, 2021	**$ 6,215**	**$ (25,049)**	**$ 36,697**	**$ (1,290)**	**$ 44**	**$ 16,617**
Three Months Ended March 31, 2022						
Balance at December 31, 2021	$ 6,398	$ (27,643)	$ 39,282	$ (1,553)	$ 32	$ 16,516
Profit of consolidated and affiliated companies	—	—	1,537	—	—	1,537
Foreign currency translation, net of tax	—	—	—	(115)	—	(115)
Pension and other postretirement benefits, net of tax	—	—	—	(1)	—	(1)
Derivative financial instruments, net of tax	—	—	—	23	—	23
Available-for-sale securities, net of tax	—	—	—	(64)	—	(64)
Dividends declared	—	—	1	—	—	1
Common shares issued from treasury stock for stock-based compensation: 1,037,468	(65)	37	—	—	—	(28)
Stock-based compensation expense	40	—	—	—	—	40
Common shares repurchased: 3,571,684 [1]	—	(720)	—	—	—	(720)
Other	(92)	—	—	—	—	(92)
Balance at March 31, 2022	**$ 6,281**	**$ (28,326)**	**$ 40,820**	**$ (1,710)**	**$ 32**	**$ 17,097**

[1] See Note 12 for additional information.

See accompanying notes to Consolidated Financial Statements.

Caterpillar Inc.
Consolidated Statement of Cash Flow
(Unaudited)
(Millions of dollars)

	Three Months Ended March 31	
	2022	**2021**
Cash flow from operating activities:		
Profit of consolidated and affiliated companies	$ 1,537	$ 1,531
Adjustments for non-cash items:		
Depreciation and amortization	557	586
Provision (benefit) for deferred income taxes	(99)	109
Other	(52)	(104)
Changes in assets and liabilities, net of acquisitions and divestitures:		
Receivables – trade and other	(372)	(543)
Inventories	(1,032)	(657)
Accounts payable	452	733
Accrued expenses	(74)	84
Accrued wages, salaries and employee benefits	(965)	191
Customer advances	311	58
Other assets – net	99	56
Other liabilities – net	(49)	(116)
Net cash provided by (used for) operating activities	313	1,928
Cash flow from investing activities:		
Capital expenditures – excluding equipment leased to others	(346)	(252)
Expenditures for equipment leased to others	(333)	(252)
Proceeds from disposals of leased assets and property, plant and equipment	269	309
Additions to finance receivables	(2,988)	(2,629)
Collections of finance receivables	2,966	2,770
Proceeds from sale of finance receivables	9	5
Investments and acquisitions (net of cash acquired)	(8)	(386)
Proceeds from sale of businesses and investments (net of cash sold)	—	28
Proceeds from sale of securities	571	126
Investments in securities	(1,438)	(148)
Other – net	(15)	(48)
Net cash provided by (used for) investing activities	(1,313)	(477)
Cash flow from financing activities:		
Dividends paid	(595)	(562)
Common stock issued, including treasury shares reissued	(28)	65
Common shares repurchased	(820)	—
Proceeds from debt issued (original maturities greater than three months):		
Machinery, Energy & Transportation	—	494
Financial Products	2,131	1,779
Payments on debt (original maturities greater than three months):		
Machinery, Energy & Transportation	(6)	(644)
Financial Products	(1,381)	(2,243)
Short-term borrowings – net (original maturities three months or less)	(1,016)	1,659
Other – net	—	(2)
Net cash provided by (used for) financing activities	(1,715)	546
Effect of exchange rate changes on cash	(16)	(12)
Increase (decrease) in cash, cash equivalents and restricted cash	(2,731)	1,985
Cash, cash equivalents and restricted cash at beginning of period	9,263	9,366
Cash, cash equivalents and restricted cash at end of period	$ 6,532	$ 11,351

Cash equivalents primarily represent short-term, highly liquid investments with original maturities of generally three months or less.

See accompanying notes to Consolidated Financial Statements.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

1. A. Nature of operations

Information in our financial statements and related commentary are presented in the following categories:

Machinery, Energy & Transportation (ME&T) – We define ME&T as Caterpillar Inc. and its subsidiaries, excluding Financial Products. ME&T's information relates to the design, manufacturing and marketing of our products.

Financial Products – We define Financial Products as our finance and insurance subsidiaries, primarily Caterpillar Financial Services Corporation (Cat Financial) and Caterpillar Insurance Holdings Inc. (Insurance Services). Financial Products' information relates to the financing to customers and dealers for the purchase and lease of Caterpillar and other equipment.

B. Basis of presentation

In the opinion of management, the accompanying unaudited financial statements include all adjustments, consisting only of normal recurring adjustments, necessary for a fair statement of (a) the consolidated results of operations for the three months ended March 31, 2022 and 2021, (b) the consolidated comprehensive income for the three months ended March 31, 2022 and 2021, (c) the consolidated financial position at March 31, 2022 and December 31, 2021, (d) the consolidated changes in shareholders' equity for the three months ended March 31, 2022 and 2021 and (e) the consolidated cash flow for the three months ended March 31, 2022 and 2021. The financial statements have been prepared in conformity with generally accepted accounting principles in the United States of America (U.S. GAAP) and pursuant to the rules and regulations of the Securities and Exchange Commission (SEC).

Interim results are not necessarily indicative of results for a full year. The information included in this Form 10-Q should be read in conjunction with the audited financial statements and notes thereto included in our company's annual report on Form 10-K for the year ended December 31, 2021 (2021 Form 10-K).

The December 31, 2021 financial position data included herein is derived from the audited consolidated financial statements included in the 2021 Form 10-K but does not include all disclosures required by U.S. GAAP. Certain amounts for prior periods have been reclassified to conform to the current period financial statement presentation.

Cat Financial has end-user customers that are variable interest entities (VIEs) of which we are not the primary beneficiary. Although we have provided financial support to these entities and therefore have a variable interest, we do not have the power to direct the activities that most significantly impact their economic performance. Our maximum exposure to loss from our involvement with these VIEs is limited to the credit risk inherently present in the financial support that we have provided. These risks were evaluated and reflected in our financial statements as part of our overall portfolio of finance receivables and related allowance for credit losses. See Note 11 for further discussions on a consolidated VIE.

2. New accounting guidance

A. Adoption of new accounting standards

We consider the applicability and impact of all ASUs. We adopted the following ASUs effective January 1, 2022, none of which had a material impact on our financial statements:

ASU	Description
2020-06	Debt with conversion and other options and Derivatives and hedging
2021-05	Lessor - Variable lease payments
2021-10	Government assistance

B. Accounting standards issued but not yet adopted

We consider the applicability and impact of all ASUs. We assessed the ASUs and determined that they either were not applicable or were not expected to have a material impact on our financial statements.

3. Sales and revenue contract information

Trade receivables represent amounts due from dealers and end users for the sale of our products. In addition, Cat Financial provides wholesale inventory financing for a dealer's purchase of inventory. We include wholesale inventory receivables in Receivables – trade and other and Long-term receivables – trade and other in the Consolidated Statement of Financial Position. We recognize trade receivables from dealers and end users in Receivables – trade and other and Long-term receivables – trade and other in the Consolidated Statement of Financial Position. Trade receivables from dealers and end users were $7,818 million, $7,267 million and $6,310 million as of March 31, 2022, December 31, 2021 and December 31, 2020, respectively. Long-term trade receivables from dealers and end users were $553 million, $624 million and $657 million as of March 31, 2022, December 31, 2021 and December 31, 2020, respectively.

We invoice in advance of recognizing the sale of certain products. We recognize advanced customer payments as a contract liability in Customer advances and Other liabilities in the Consolidated Statement of Financial Position. Contract liabilities were $1,869 million, $1,557 million and $1,526 million as of March 31, 2022, December 31, 2021 and December 31, 2020, respectively. We reduce the contract liability when revenue is recognized. During the three months ended March 31, 2022 and 2021, we recognized $437 million and $433 million, respectively, of revenue that was recorded as a contract liability at the beginning of 2022 and 2021, respectively.

As of March 31, 2022, we have entered into contracts with dealers and end users for which sales have not been recognized as we have not satisfied our performance obligations and transferred control of the products. The dollar amount of unsatisfied performance obligations for contracts with an original duration greater than one year is $7.7 billion, with about one-half of the amount expected to be completed and revenue recognized in the twelve months following March 31, 2022. We have elected the practical expedient not to disclose unsatisfied performance obligations with an original contract duration of one year or less. Contracts with an original duration of one year or less are primarily sales to dealers for machinery, engines and replacement parts.

See Note 16 for further disaggregated sales and revenues information.

4. Stock-based compensation

Accounting for stock-based compensation requires that the cost resulting from all stock-based payments be recognized in the financial statements based on the grant date fair value of the award. Our stock-based compensation primarily consists of stock options, restricted stock units (RSUs) and performance-based restricted stock units (PRSUs).

We recognized pretax stock-based compensation expense of $40 million and $42 million for the three months ended March 31, 2022 and 2021, respectively.

The following table illustrates the type and fair value of the stock-based compensation awards granted during the three months ended March 31, 2022 and 2021, respectively:

	Three Months Ended March 31, 2022			Three Months Ended March 31, 2021		
	Shares Granted	Weighted-Average Fair Value Per Share	Weighted-Average Grant Date Stock Price	Shares Granted	Weighted-Average Fair Value Per Share	Weighted-Average Grant Date Stock Price
Stock options	1,029,202	$ 51.69	$ 196.70	1,084,821	$ 56.30	$ 219.76
RSUs	484,025	$ 196.70	$ 196.70	448,311	$ 219.76	$ 219.76
PRSUs	258,900	$ 196.70	$ 196.70	266,894	$ 219.76	$ 219.76

The following table provides the assumptions used in determining the fair value of the stock-based awards for the three months ended March 31, 2022 and 2021, respectively:

	Grant Year	
	2022	2021
Weighted-average dividend yield	2.60%	2.60%
Weighted-average volatility	31.7%	32.9%
Range of volatilities	25.3% - 36.8%	29.2% - 45.8%
Range of risk-free interest rates	1.03% - 2.00%	0.06% - 1.41%
Weighted-average expected lives	8 years	8 years

As of March 31, 2022, the total remaining unrecognized compensation expense related to nonvested stock-based compensation awards was $299 million, which will be amortized over the weighted-average remaining requisite service periods of approximately 1.8 years.

5. Derivative financial instruments and risk management

Our earnings and cash flow are subject to fluctuations due to changes in foreign currency exchange rates, interest rates and commodity prices. Our Risk Management Policy (policy) allows for the use of derivative financial instruments to prudently manage foreign currency exchange rate, interest rate and commodity price exposures. Our policy specifies that derivatives are not to be used for speculative purposes. Derivatives that we use are primarily foreign currency forward, option and cross currency contracts, interest rate contracts and commodity forward and option contracts. Our derivative activities are subject to the management, direction and control of our senior financial officers. We present at least annually to the Audit Committee of the Board of Directors on our risk management practices, including our use of financial derivative instruments.

We recognize all derivatives at their fair value on the Consolidated Statement of Financial Position. On the date the derivative contract is entered into, we designate the derivative as (1) a hedge of the fair value of a recognized asset or liability (fair value hedge), (2) a hedge of a forecasted transaction or the variability of cash flow (cash flow hedge) or (3) an undesignated instrument. We record in current earnings changes in the fair value of a derivative that is qualified, designated and highly effective as a fair value hedge, along with the gain or loss on the hedged recognized asset or liability that is attributable to the hedged risk. We record in Accumulated other comprehensive income (loss) (AOCI) changes in the fair value of a derivative that is qualified, designated and highly effective as a cash flow hedge, to the extent effective, on the Consolidated Statement of Financial Position until we reclassify them to earnings in the same period or periods during which the hedged transaction affects earnings. We report changes in the fair value of undesignated derivative instruments in current earnings. We classify cash flows from designated derivative financial instruments within the same category as the item being hedged on the Consolidated Statement of Cash Flow. We include cash flows from undesignated derivative financial instruments in the investing category on the Consolidated Statement of Cash Flow.

We formally document all relationships between hedging instruments and hedged items, as well as the risk-management objective and strategy for undertaking various hedge transactions. This process includes linking all derivatives that are designated as fair value hedges to specific assets and liabilities on the Consolidated Statement of Financial Position and linking cash flow hedges to specific forecasted transactions or variability of cash flow.

We also formally assess, both at the hedge's inception and on an ongoing basis, whether the designated derivatives that are used in hedging transactions are highly effective in offsetting changes in fair values or cash flow of hedged items. When a derivative is determined not to be highly effective as a hedge or the underlying hedged transaction is no longer probable, we discontinue hedge accounting prospectively, in accordance with the derecognition criteria for hedge accounting.

Foreign Currency Exchange Rate Risk

Foreign currency exchange rate movements create a degree of risk by affecting the U.S. dollar value of sales made and costs incurred in foreign currencies. Movements in foreign currency rates also affect our competitive position as these changes may affect business practices and/or pricing strategies of non-U.S.-based competitors. Additionally, we have balance sheet positions denominated in foreign currencies, thereby creating exposure to movements in exchange rates.

Our ME&T operations purchase, manufacture and sell products in many locations around the world. As we have a diversified revenue and cost base, we manage our future foreign currency cash flow exposure on a net basis. We use foreign currency forward and option contracts to manage unmatched foreign currency cash inflow and outflow. Our objective is to minimize the risk of exchange rate movements that would reduce the U.S. dollar value of our foreign currency cash flow. Our policy allows for managing anticipated foreign currency cash flow for up to approximately five years. As of March 31, 2022, the maximum term of these outstanding contracts at inception was approximately 60 months.

We generally designate as cash flow hedges at inception of the contract any forward or option contracts that meet the requirements for hedge accounting and the maturity extends beyond the current quarter-end. We perform designation on a specific exposure basis to support hedge accounting. The remainder of ME&T foreign currency contracts are undesignated.

In managing foreign currency risk for our Financial Products operations, our objective is to minimize earnings volatility resulting from conversion and the remeasurement of net foreign currency balance sheet positions and future transactions denominated in foreign currencies. Our policy allows the use of foreign currency forward, option and cross currency contracts to offset the risk of currency mismatch between our assets and liabilities and exchange rate risk associated with future transactions denominated in foreign currencies. Our foreign currency forward and option contracts are primarily undesignated. We designate fixed-to-fixed cross currency contracts as cash flow hedges to protect against movements in exchange rates on foreign currency fixed-rate assets and liabilities.

Interest Rate Risk

Interest rate movements create a degree of risk by affecting the amount of our interest payments and the value of our fixed-rate debt. Our practice is to use interest rate contracts to manage our exposure to interest rate changes.

Our ME&T operations generally use fixed-rate debt as a source of funding. Our objective is to minimize the cost of borrowed funds. Our policy allows us to enter into fixed-to-floating interest rate contracts and forward rate agreements to meet that objective. We designate fixed-to-floating interest rate contracts as fair value hedges at inception of the contract, and we designate certain forward rate agreements as cash flow hedges at inception of the contract.

Financial Products operations has a match-funding policy that addresses interest rate risk by aligning the interest rate profile (fixed or floating rate and duration) of Cat Financial's debt portfolio with the interest rate profile of our receivables portfolio within predetermined ranges on an ongoing basis. In connection with that policy, we use interest rate derivative instruments to modify the debt structure to match assets within the receivables portfolio. This matched funding reduces the volatility of margins between interest-bearing assets and interest-bearing liabilities, regardless of which direction interest rates move.

Our policy allows us to use fixed-to-floating, floating-to-fixed and floating-to-floating interest rate contracts to meet the match-funding objective. We designate fixed-to-floating interest rate contracts as fair value hedges to protect debt against changes in fair value due to changes in the benchmark interest rate. We designate most floating-to-fixed interest rate contracts as cash flow hedges to protect against the variability of cash flows due to changes in the benchmark interest rate.

We have, at certain times, liquidated fixed-to-floating and floating-to-fixed interest rate contracts at both ME&T and Financial Products. We amortize the gains or losses associated with these contracts at the time of liquidation into earnings over the original term of the previously designated hedged item.

Commodity Price Risk

Commodity price movements create a degree of risk by affecting the price we must pay for certain raw materials. Our policy is to use commodity forward and option contracts to manage the commodity risk and reduce the cost of purchased materials.

Our ME&T operations purchase base and precious metals embedded in the components we purchase from suppliers. Our suppliers pass on to us price changes in the commodity portion of the component cost. In addition, we are subject to price changes on energy products such as natural gas and diesel fuel purchased for operational use.

Our objective is to minimize volatility in the price of these commodities. Our policy allows us to enter into commodity forward and option contracts to lock in the purchase price of a portion of these commodities within a five-year horizon. All such commodity forward and option contracts are undesignated.

The location and fair value of derivative instruments reported in the Consolidated Statement of Financial Position were as follows:

(Millions of dollars)	Fair Value			
	March 31, 2022		December 31, 2021	
	Assets[1]	Liabilities[2]	Assets[1]	Liabilities[2]
Designated derivatives				
Foreign exchange contracts	$ 242	$ (127)	$ 228	$ (64)
Interest rate contracts	75	(87)	38	(15)
Total	$ 317	$ (214)	$ 266	$ (79)
Undesignated derivatives				
Foreign exchange contracts	$ 58	$ (88)	$ 46	$ (42)
Commodity contracts	87	—	30	(9)
Total	$ 145	$ (88)	$ 76	$ (51)

[1] Assets are classified on the Consolidated Statement of Financial Position as Receivables - trade and other or Long-term receivables - trade and other.

[2] Liabilities are classified on the Consolidated Statement of Financial Position as Accrued expenses or Other liabilities.

The total notional amounts of the derivative instruments as of March 31, 2022 and December 31, 2021 were $20.7 billion and $18.9 billion, respectively. The notional amounts of the derivative financial instruments do not represent amounts exchanged by the parties. We calculate the amounts exchanged by the parties by referencing the notional amounts and by other terms of the derivatives, such as foreign currency exchange rates, interest rates or commodity prices.

Gains (Losses) on derivative instruments are categorized as follows:

(Millions of dollars)	Three Months Ended March 31					
	Fair Value / Undesignated Hedges		Cash Flow Hedges			
	Gains (Losses) Recognized on the Consolidated Statement of Results of Operations[1]		Gains (Losses) Recognized in AOCI		Gains (Losses) Reclassified from AOCI[2]	
	2022	2021	2022	2021	2022	2021
Foreign exchange contracts	$ (63)	$ 78	$ (9)	$ 72	$ 26	$ 129
Interest rate contracts	7	7	56	7	(7)	(11)
Commodity contracts	93	20	—	—	—	—
Total	$ 37	$ 105	$ 47	$ 79	$ 19	$ 118

[1] Foreign exchange contract and Commodity contract gains (losses) are included in Other income (expense). Interest rate contract gains (losses) are primarily included in Interest expense of Financial Products.

[2] Foreign exchange contract gains (losses) are primarily included in Sales of Machinery, Energy & Transportation and Other income (expense) in the Consolidated Statement of Results of Operations. Interest rate contract gains (losses) are primarily included in Interest expense of Financial Products in the Consolidated Statement of Results of Operations.

The following amounts were recorded on the Consolidated Statement of Financial Position related to cumulative basis adjustments for fair value hedges:

(Millions of dollars)	Carrying Value of the Hedged Liabilities		Cumulative Amount of Fair Value Hedging Adjustment Included in the Carrying Value of the Hedged Liabilities	
	March 31, 2022	December 31, 2021	March 31, 2022	December 31, 2021
Long-term debt due within one year	$ 750	$ 755	$ —	$ 5
Long-term debt due after one year	2,419	1,304	(87)	(2)
Total	$ 3,169	$ 2,059	$ (87)	$ 3

We enter into International Swaps and Derivatives Association (ISDA) master netting agreements within ME&T and Financial Products that permit the net settlement of amounts owed under their respective derivative contracts. Under these master netting agreements, net settlement generally permits the company or the counterparty to determine the net amount payable for contracts due on the same date and in the same currency for similar types of derivative transactions. The master netting agreements generally also provide for net settlement of all outstanding contracts with a counterparty in the case of an event of default or a termination event.

Collateral is generally not required of the counterparties or of our company under the master netting agreements. As of March 31, 2022 and December 31, 2021, no cash collateral was received or pledged under the master netting agreements.

The effect of the net settlement provisions of the master netting agreements on our derivative balances upon an event of default or termination event was as follows:

(Millions of dollars)	March 31, 2022		December 31, 2021	
	Assets	Liabilities	Assets	Liabilities
Gross Amounts Recognized	$ 462	$ (302)	$ 342	$ (130)
Financial Instruments Not Offset	(152)	152	(114)	114
Cash Collateral Received	—	—	—	—
Net Amount	$ 310	$ (150)	$ 228	$ (16)

6. Inventories

Inventories (principally using the last-in, first-out (LIFO) method) were comprised of the following:

(Millions of dollars)	March 31, 2022	December 31, 2021
Raw materials	$ 5,924	$ 5,528
Work-in-process	1,438	1,318
Finished goods	7,390	6,907
Supplies	286	285
Total inventories	$ 15,038	$ 14,038

7. Intangible assets and goodwill

A. Intangible assets

Intangible assets were comprised of the following:

(Millions of dollars)		March 31, 2022		
	Weighted Amortizable Life (Years)	Gross Carrying Amount	Accumulated Amortization	Net
Customer relationships	15	$ 2,273	$ (1,601)	$ 672
Intellectual property	12	1,473	(1,225)	248
Other	16	131	(84)	47
Total finite-lived intangible assets	14	$ 3,877	$ (2,910)	$ 967

		December 31, 2021		
	Weighted Amortizable Life (Years)	Gross Carrying Amount	Accumulated Amortization	Net
Customer relationships	15	$ 2,421	$ (1,709)	$ 712
Intellectual property	12	1,472	(1,192)	280
Other	14	156	(106)	50
Total finite-lived intangible assets	14	$ 4,049	$ (3,007)	$ 1,042

Amortization expense for the three months ended March 31, 2022 and 2021 was $72 million and $77 million, respectively. Amortization expense related to intangible assets is expected to be:

(Millions of dollars)

Remaining Nine Months of 2022	2023	2024	2025	2026	Thereafter
$214	$227	$168	$158	$87	$113

B. Goodwill

No goodwill was impaired during the three months ended March 31, 2022 or 2021.

The changes in carrying amount of goodwill by reportable segment for the three months ended March 31, 2022 were as follows:

(Millions of dollars)	December 31, 2021	Other Adjustments [1]	March 31, 2022
Construction Industries			
Goodwill	$ 302	$ (9)	$ 293
Impairments	(22)	—	(22)
Net goodwill	280	(9)	271
Resource Industries			
Goodwill	4,182	2	4,184
Impairments	(1,175)	—	(1,175)
Net goodwill	3,007	2	3,009
Energy & Transportation			
Goodwill	2,985	(22)	2,963
All Other [2]			
Goodwill	52	(2)	50
Consolidated total			
Goodwill	7,521	(31)	7,490
Impairments	(1,197)	—	(1,197)
Net goodwill	$ 6,324	$ (31)	$ 6,293

[1] Other adjustments are comprised primarily of foreign currency translation.
[2] Includes All Other operating segment (See Note 16).

8. Investments in debt and equity securities

We have investments in certain debt and equity securities, which we record at fair value and primarily include in Other assets in the Consolidated Statement of Financial Position.

We classify debt securities primarily as available-for-sale. We include the unrealized gains and losses arising from the revaluation of available-for-sale debt securities, net of applicable deferred income taxes, in equity (AOCI in the Consolidated Statement of Financial Position). We include the unrealized gains and losses arising from the revaluation of the equity securities in Other income (expense) in the Consolidated Statement of Results of Operations. We generally determine realized gains and losses on sales of investments using the specific identification method for available-for-sale debt and equity securities and include them in Other income (expense) in the Consolidated Statement of Results of Operations.

The cost basis and fair value of available-for-sale debt securities with unrealized gains and losses included in equity (AOCI in the Consolidated Statement of Financial Position) were as follows:

Available-for-sale debt securities (Millions of dollars)	March 31, 2022 Cost Basis	March 31, 2022 Unrealized Pretax Net Gains (Losses)	March 31, 2022 Fair Value	December 31, 2021 Cost Basis	December 31, 2021 Unrealized Pretax Net Gains (Losses)	December 31, 2021 Fair Value
Government debt						
U.S. treasury bonds	$ 9	$ —	$ 9	$ 10	$ —	$ 10
Other U.S. and non-U.S. government bonds	61	(1)	60	61	—	61
Corporate bonds						
Corporate bonds	2,026	(38)	1,988	1,027	19	1,046
Asset-backed securities	184	(1)	183	175	1	176
Mortgage-backed debt securities						
U.S. governmental agency	328	(9)	319	319	6	325
Residential	3	—	3	4	—	4
Commercial	103	(3)	100	98	1	99
Total available-for-sale debt securities	$ 2,714	$ (52)	$ 2,662	$ 1,694	$ 27	$ 1,721

Available-for-sale debt securities in an unrealized loss position:

	March 31, 2022					
	Less than 12 months [1]		12 months or more [1]		Total	
(Millions of dollars)	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses
Government debt						
Other U.S. and non-U.S. government bonds	$ 24	$ 1	$ —	$ —	$ 24	$ 1
Corporate bonds						
Corporate bonds	1,433	37	61	6	1,494	43
Asset-backed securities	109	3	—	—	109	3
Mortgage-backed debt securities						
U.S. governmental agency	231	8	25	2	256	10
Commercial	98	3	1	—	99	3
Total	$ 1,895	$ 52	$ 87	$ 8	$ 1,982	$ 60

	December 31, 2021					
	Less than 12 months [1]		12 months or more [1]		Total	
(Millions of dollars)	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses
Corporate bonds						
Corporate bonds	$ 270	$ 4	$ 33	$ 1	$ 303	$ 5
Mortgage-backed debt securities						
U.S. governmental agency	89	1	22	—	111	1
Total	$ 359	$ 5	$ 55	$ 1	$ 414	$ 6

[1] Indicates the length of time that individual securities have been in a continuous unrealized loss position.

The unrealized losses on our investments in government debt, corporate bonds and mortgage-backed debt securities relate to changes in interest rates and credit-related yield spreads since time of purchase. We do not intend to sell the investments, and it is not likely that we will be required to sell the investments before recovery of their amortized cost basis. In addition, we did not expect credit-related losses on these investments as of March 31, 2022.

The cost basis and fair value of available-for-sale debt securities at March 31, 2022, by contractual maturity, are shown below. Expected maturities will differ from contractual maturities because borrowers may have the right to prepay and creditors may have the right to call obligations.

	March 31, 2022	
(Millions of dollars)	**Cost Basis**	**Fair Value**
Due in one year or less	$ 508	$ 507
Due after one year through five years	1,369	1,341
Due after five years through ten years	327	317
Due after ten years	76	75
U.S. governmental agency mortgage-backed securities	328	319
Residential mortgage-backed securities	3	3
Commercial mortgage-backed securities	103	100
Total debt securities – available-for-sale	$ 2,714	$ 2,662

Sales of available-for-sale debt securities:

	Three Months Ended March 31	
(Millions of dollars)	**2022**	**2021**
Proceeds from the sale of available-for-sale securities	$ 96	$ 100
Gross gains from the sale of available-for-sale securities	—	—
Gross losses from the sale of available-for-sale securities	—	—

In addition, we had $813 million and $964 million of investments in time deposits classified as held-to-maturity debt securities as of March 31, 2022 and December 31, 2021, respectively. All these investments mature within one year and we include them in Prepaid expenses and other current assets in the Consolidated Statement of Financial Position. We record held-to-maturity debt securities at amortized cost, which approximates fair value. We did not have any unrealized gains or losses on these securities as of March 31, 2022 and December 31, 2021.

For the three months ended March 31, 2022 and 2021, the net unrealized gains (losses) for equity securities held at March 31, 2022 and 2021 were $(12) million and $20 million, respectively.

9. Postretirement benefits

A. Pension and postretirement benefit costs

	U.S. Pension Benefits March 31		Non-U.S. Pension Benefits March 31		Other Postretirement Benefits March 31	
(Millions of dollars)	**2022**	**2021**	**2022**	**2021**	**2022**	**2021**
<u>For the three months ended:</u>						
Components of net periodic benefit cost:						
Service cost	$ —	$ —	$ 13	$ 14	$ 25	$ 25
Interest cost	100	82	18	14	20	16
Expected return on plan assets	(167)	(179)	(34)	(32)	(4)	(2)
Amortization of prior service cost (credit)	—	—	—	—	(1)	(10)
Net periodic benefit cost (benefit) [1]	$ (67)	$ (97)	$ (3)	$ (4)	$ 40	$ 29

[1] The service cost component is included in Operating costs in the Consolidated Statement of Results of Operations. All other components are included in Other income (expense) in the Consolidated Statement of Results of Operations.

We made $210 million of contributions to our pension and other postretirement plans during the three months ended March 31, 2022. We currently anticipate full-year 2022 contributions of approximately $357 million.

B. Defined contribution benefit costs

Total company costs related to our defined contribution plans, which are included in Operating Costs in the Consolidated Statement of Results of Operations, were as follows:

	Three Months Ended March 31	
(Millions of dollars)	**2022**	**2021**
U.S. Plans	$ 114	$ 125
Non-U.S. Plans	29	26
	$ 143	$ 151

The decrease in the U.S. defined contribution benefit costs for the three months ended March 31, 2022 was primarily due to the fair value adjustments related to our non-qualified deferred compensation plans.

10. Leases

Revenues from finance and operating leases, primarily included in Revenues of Financial Products on the Consolidated Statement of Results of Operations, were as follows:

	Three Months Ended March 31	
(Millions of dollars)	**2022**	**2021**
Finance lease revenue	$ 112	$ 125
Operating lease revenue	278	294
Total	$ 390	$ 419

We present revenues net of sales and other related taxes.

11. Guarantees and product warranty

Caterpillar dealer performance guarantees

We have provided an indemnity to a third-party insurance company for potential losses related to performance bonds issued on behalf of Caterpillar dealers. The bonds have varying terms and are issued to insure governmental agencies against nonperformance by certain dealers. We also provided guarantees to third-parties related to the performance of contractual obligations by certain Caterpillar dealers. These guarantees have varying terms and cover potential financial losses incurred by the third parties resulting from the dealers' nonperformance.

In 2016, we provided a guarantee to an end user related to the performance of contractual obligations by a Caterpillar dealer. Under the guarantee, which expires in 2025, non-performance by the Caterpillar dealer could require Caterpillar to satisfy the contractual obligations by providing goods, services or financial compensation to the end user up to an annual designated cap. This guarantee was terminated during the first quarter of 2022. No payments were made under the guarantee.

Supplier consortium performance guarantee

We have provided a guarantee to a customer in Europe related to the performance of contractual obligations by a supplier consortium to which one of our Caterpillar subsidiaries is a member. The guarantee covers potential damages incurred by the customer resulting from the supplier consortium's non-performance. The damages are capped except for failure of the consortium to meet certain obligations outlined in the contract in the normal course of business. The guarantee will expire when the supplier consortium performs all of its contractual obligations, which is expected to be completed in 2022.

We have dealer performance guarantees and third-party performance guarantees that do not limit potential payment to end users related to indemnities and other commercial contractual obligations. In addition, we have entered into contracts involving industry standard indemnifications that do not limit potential payment. For these unlimited guarantees, we are unable to estimate a maximum potential amount of future payments that could result from claims made.

No significant loss has been experienced or is anticipated under any of these guarantees. At March 31, 2022 and December 31, 2021, the related recorded liability was $4 million and $5 million respectively. The maximum potential amount of future payments (undiscounted and without reduction for any amounts that may possibly be recovered under recourse or collateralized provisions) we could be required to make under the guarantees was as follows:

(Millions of dollars)	**March 31, 2022**	**December 31, 2021**
Caterpillar dealer performance guarantees	$ 251	$ 747
Supplier consortium performance guarantee	239	242
Other guarantees	165	232
Total guarantees	$ 655	$ 1,221

Cat Financial provides guarantees to purchase certain loans of Caterpillar dealers from a special-purpose corporation (SPC) that qualifies as a variable interest entity. The purpose of the SPC is to provide short-term working capital loans to Caterpillar dealers. This SPC issues commercial paper and uses the proceeds to fund its loan program. Cat Financial receives a fee for providing this guarantee. Cat Financial is the primary beneficiary of the SPC as its guarantees result in Cat Financial having both the power to direct the activities that most significantly impact the SPC's economic performance and the obligation to absorb losses, and therefore Cat Financial has consolidated the financial statements of the SPC. As of March 31, 2022 and December 31, 2021, the SPC's assets of $839 million and $888 million, respectively, were primarily comprised of loans to dealers, and the SPC's liabilities of $838 million and $888 million, respectively, were primarily comprised of commercial paper. The assets of the SPC are not available to pay Cat Financial's creditors. Cat Financial may be obligated to perform under the guarantee if the SPC experiences losses. No loss has been experienced or is anticipated under this loan purchase agreement.

We determine our product warranty liability by applying historical claim rate experience to the current field population and dealer inventory. Generally, we base historical claim rates on actual warranty experience for each product by machine model/engine size by customer or dealer location (inside or outside North America). We develop specific rates for each product shipment month and update them monthly based on actual warranty claim experience.

The reconciliation of the change in our product warranty liability balances for the quarters ended March 31 was as follows:

	First Three Months	
(Millions of dollars)	**2022**	**2021**
Warranty liability, beginning of period	$ 1,689	$ 1,612
Reduction in liability (payments)	(194)	(225)
Increase in liability (new warranties)	168	244
Warranty liability, end of period	$ 1,663	$ 1,631

12. Profit per share

Computations of profit per share: (Dollars in millions except per share data)	Three Months Ended March 31 2022	Three Months Ended March 31 2021
Profit for the period (A) [1]	$ 1,537	$ 1,530
Determination of shares (in millions):		
Weighted-average number of common shares outstanding (B)	534.5	546.4
Shares issuable on exercise of stock awards, net of shares assumed to be purchased out of proceeds at average market price	3.8	5.0
Average common shares outstanding for fully diluted computation (C) [2]	538.3	551.4
Profit per share of common stock:		
Assuming no dilution (A/B)	$ 2.88	$ 2.80
Assuming full dilution (A/C) [2]	$ 2.86	$ 2.77
Shares outstanding as of March 31 (in millions)	533.4	547.8

[1] Profit attributable to common shareholders.

[2] Diluted by assumed exercise of stock-based compensation awards using the treasury stock method.

For the three months ended March 31, 2022 and 2021, we excluded 2.1 million and 1.1 million of outstanding stock options, respectively, from the computation of diluted earnings per share because the effect would have been antidilutive.

In July 2018, the Board approved a share repurchase authorization (the 2018 Authorization) of up to $10.0 billion of Caterpillar common stock effective January 1, 2019, with no expiration. As of March 31, 2022, approximately $1.4 billion remained available under the 2018 Authorization.

For the three months ended March 31, 2022, we repurchased 3.6 million shares of Caterpillar common stock, at an aggregate cost of $720 million. For the three months ended March 31, 2021, we did not repurchase any shares of Caterpillar common stock. We made these purchases through a combination of accelerated stock repurchase agreements with third-party financial institutions and open market transactions.

13. Accumulated other comprehensive income (loss)

We present comprehensive income and its components in the Consolidated Statement of Comprehensive Income. Changes in the balances for each component of AOCI were as follows:

(Millions of dollars)	Three Months Ended March 31 2022	2021
Foreign currency translation:		
Beginning balance	$ (1,508)	$ (910)
Gains (losses) on foreign currency translation	(104)	(323)
Less: Tax provision /(benefit)	11	24
Net gains (losses) on foreign currency translation	(115)	(347)
(Gains) losses reclassified to earnings	—	—
Less: Tax provision /(benefit)	—	—
Net (gains) losses reclassified to earnings	—	—
Other comprehensive income (loss), net of tax	(115)	(347)
Ending balance	$ (1,623)	$ (1,257)
Pension and other postretirement benefits		
Beginning balance	$ (62)	$ (32)
Current year prior service credit (cost)	—	—
Less: Tax provision /(benefit)	—	—
Net current year prior service credit (cost)	—	—
Amortization of prior service (credit) cost	(1)	(10)
Less: Tax provision /(benefit)	—	(2)
Net amortization of prior service (credit) cost	(1)	(8)
Other comprehensive income (loss), net of tax	(1)	(8)
Ending balance	$ (63)	$ (40)
Derivative financial instruments		
Beginning balance	$ (3)	$ —
Gains (losses) deferred	47	79
Less: Tax provision /(benefit)	10	16
Net gains (losses) deferred	37	63
(Gains) losses reclassified to earnings	(19)	(118)
Less: Tax provision /(benefit)	(5)	(24)
Net (gains) losses reclassified to earnings	(14)	(94)
Other comprehensive income (loss), net of tax	23	(31)
Ending balance	$ 20	$ (31)
Available-for-sale securities		
Beginning balance	$ 20	$ 54
Gains (losses) deferred	(79)	(21)
Less: Tax provision /(benefit)	(15)	(5)
Net gains (losses) deferred	(64)	(16)
(Gains) losses reclassified to earnings	—	—
Less: Tax provision /(benefit)	—	—
Net (gains) losses reclassified to earnings	—	—
Other comprehensive income (loss), net of tax	(64)	(16)
Ending balance	$ (44)	$ 38
Total AOCI Ending Balance at March 31	$ (1,710)	$ (1,290)

14. Environmental and legal matters

The Company is regulated by federal, state and international environmental laws governing its use, transport and disposal of substances and control of emissions. In addition to governing our manufacturing and other operations, these laws often impact the development of our products, including, but not limited to, required compliance with air emissions standards applicable to internal combustion engines. We have made, and will continue to make, significant research and development and capital expenditures to comply with these emissions standards.

We are engaged in remedial activities at a number of locations, often with other companies, pursuant to federal and state laws. When it is probable we will pay remedial costs at a site, and those costs can be reasonably estimated, we accrue the investigation, remediation, and operating and maintenance costs against our earnings. We accrue costs based on consideration of currently available data and information with respect to each individual site, including available technologies, current applicable laws and regulations, and prior remediation experience. Where no amount within a range of estimates is more likely, we accrue the minimum. Where multiple potentially responsible parties are involved, we consider our proportionate share of the probable costs. In formulating the estimate of probable costs, we do not consider amounts expected to be recovered from insurance companies or others. We reassess these accrued amounts on a quarterly basis. The amount recorded for environmental remediation is not material and is included in Accrued expenses in the Consolidated Statement of Financial Position. We believe there is no more than a remote chance that a material amount for remedial activities at any individual site, or at all the sites in the aggregate, will be required.

On January 7, 2015, the Company received a grand jury subpoena from the U.S. District Court for the Central District of Illinois. The subpoena requested documents and information from the Company relating to, among other things, financial information concerning U.S. and non-U.S. Caterpillar subsidiaries (including undistributed profits of non-U.S. subsidiaries and the movement of cash among U.S. and non-U.S. subsidiaries). The Company has received additional subpoenas relating to this investigation requesting additional documents and information relating to, among other things, the purchase and resale of replacement parts by Caterpillar Inc. and non-U.S. Caterpillar subsidiaries, dividend distributions of certain non-U.S. Caterpillar subsidiaries, and Caterpillar SARL (CSARL) and related structures. On March 2-3, 2017, agents with the Department of Commerce, the Federal Deposit Insurance Corporation and the Internal Revenue Service executed search and seizure warrants at three facilities of the Company in the Peoria, Illinois area, including its former corporate headquarters. The warrants identify, and agents seized, documents and information related to, among other things, the export of products from the United States, the movement of products between the United States and Switzerland, the relationship between Caterpillar Inc. and CSARL, and sales outside the United States. It is the Company’s understanding that the warrants, which concern both tax and export activities, are related to the ongoing grand jury investigation. The Company is continuing to cooperate with this investigation. The Company is unable to predict the outcome or reasonably estimate any potential loss; however, we currently believe that this matter will not have a material adverse effect on the Company’s consolidated results of operations, financial position or liquidity.

In addition, we are involved in other unresolved legal actions that arise in the normal course of business. The most prevalent of these unresolved actions involve disputes related to product design, manufacture and performance liability (including claimed asbestos exposure), contracts, employment issues, environmental matters, intellectual property rights, taxes (other than income taxes) and securities laws. The aggregate range of reasonably possible losses in excess of accrued liabilities, if any, associated with these unresolved legal actions is not material. In some cases, we cannot reasonably estimate a range of loss because there is insufficient information regarding the matter. However, we believe there is no more than a remote chance that any liability arising from these matters would be material. Although it is not possible to predict with certainty the outcome of these unresolved legal actions, we believe that these actions will not individually or in the aggregate have a material adverse effect on our consolidated results of operations, financial position or liquidity.

15. Income taxes

The provision for income taxes for the first three months of 2022 reflected an estimated annual tax rate of 24 percent, compared with 26 percent for the first three months of 2021, excluding the discrete items discussed in the following paragraph. The comparative tax rate for full-year 2021 was approximately 23 percent. The increase in the estimated annual tax rate from full-year 2021 was primarily related to changes in the expected geographic mix of profits from a tax perspective for 2022.

In addition, a discrete tax benefit of $12 million was recorded in the first three months of 2022, compared with a $43 million benefit in the first three months of 2021, for the settlement of stock-based compensation awards with associated tax deductions in excess of cumulative U.S. GAAP compensation expense.

In Revenue Agent's Reports issued at the end of the field examinations of our U.S. income tax returns for 2007 to 2012 including the impact of a loss carryback to 2005, the Internal Revenue Service has proposed to tax in the United States profits earned from certain parts transactions by Caterpillar SARL (CSARL) based on the examination team's application of the "substance-over-form" or "assignment-of-income" judicial doctrines. We are vigorously contesting the proposed increases to tax and penalties for these years of approximately $2.3 billion. We believe that the relevant transactions complied with applicable tax laws and did not violate judicial doctrines. We have filed U.S. income tax returns on this same basis for years after 2012. Based on the information currently available, we do not anticipate a significant change to our unrecognized tax benefits for this position within the next 12 months. We currently believe the ultimate disposition of this matter will not have a material adverse effect on our consolidated financial position, liquidity or results of operations.

16. Segment information

A. Basis for segment information

Our Executive Office is comprised of a Chief Executive Officer (CEO), four Group Presidents, a Chief Financial Officer (CFO), a Chief Legal Officer and General Counsel and a Chief Human Resources Officer. The Group Presidents and CFO are accountable for a related set of end-to-end businesses that they manage. The Chief Legal Officer and General Counsel leads the Law, Security and Public Policy Division. The Chief Human Resources Officer leads the Human Resources Organization. The CEO allocates resources and manages performance at the Group President/CFO level. As such, the CEO serves as our Chief Operating Decision Maker, and operating segments are primarily based on the Group President/CFO reporting structure.

Three of our operating segments, Construction Industries, Resource Industries and Energy & Transportation are led by Group Presidents. One operating segment, Financial Products, is led by the CFO who also has responsibility for Corporate Services. Corporate Services is a cost center primarily responsible for the performance of certain support functions globally and to provide centralized services; it does not meet the definition of an operating segment. One Group President leads one smaller operating segment that is included in the All Other operating segment. The Law, Security and Public Policy Division and the Human Resources Organization are cost centers and do not meet the definition of an operating segment.

Segment information for 2021 has been recast due to a methodology change related to how we assign intersegment sales and segment profit from our technology products and services to Construction Industries, Resource Industries and Energy & Transportation. This methodology change did not have a material impact on our segment results.

B. Description of segments

We have five operating segments, of which four are reportable segments. Following is a brief description of our reportable segments and the business activities included in the All Other operating segment:

Construction Industries: A segment primarily responsible for supporting customers using machinery in infrastructure and building construction applications. Responsibilities include business strategy, product design, product management and development, manufacturing, marketing and sales and product support. The product portfolio includes asphalt pavers; backhoe loaders; compactors; cold planers; compact track and multi-terrain loaders; mini, small, medium and large track excavators; motor graders; pipelayers; road reclaimers; skid steer loaders; telehandlers; small and medium track-type tractors; track-type loaders; wheel excavators; compact, small and medium wheel loaders; and related parts and work tools. Inter-segment sales are a source of revenue for this segment.

Resource Industries: A segment primarily responsible for supporting customers using machinery in mining, heavy construction and quarry and aggregates. Responsibilities include business strategy, product design, product management and development, manufacturing, marketing and sales and product support. The product portfolio includes large track-type tractors; large mining trucks; hard rock vehicles; longwall miners; electric rope shovels; draglines; hydraulic shovels; rotary drills; large wheel loaders; off-highway trucks; articulated trucks; wheel tractor scrapers; wheel dozers; landfill compactors; soil compactors; select work tools; machinery components; electronics and control systems and related parts. In addition to equipment, Resource Industries also develops and sells technology products and services to provide customers fleet management, equipment management analytics, autonomous machine capabilities, safety services and mining performance solutions. Resource Industries also manages areas that provide services to other parts of the company, including strategic procurement, lean center of excellence, integrated manufacturing, research and development for hydraulic systems, automation, electronics and software for Cat machines and engines. Inter-segment sales are a source of revenue for this segment.

Energy & Transportation: A segment primarily responsible for supporting customers using reciprocating engines, turbines, diesel-electric locomotives and related services across industries serving Oil and Gas, Power Generation, Industrial and Transportation applications, including marine- and rail-related businesses. Responsibilities include business strategy, product design, product management, development and testing manufacturing, marketing and sales and product support. The product and services portfolio includes turbines, centrifugal gas compressors, and turbine-related services; reciprocating engine-powered generator sets; integrated systems and solutions used in the electric power generation industry; reciprocating engines, drivetrain and integrated systems and solutions for the marine and oil and gas industries; reciprocating engines, drivetrain and integrated systems and solutions supplied to the industrial industry as well as Cat machinery; and diesel-electric locomotives and components and other rail-related products and services, including remanufacturing and leasing. Responsibilities also include the remanufacturing of Caterpillar reciprocating engines and components and remanufacturing services for other companies; and product support of on-highway vocational trucks for North America. Inter-segment sales are a source of revenue for this segment.

Financial Products Segment: Provides financing alternatives to customers and dealers around the world for Caterpillar products and services, as well as financing for vehicles, power generation facilities and marine vessels that, in most cases, incorporate Caterpillar products. Financing plans include operating and finance leases, installment sale contracts, repair/rebuild financing, working capital loans and wholesale financing plans. The segment also provides insurance and risk management products and services that help customers and dealers manage their business risk. Insurance and risk management products offered include physical damage insurance, inventory protection plans, extended service coverage and maintenance plans for machines and engines, and dealer property and casualty insurance. The various forms of financing, insurance and risk management products offered to customers and dealers help support the purchase and lease of Caterpillar equipment. The segment also earns revenues from ME&T, but the related costs are not allocated to operating segments. Financial Products' segment profit is determined on a pretax basis and includes other income/expense items.

All Other operating segment: Primarily includes activities such as: business strategy; product management and development; manufacturing and sourcing of filters and fluids, undercarriage, ground-engaging tools, fluid transfer products, precision seals, rubber sealing and connecting components primarily for Cat® products; parts distribution; integrated logistics solutions; distribution services responsible for dealer development and administration, including a wholly owned dealer in Japan; dealer portfolio management and ensuring the most efficient and effective distribution of machines, engines and parts; brand management and marketing strategy; and digital investments for new customer and dealer solutions that integrate data analytics with state-of-the-art digital technologies while transforming the buying experience. Results for the All Other operating segment are included as a reconciling item between reportable segments and consolidated external reporting.

C. Segment measurement and reconciliations

There are several methodology differences between our segment reporting and our external reporting. The following is a list of the more significant methodology differences:

- ME&T segment net assets generally include inventories, receivables, property, plant and equipment, goodwill, intangibles, accounts payable and customer advances. We generally manage at the corporate level liabilities other than accounts payable and customer advances, and we do not include these in segment operations. Financial Products Segment assets generally include all categories of assets.

- We value segment inventories and cost of sales using a current cost methodology.

- We amortize goodwill allocated to segments using a fixed amount based on a 20-year useful life. This methodology difference only impacts segment assets. We do not include goodwill amortization expense in segment profit. In addition, we have allocated to segments only a portion of goodwill for certain acquisitions made in 2011 or later.

- We generally manage currency exposures for ME&T at the corporate level and do not include in segment profit the effects of changes in exchange rates on results of operations within the year. We report the net difference created in the translation of revenues and costs between exchange rates used for U.S. GAAP reporting and exchange rates used for segment reporting as a methodology difference.

- We do not include stock-based compensation expense in segment profit.

- Postretirement benefit expenses are split; segments are generally responsible for service costs, with the remaining elements of net periodic benefit cost included as a methodology difference.

- We determine ME&T segment profit on a pretax basis and exclude interest expense and most other income/expense items. We determine Financial Products Segment profit on a pretax basis and include other income/expense items.

Reconciling items are created based on accounting differences between segment reporting and our consolidated external reporting. Please refer to pages 26 to 28 for financial information regarding significant reconciling items. Most of our reconciling items are self-explanatory given the above explanations. For the reconciliation of profit, we have grouped the reconciling items as follows:

- **Corporate costs:** These costs are related to corporate requirements primarily for compliance and legal functions for the benefit of the entire organization.

- **Restructuring costs:** May include costs for employee separation, long-lived asset impairments and contract terminations. These costs are included in Other operating (income) expenses except for defined-benefit plan curtailment losses and special termination benefits, which are included in Other income (expense). Restructuring costs also include other exit-related costs, which may consist of accelerated depreciation, inventory write-downs, building demolition, equipment relocation and project management costs and LIFO inventory decrement benefits from inventory liquidations at closed facilities, all of which are primarily included in Cost of goods sold. See Note 20 for more information.

- **Methodology differences:** See previous discussion of significant accounting differences between segment reporting and consolidated external reporting.

- **Timing:** Timing differences in the recognition of costs between segment reporting and consolidated external reporting. For example, we report certain costs on the cash basis for segment reporting and the accrual basis for consolidated external reporting.

For the three months ended March 31, 2022 and 2021, sales and revenues by geographic region reconciled to consolidated sales and revenues were as follows:

Sales and Revenues by Geographic Region

(Millions of dollars)	North America	Latin America	EAME	Asia/ Pacific	External Sales and Revenues	Intersegment Sales and Revenues	Total Sales and Revenues
Three Months Ended March 31, 2022							
Construction Industries	$ 2,720	$ 627	$ 1,277	$ 1,462	$ 6,086	$ 29	$ 6,115
Resource Industries	1,018	399	594	748	2,759	71	2,830
Energy & Transportation	1,938	310	1,184	600	4,032	1,006	5,038
Financial Products Segment	503	73	96	111	783 [1]	—	783
Total sales and revenues from reportable segments	6,179	1,409	3,151	2,921	13,660	1,106	14,766
All Other operating segment	18	—	5	16	39	79	118
Corporate Items and Eliminations	(60)	(16)	(11)	(23)	(110)	(1,185)	(1,295)
Total Sales and Revenues	$ 6,137	$ 1,393	$ 3,145	$ 2,914	$ 13,589	$ —	$ 13,589
Three Months Ended March 31, 2021							
Construction Industries	$ 2,126	$ 392	$ 1,081	$ 1,842	$ 5,441	$ 18	$ 5,459
Resource Industries	657	405	474	561	2,097	81	2,178
Energy & Transportation	1,782	256	1,093	527	3,658	849	4,507
Financial Products Segment	476	62	100	123	761 [1]	—	761
Total sales and revenues from reportable segments	5,041	1,115	2,748	3,053	11,957	948	12,905
All Other operating segment	13	—	3	22	38	92	130
Corporate Items and Eliminations	(63)	(11)	(8)	(26)	(108)	(1,040)	(1,148)
Total Sales and Revenues	$ 4,991	$ 1,104	$ 2,743	$ 3,049	$ 11,887	$ —	$ 11,887

[1] Includes revenues from Construction Industries, Resource Industries, Energy & Transportation and All Other operating segment of $100 million and $84 million in the three months ended March 31, 2022 and 2021, respectively.

For the three months ended March 31, 2022 and 2021, Energy & Transportation segment sales by end user application were as follows:

Energy & Transportation External Sales

(Millions of dollars)	Three Months Ended March 31 2022	Three Months Ended March 31 2021
Oil and gas	$ 948	$ 915
Power generation	1,012	963
Industrial	1,020	813
Transportation	1,052	967
Energy & Transportation External Sales	$ 4,032	$ 3,658

Reconciliation of Consolidated profit before taxes:

(Millions of dollars)	Three Months Ended March 31	
	2022	2021
Profit from reportable segments:		
Construction Industries	$ 1,057	$ 1,042
Resource Industries	361	312
Energy & Transportation	538	675
Financial Products Segment	238	244
Total profit from reportable segments	2,194	2,273
Profit from All Other operating segment	3	3
Cost centers	10	21
Corporate costs	(198)	(185)
Timing	(98)	(66)
Restructuring costs	(13)	(64)
Methodology differences:		
Inventory/cost of sales	168	—
Postretirement benefit expense	81	68
Stock-based compensation expense	(40)	(42)
Financing costs	(100)	(130)
Currency	106	186
Other income/expense methodology differences	(81)	(49)
Other methodology differences	(33)	(18)
Total consolidated profit before taxes	$ 1,999	$ 1,997

Reconciliation of Assets:

(Millions of dollars)	March 31, 2022	December 31, 2021
Assets from reportable segments:		
Construction Industries	$ 5,019	$ 4,547
Resource Industries	5,717	5,962
Energy & Transportation	9,480	9,253
Financial Products Segment	35,108	34,860
Total assets from reportable segments	55,324	54,622
Assets from All Other operating segment	2,568	1,678
Items not included in segment assets:		
Cash and cash equivalents	5,662	8,428
Deferred income taxes	1,862	1,735
Goodwill and intangible assets	4,842	4,859
Property, plant and equipment – net and other assets	3,149	4,056
Inventory methodology differences	(2,901)	(2,656)
Liabilities included in segment assets	11,378	10,777
Other	392	(706)
Total assets	$ 82,276	$ 82,793

Reconciliation of Depreciation and amortization:
(Millions of dollars)

	Three Months Ended March 31	
	2022	2021
Depreciation and amortization from reportable segments:		
Construction Industries	$ 58	$ 59
Resource Industries	92	99
Energy & Transportation	134	142
Financial Products Segment	188	196
Total depreciation and amortization from reportable segments	472	496
Items not included in segment depreciation and amortization:		
All Other operating segment	58	62
Cost centers	21	26
Other	6	2
Total depreciation and amortization	$ 557	$ 586

Reconciliation of Capital expenditures:
(Millions of dollars)

	Three Months Ended March 31	
	2022	2021
Capital expenditures from reportable segments:		
Construction Industries	$ 32	$ 28
Resource Industries	22	23
Energy & Transportation	177	81
Financial Products Segment	241	228
Total capital expenditures from reportable segments	472	360
Items not included in segment capital expenditures:		
All Other operating segment	16	15
Cost centers	9	19
Timing	192	124
Other	(10)	(14)
Total capital expenditures	$ 679	$ 504

17. Cat Financial financing activities

Allowance for credit losses

Portfolio segments
A portfolio segment is the level at which Cat Financial develops a systematic methodology for determining its allowance for credit losses. Cat Financial's portfolio segments and related methods for estimating expected credit losses are as follows:

Customer
Cat Financial provides loans and finance leases to end-user customers primarily for the purpose of financing new and used Caterpillar machinery, engines and equipment for commercial use, the majority of which operate in construction-related industries. Cat Financial also provides financing for vehicles, power generation facilities and marine vessels that, in most cases, incorporate Caterpillar products. The average original term of Cat Financial's customer finance receivable portfolio was approximately 50 months with an average remaining term of approximately 27 months as of March 31, 2022.

Cat Financial typically maintains a security interest in financed equipment and requires physical damage insurance coverage on the financed equipment, both of which provide Cat Financial with certain rights and protections. If Cat Financial's collection efforts fail to bring a defaulted account current, Cat Financial generally can repossess the financed equipment, after satisfying local legal requirements, and sell it within the Caterpillar dealer network or through third-party auctions.

Cat Financial estimates the allowance for credit losses related to its customer finance receivables based on loss forecast models utilizing probabilities of default and the estimated loss given default based on past loss experience adjusted for current conditions and reasonable and supportable forecasts capturing country and industry-specific economic factors.

During the three months ended March 31, 2022, Cat Financial's forecasts for the markets in which it operates reflected a continuation of the trend of a growing economy, improved unemployment rates and relatively low delinquencies. However, an increase in inflation, exacerbated by an increase in commodity prices, dampened the expectations of global economic growth. The company believes the economic forecasts employed represent reasonable and supportable forecasts, followed by a reversion to long-term trends.

Dealer

Cat Financial provides financing to Caterpillar dealers in the form of wholesale financing plans. Cat Financial's wholesale financing plans provide assistance to dealers by financing their mostly new Caterpillar equipment inventory and rental fleets on a secured and unsecured basis. In addition, Cat Financial provides a variety of secured and unsecured loans to Caterpillar dealers.

Cat Financial estimates the allowance for credit losses for dealer finance receivables based on historical loss rates with consideration of current economic conditions and reasonable and supportable forecasts.

In general, Cat Financial's Dealer portfolio segment has not historically experienced large increases or decreases in credit losses based on changes in economic conditions due to its close working relationships with the dealers and their financial strength. Therefore, Cat Financial made no adjustments to historical loss rates during the three months ended March 31, 2022.

Classes of finance receivables

Cat Financial further evaluates portfolio segments by the class of finance receivables, which is defined as a level of information (below a portfolio segment) in which the finance receivables have the same initial measurement attribute and a similar method for assessing and monitoring credit risk. Cat Financial's classes, which align with management reporting for credit losses, are as follows:

- **North America** - Finance receivables originated in the United States and Canada.
- **EAME** - Finance receivables originated in Europe, Africa, the Middle East and the Commonwealth of Independent States.
- **Asia/Pacific** - Finance receivables originated in Australia, New Zealand, China, Japan, Southeast Asia and India.
- **Mining** - Finance receivables related to large mining customers worldwide.
- **Latin America** - Finance receivables originated in Mexico and Central and South American countries.
- **Caterpillar Power Finance** - Finance receivables originated worldwide related to marine vessels with Caterpillar engines and Caterpillar electrical power generation, gas compression and co-generation systems and non-Caterpillar equipment that is powered by these systems.

Receivable balances, including accrued interest, are written off against the allowance for credit losses when, in the judgment of management, they are considered uncollectible (generally upon repossession of the collateral). The amount of the write-off is determined by comparing the fair value of the collateral, less cost to sell, to the amortized cost. Subsequent recoveries, if any, are credited to the allowance for credit losses when received.

An analysis of the allowance for credit losses was as follows:

(Millions of dollars)	Three Months Ended March 31, 2022			Three Months Ended March 31, 2021		
	Customer	Dealer	Total	Customer	Dealer	Total
Beginning balance	$ 251	$ 82	$ 333	$ 431	$ 44	$ 475
Write-offs	(20)	—	(20)	(34)	—	(34)
Recoveries	12	—	12	10	—	10
Provision for credit losses	26 [1]	(1)	25	(10)	—	(10)
Other	2	—	2	(4)	—	(4)
Ending balance	$ 271	$ 81	$ 352	$ 393	$ 44	$ 437
Finance Receivables	$ 20,289	$ 1,722	$ 22,011	$ 19,103	$ 2,633	$ 21,736

[1] Included a higher reserve for the Russia and Ukraine portfolios.

Credit quality of finance receivables

At origination, Cat Financial evaluates credit risk based on a variety of credit quality factors including prior payment experience, customer financial information, credit ratings, loan-to-value ratios, probabilities of default, industry trends, macroeconomic factors and other internal metrics. On an ongoing basis, Cat Financial monitors credit quality based on past-due status as there is a meaningful correlation between the past-due status of customers and the risk of loss. In determining past-due status, Cat Financial considers the entire finance receivable past due when any installment is over 30 days past due.

Customer

The tables below summarize the aging category of Cat Financial's amortized cost of finance receivables in the Customer portfolio segment by origination year:

(Millions of dollars)	March 31, 2022							
	2022	2021	2020	2019	2018	Prior	Revolving Finance Receivables	Total Finance Receivables
North America								
Current	$ 1,204	$ 4,442	$ 2,323	$ 1,213	$ 503	$ 154	$ 188	$ 10,027
31-60 days past due	5	29	22	15	7	3	6	87
61-90 days past due	—	8	4	4	2	1	2	21
91+ days past due	—	10	13	10	11	8	5	57
EAME								
Current	307	1,369	739	496	295	136	—	3,342
31-60 days past due	1	12	6	5	1	—	—	25
61-90 days past due	—	4	4	1	1	1	—	11
91+ days past due	—	4	11	3	2	2	—	22
Asia/Pacific								
Current	333	1,145	667	225	53	13	—	2,436
31-60 days past due	1	14	18	9	1	—	—	43
61-90 days past due	—	4	8	5	1	—	—	18
91+ days past due	—	7	9	7	2	—	—	25
Mining								
Current	195	780	312	274	167	167	48	1,943
31-60 days past due	—	—	—	—	—	—	—	—
61-90 days past due	—	—	—	—	—	—	—	—
91+ days past due	—	1	1	8	12	8	—	30
Latin America								
Current	204	607	270	137	45	29	—	1,292
31-60 days past due	—	6	7	5	16	—	—	34
61-90 days past due	—	5	1	1	1	—	—	8
91+ days past due	—	9	14	9	5	18	—	55
Caterpillar Power Finance								
Current	12	105	144	92	65	236	115	769
31-60 days past due	2	—	—	—	—	—	—	2
61-90 days past due	—	—	—	—	—	—	—	—
91+ days past due	—	—	—	—	—	42	—	42
Totals by Aging Category								
Current	$ 2,255	$ 8,448	$ 4,455	$ 2,437	$ 1,128	$ 735	$ 351	$ 19,809
31-60 days past due	9	61	53	34	25	3	6	191
61-90 days past due	—	21	17	11	5	2	2	58
91+ days past due	—	31	48	37	32	78	5	231
Total Customer	$ 2,264	$ 8,561	$ 4,573	$ 2,519	$ 1,190	$ 818	$ 364	$ 20,289

(Millions of dollars)	December 31, 2021							
	2020	2019	2018	2017	2016	Prior	Revolving Finance Receivables	Total Finance Receivables
North America								
Current	$ 4,792	$ 2,596	$ 1,426	$ 630	$ 182	$ 32	$ 182	$ 9,840
31-60 days past due	27	32	20	12	4	1	5	101
61-90 days past due	7	8	5	3	1	1	5	30
91+ days past due	9	17	12	13	5	4	5	65
EAME								
Current	1,499	836	577	352	140	26	—	3,430
31-60 days past due	5	4	3	1	1	—	—	14
61-90 days past due	3	3	3	1	—	—	—	10
91+ days past due	3	11	2	2	—	2	—	20
Asia/Pacific								
Current	1,271	803	307	71	16	2	—	2,470
31-60 days past due	10	14	10	2	—	—	—	36
61-90 days past due	3	7	4	1	—	—	—	15
91+ days past due	2	10	10	3	—	—	—	25
Mining								
Current	851	347	307	193	36	161	36	1,931
31-60 days past due	6	—	—	—	—	—	—	6
61-90 days past due	1	—	—	—	4	—	—	5
91+ days past due	—	1	8	9	3	1	—	22
Latin America								
Current	617	299	160	70	17	18	—	1,181
31-60 days past due	4	7	3	3	1	—	—	18
61-90 days past due	3	3	1	1	—	—	—	8
91+ days past due	4	9	9	7	7	14	—	50
Caterpillar Power Finance								
Current	117	145	97	70	180	104	101	814
31-60 days past due	—	—	—	—	—	—	—	—
61-90 days past due	—	—	—	—	—	—	—	—
91+ days past due	—	—	—	—	—	44	—	44
Totals by Aging Category								
Current	$ 9,147	$ 5,026	$ 2,874	$ 1,386	$ 571	$ 343	$ 319	$ 19,666
31-60 days past due	52	57	36	18	6	1	5	175
61-90 days past due	17	21	13	6	5	1	5	68
91+ days past due	18	48	41	34	15	65	5	226
Total Customer	$ 9,234	$ 5,152	$ 2,964	$ 1,444	$ 597	$ 410	$ 334	$ 20,135

Finance receivables in the Customer portfolio segment are substantially secured by collateral, primarily in the form of Caterpillar and other machinery. For those contracts where the borrower is experiencing financial difficulty, repayment of the outstanding amounts is generally expected to be provided through the operation or repossession and sale of the machinery.

Dealer

As of March 31, 2022, Cat Financial's total amortized cost of finance receivables within the Dealer portfolio segment was current, with the exception of $74 million. Of these past due receivables, $73 million were 91+ days past due in Latin America and were originated in 2017. As of December 31, 2021, Cat Financial's total amortized cost of finance receivables within the Dealer portfolio segment was current, with the exception of $78 million that was 91+ days past due in Latin America, all of which was originated in 2017.

Non-accrual finance receivables

Recognition of income is suspended and the finance receivable is placed on non-accrual status when management determines that collection of future income is not probable. Contracts on non-accrual status are generally more than 120 days past due or have been restructured in a troubled debt restructuring (TDR). Recognition is resumed and previously suspended income is recognized when collection is considered probable. Payments received while the finance receivable is on non-accrual status are applied to interest and principal in accordance with the contractual terms. Interest earned but uncollected prior to the receivable being placed on non-accrual status is written off through Provision for credit losses when, in the judgment of management, it is considered uncollectible.

In Cat Financial's Customer portfolio segment, finance receivables which were on non-accrual status and finance receivables over 90 days past due and still accruing income were as follows:

	March 31, 2022			December 31, 2021		
	Amortized Cost			Amortized Cost		
(Millions of dollars)	Non-accrual With an Allowance	Non-accrual Without an Allowance	91+ Still Accruing	Non-accrual With an Allowance	Non-accrual Without an Allowance	91+ Still Accruing
North America	$ 43	$ 6	$ 13	$ 47	$ 9	$ 12
EAME	20	1	2	18	1	2
Asia/Pacific	13	—	13	19	—	7
Mining	28	1	1	8	1	14
Latin America	51	—	1	52	4	1
Caterpillar Power Finance	31	12	—	40	11	—
Total	$ 186	$ 20	$ 30	$ 184	$ 26	$ 36

There was $1 million and $3 million of interest income recognized during the three months ended March 31, 2022 and 2021, respectively, for customer finance receivables on non-accrual status.

As of March 31, 2022 and December 31, 2021, finance receivables in Cat Financial's Dealer portfolio segment on non-accrual status were $73 million and $78 million, respectively, all of which was in Latin America. There were no finance receivables in Cat Financial's Dealer portfolio segment more than 90 days past due and still accruing income as of March 31, 2022 and December 31, 2021 and no interest income was recognized on dealer finance receivables on non-accrual status during the three months ended March 31, 2022 and 2021.

Troubled debt restructurings

A restructuring of a finance receivable constitutes a TDR when the lender grants a concession it would not otherwise consider to a borrower experiencing financial difficulties. Concessions granted may include extended contract maturities, inclusion of interest only periods, below market interest rates, payment deferrals and reduction of principal and/or accrued interest. Cat Financial individually evaluates TDR contracts and establishes an allowance based on the present value of expected future cash flows discounted at the receivable's effective interest rate, the fair value of the collateral for collateral-dependent receivables or the observable market price of the receivable.

There were no finance receivables modified as TDRs during the three months ended March 31, 2022 and 2021 for the Dealer portfolio segment. Cat Financial's finance receivables in the Customer portfolio segment modified as TDRs were as follows:

(Millions of dollars)	Three Months Ended March 31, 2022		Three Months Ended March 31, 2021	
	Pre-TDR Amortized Cost	Post-TDR Amortized Cost	Pre-TDR Amortized Cost	Post-TDR Amortized Cost
Customer				
EAME	$ 1	$ 1	$ —	$ —
Mining	—	—	11	5
Caterpillar Power Finance	6	6	—	—
Total	$ 7	$ 7	$ 11	$ 5

The Post-TDR amortized costs in the Customer portfolio segment with a payment default (defined as 91+ days past due) which had been modified within twelve months prior to the default date, were as follows:

(Millions of dollars)	Three Months Ended March 31	
Customer	2022	2021
North America	$ —	$ 1
Asia/Pacific	—	4
Mining	5	—
Caterpillar Power Finance	—	5
Total	$ 5	$ 10

18. Fair value disclosures

A. Fair value measurements

The guidance on fair value measurements defines fair value as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants. This guidance also specifies a fair value hierarchy based upon the observability of inputs used in valuation techniques. Observable inputs (highest level) reflect market data obtained from independent sources, while unobservable inputs (lowest level) reflect internally developed market assumptions. In accordance with this guidance, fair value measurements are classified under the following hierarchy:

- **Level 1** – Quoted prices for identical instruments in active markets.
- **Level 2** – Quoted prices for similar instruments in active markets; quoted prices for identical or similar instruments in markets that are not active; and model-derived valuations in which all significant inputs or significant value-drivers are observable in active markets.
- **Level 3** – Model-derived valuations in which one or more significant inputs or significant value-drivers are unobservable.

When available, we use quoted market prices to determine fair value, and we classify such measurements within Level 1. In some cases where market prices are not available, we make use of observable market based inputs to calculate fair value, in which case the measurements are classified within Level 2. If quoted or observable market prices are not available, fair value is based upon valuations in which one or more significant inputs are unobservable, including internally developed models that use, where possible, current market-based parameters such as interest rates, yield curves and currency rates. These measurements are classified within Level 3.

We classify fair value measurements according to the lowest level input or value-driver that is significant to the valuation. We may therefore classify a measurement within Level 3 even though there may be significant inputs that are readily observable.

Fair value measurement includes the consideration of nonperformance risk. Nonperformance risk refers to the risk that an obligation (either by a counterparty or Caterpillar) will not be fulfilled. For financial assets traded in an active market (Level 1 and certain Level 2), the nonperformance risk is included in the market price. For certain other financial assets and liabilities (certain Level 2 and Level 3), our fair value calculations have been adjusted accordingly.

Investments in debt and equity securities
We have investments in certain debt and equity securities that are recorded at fair value. Fair values for our U.S. treasury bonds and large capitalization value and smaller company growth equity securities are based upon valuations for identical instruments in active markets. Fair values for other government bonds, corporate bonds and mortgage-backed debt securities are based upon models that take into consideration such market-based factors as recent sales, risk-free yield curves and prices of similarly rated bonds.

We also have investments in time deposits classified as held-to-maturity debt securities. The fair value of these investments is based upon valuations observed in less active markets than Level 1. These investments have a maturity of less than one year and are recorded at amortized costs, which approximate fair value.

In addition, Insurance Services has an equity investment in a real estate investment trust (REIT) which is recorded at fair value based on the net asset value (NAV) of the investment and is not classified within the fair value hierarchy.

See Note 8 for additional information on our investments in debt and equity securities.

Derivative financial instruments
The fair value of interest rate contracts is primarily based on a standard industry accepted valuation model that utilizes the appropriate market-based forward swap curves and zero-coupon interest rates to determine discounted cash flows. The fair value of foreign currency and commodity forward, option and cross currency contracts is based on standard industry accepted valuation models that discount cash flows resulting from the differential between the contract price and the market-based forward rate.

See Note 5 for additional information.

Assets and liabilities measured on a recurring basis at fair value included in our Consolidated Statement of Financial Position as of March 31, 2022 and December 31, 2021 were as follows:

(Millions of dollars)	March 31, 2022 Level 1	Level 2	Level 3	Measured at NAV	Total Assets / Liabilities, at Fair Value
Assets					
Debt securities					
Government debt					
U.S. treasury bonds	$ 9	$ —	$ —	$ —	$ 9
Other U.S. and non-U.S. government bonds	—	60	—	—	60
Corporate bonds					
Corporate bonds	—	1,988	—	—	1,988
Asset-backed securities	—	183	—	—	183
Mortgage-backed debt securities					
U.S. governmental agency	—	319	—	—	319
Residential	—	3	—	—	3
Commercial	—	100	—	—	100
Total debt securities	9	2,653	—	—	2,662
Equity securities					
Large capitalization value	214	—	—	—	214
Smaller company growth	72	—	—	—	72
REIT	—	—	—	185	185
Total equity securities	286	—	—	185	471
Derivative financial instruments - assets					
Foreign currency contracts - net	—	85	—	—	85
Commodity contracts - net	—	87	—	—	87
Total assets	$ 295	$ 2,825	$ —	$ 185	$ 3,305
Liabilities					
Derivative financial instruments - liabilities					
Interest rate contracts - net	$ —	$ 12	$ —	$ —	$ 12
Total liabilities	$ —	$ 12	$ —	$ —	$ 12

(Millions of dollars)	December 31, 2021 Level 1	Level 2	Level 3	Measured at NAV	Total Assets / Liabilities, at Fair Value
Assets					
Debt securities					
Government debt					
U.S. treasury bonds	$ 10	$ —	$ —	$ —	$ 10
Other U.S. and non-U.S. government bonds	—	61	—	—	61
Corporate bonds					
Corporate bonds	—	1,046	—	—	1,046
Asset-backed securities	—	176	—	—	176
Mortgage-backed debt securities					
U.S. governmental agency	—	325	—	—	325
Residential	—	4	—	—	4
Commercial	—	99	—	—	99
Total debt securities	10	1,711	—	—	1,721
Equity securities					
Large capitalization value	217	—	—	—	217
Smaller company growth	98	—	—	—	98
REIT	—	—	—	167	167
Total equity securities	315	—	—	167	482
Derivative financial instruments - assets					
Foreign currency contracts - net	—	168	—	—	168
Interest rate contracts - net	—	23	—	—	23
Commodity contracts - net	—	21	—	—	21
Total Assets	$ 325	$ 1,923	$ —	$ 167	$ 2,415

In addition to the amounts above, certain Cat Financial loans are subject to measurement at fair value on a nonrecurring basis and are classified as Level 3 measurements. A loan is measured at fair value when management determines that collection of contractual amounts due is not probable and the loan is individually evaluated. In these cases, an allowance for credit losses may be established based either on the present value of expected future cash flows discounted at the receivables' effective interest rate, the fair value of the collateral for collateral-dependent receivables, or the observable market price of the receivable. In determining collateral value, Cat Financial estimates the current fair market value of the collateral less selling costs. Cat Financial had loans carried at fair value of $108 million and $100 million as of March 31, 2022 and December 31, 2021, respectively.

B. Fair values of financial instruments

In addition to the methods and assumptions we use to record the fair value of financial instruments as discussed in the Fair value measurements section above, we use the following methods and assumptions to estimate the fair value of our financial instruments:

Cash and cash equivalents
Carrying amount approximates fair value. We classify cash and cash equivalents as Level 1. See Consolidated Statement of Financial Position.

Restricted cash and short-term investments
Carrying amount approximates fair value. We include restricted cash and short-term investments in Prepaid expenses and other current assets in the Consolidated Statement of Financial Position. We classify these instruments as Level 1 except for time deposits which are Level 2. See Note 8 for additional information.

Finance receivables
We estimate fair value by discounting the future cash flows using current rates, representative of receivables with similar remaining maturities.

Wholesale inventory receivables
We estimate fair value by discounting the future cash flows using current rates, representative of receivables with similar remaining maturities.

Short-term borrowings
Carrying amount approximates fair value. We classify short-term borrowings as Level 1. See Consolidated Statement of Financial Position.

Long-term debt
We estimate fair value for fixed and floating rate debt based on quoted market prices.

Guarantees
The fair value of guarantees is based upon our estimate of the premium a market participant would require to issue the same guarantee in a stand-alone arms-length transaction with an unrelated party. If quoted or observable market prices are not available, fair value is based upon internally developed models that utilize current market-based assumptions. We classify guarantees as Level 3. See Note 11 for additional information.

Our financial instruments not carried at fair value were as follows:

	March 31, 2022		December 31, 2021			
(Millions of dollars)	**Carrying Amount**	**Fair Value**	**Carrying Amount**	**Fair Value**	**Fair Value Levels**	**Reference**
Assets						
Finance receivables – net (excluding finance leases [1])	$ 14,077	$ 13,848	$ 13,837	$ 13,836	3	Note 17
Wholesale inventory receivables – net (excluding finance leases [1])	714	690	773	753	3	
Liabilities						
Long-term debt (including amounts due within one year)						
Machinery, Energy & Transportation	9,763	11,127	9,791	12,420	2	
Financial Products	23,320	23,010	22,594	22,797	2	

[1] Represents finance leases and failed sale leasebacks of $7,895 million and $8,083 million at March 31, 2022 and December 31, 2021, respectively.

19. Other income (expense)

	Three Months Ended March 31	
(Millions of dollars)	**2022**	**2021**
Investment and interest income	$ 21	$ 23
Foreign exchange gains (losses) [1]	47	95
License fee income	32	25
Net periodic pension and OPEB income (cost), excluding service cost	68	111
Gains (losses) on securities	(12)	25
Miscellaneous income (loss)	97	46
Total	$ 253	$ 325

[1] Includes gains (losses) from foreign exchange derivative contracts. See Note 5 for further details.

20. Restructuring costs

Our accounting for employee separations is dependent upon how the particular program is designed. For voluntary programs, we recognize eligible separation costs at the time of employee acceptance unless the acceptance requires explicit approval by the company. For involuntary programs, we recognize eligible costs when management has approved the program, the affected employees have been properly notified and the costs are estimable.

Restructuring costs for the three months ended March 31, 2022 and 2021 were as follows:

(Millions of dollars)	Three Months Ended March 31	
	2022	2021
Employee separations [1]	$ 5	$ 45
Long-lived asset impairments [1]	—	11
Other [2]	8	8
Total restructuring costs	$ 13	$ 64

[1] Recognized in Other operating (income) expenses.

[2] Represents costs related to our restructuring programs, primarily for accelerated depreciation, project management, equipment relocation and inventory write-downs, all of which are primarily included in Cost of goods sold.

For both the three months ended March 31, 2022 and 2021, the restructuring costs were primarily related to actions across the company including strategic actions to address a small number of products.

In 2022 and 2021, all restructuring costs are excluded from segment profit.

The following table summarizes the 2022 and 2021 employee separation activity:

(Millions of dollars)	Three Months Ended March 31	
	2022	2021
Liability balance, beginning of period	$ 61	$ 164
Increase in liability (separation charges)	5	45
Reduction in liability (payments)	(19)	(55)
Liability balance, end of period	$ 47	$ 154

Most of the liability balance at March 31, 2022 is expected to be paid in 2022.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following Management's Discussion and Analysis of Financial Condition and Results of Operations (MD&A) is intended to provide information that will assist the reader in understanding the company's Consolidated Financial Statements, the changes in certain key items in those financial statements between select periods and the primary factors that accounted for those changes. In addition, we discuss how certain accounting principles, policies and critical estimates affect our Consolidated Financial Statements. Our discussion also contains certain forward-looking statements related to future events and expectations. This MD&A should be read in conjunction with our discussion of cautionary statements and significant risks to the company's business under Part I, Item 1A. Risk Factors of the 2021 Form 10-K.

Highlights for the first quarter of 2022 include:

- Total sales and revenues for the first quarter of 2022 were $13.589 billion, an increase of $1.702 billion, or 14 percent, compared with $11.887 billion in the first quarter of 2021. Sales were higher across the three primary segments.
- Operating profit margin was 13.7 percent for the first quarter of 2022, compared with 15.3 percent for the first quarter of 2021. ***Adjusted operating profit margin*** was 13.7 percent for the first quarter of 2022, compared with 15.8 percent for the first quarter of 2021.
- First-quarter 2022 profit per share was $2.86, and excluding the items in the table below, ***adjusted profit per share*** was $2.88. First-quarter 2021 profit per share was $2.77, and excluding the items in the table below, adjusted profit per share was $2.87.
- In order for our results to be more meaningful to our readers, we have separately quantified the impact of several significant items. A detailed reconciliation of GAAP to non-GAAP financial measures is included on page 53.

	Three Months Ended March 31, 2022		Three Months Ended March 31, 2021	
(Dollars in millions except per share data)	Profit Before Taxes	Profit Per Share	Profit Before Taxes	Profit Per Share
Profit	$ 1,999	$ 2.86	$ 1,997	$ 2.77
Restructuring costs	13	0.02	64	0.10
Adjusted profit	$ 2,012	$ 2.88	$ 2,061	$ 2.87

- Enterprise operating cash flow was $0.3 billion in the first quarter of 2022. Caterpillar ended the first quarter of 2022 with $6.5 billion of enterprise cash.

Overview

Total sales and revenues for the first quarter of 2022 were $13.589 billion, an increase of $1.702 billion, or 14 percent, compared with $11.887 billion in the first quarter of 2021. The increase was due to higher ***sales volume*** and favorable ***price realization***, partially offset by unfavorable ***currency*** impacts primarily related to the euro, Australian dollar and Japanese yen. The increase in sales volume was driven by higher end-user demand for equipment and ***services*** and the impact from changes in ***dealer inventories***. Dealers increased inventories by $1.3 billion during the first quarter of 2022, compared with an increase of $700 million during the first quarter of 2021. Sales were higher across the three primary segments.

First-quarter 2022 profit per share was $2.86, compared with $2.77 profit per share in the first quarter of 2021. Profit per share for both quarters included restructuring costs. Profit for the first quarter of 2022 was $1.537 billion, which was about flat compared with $1.530 billion for the first quarter of 2021. Unfavorable ***manufacturing costs*** and higher selling, general and administrative (SG&A) and research and development (R&D) expenses were offset by favorable price realization and higher sales volume. Unfavorable manufacturing costs primarily reflected higher material and freight costs. The increase in SG&A/R&D expenses was mainly driven by investments aligned with the company's strategy for profitable growth.

Global Business Conditions:

We continue to monitor a variety of external factors including the ongoing impact of the COVID-19 pandemic around the world, supply chain disruptions and associated cost and labor pressures. Areas of particular focus include certain components, transportation and raw materials. Transportation shortages have resulted in delays and increased costs. In addition, our suppliers are dealing with availability issues and freight delays, which leads to pressure on production in our facilities. Contingency plans have been developed and continue to be modified to minimize supply chain challenges that may impact our ability to meet increasing customer demand. We continue to assess the environment and are taking appropriate price actions in response to rising costs. We will continue to monitor the situation as conditions remain fluid and evolve throughout the year.

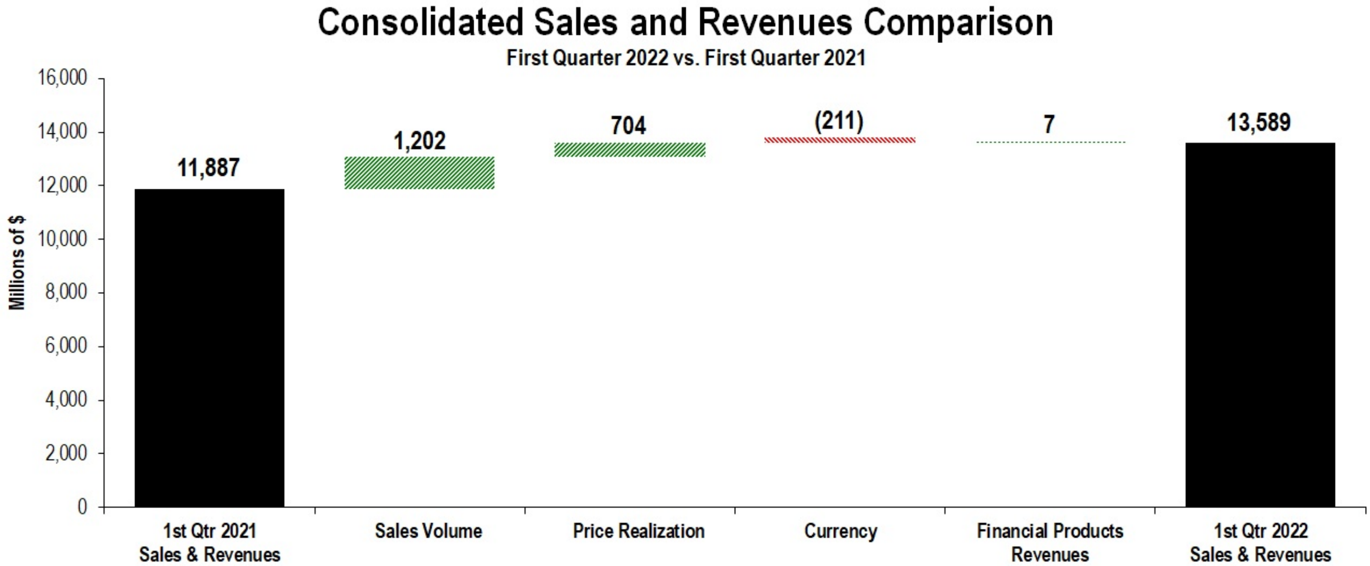
Notes:

- Glossary of terms is included on pages 47 - 49; first occurrence of terms shown in bold italics.
- Information on non-GAAP financial measures is included on page 53.
- Certain amounts may not add due to rounding.

Consolidated Results of Operations

THREE MONTHS ENDED MARCH 31, 2022 COMPARED WITH THREE MONTHS ENDED MARCH 31, 2021

CONSOLIDATED SALES AND REVENUES



The chart above graphically illustrates reasons for the change in consolidated sales and revenues between the first quarter of 2021 (at left) and the first quarter of 2022 (at right). Caterpillar management utilizes these charts internally to visually communicate with the company's Board of Directors and employees.

Total sales and revenues for the first quarter of 2022 were $13.589 billion, an increase of $1.702 billion, or 14 percent, compared with $11.887 billion in the first quarter of 2021. The increase was due to higher sales volume and favorable price realization, partially offset by unfavorable currency impacts primarily related to the euro, Australian dollar and Japanese yen. The increase in sales volume was driven by higher end-user demand for equipment and services and the impact from changes in dealer inventories. Dealers increased inventories by $1.3 billion during the first quarter of 2022, compared with an increase of $700 million during the first quarter of 2021.

Sales were higher across the three primary segments.

North America sales increased 25 percent due to higher end-user demand for equipment and services, favorable price realization and the impact of changes in dealer inventories. Dealers increased inventories more during the first quarter of 2022 than during the first quarter of 2021.

Sales increased 27 percent in ***Latin America*** due to the impact of changes in dealer inventories, favorable price realization and higher end-user demand for equipment and services across most of the region. Dealers increased inventories during the first quarter of 2022, compared with a decrease during the first quarter of 2021.

EAME sales increased 15 percent due to higher end-user demand for equipment and services, the impact of changes in dealer inventories and favorable price realization, partially offset by unfavorable currency impacts primarily related to the euro. Dealers increased inventories more during the first quarter of 2022 than during the first quarter of 2021.

Asia/Pacific sales decreased 4 percent driven by lower end-user demand for equipment and services and unfavorable currency impacts related to the Australian dollar and Japanese yen, partially offset by favorable price realization and the impact of changes in dealer inventories. Dealers increased inventories more during the first quarter of 2022 than during the first quarter of 2021. Lower sales in China were partially offset by increased sales across the majority of the region.

Dealers increased inventories by $1.3 billion during the first quarter of 2022, compared with an increase of $700 million during the first quarter of 2021. Dealers are independent, and the reasons for changes in their inventory levels vary, including their expectations of future demand and product delivery times. Dealers' demand expectations take into account seasonal changes, macroeconomic conditions, machine rental rates and other factors. Delivery times can vary based on availability of product from Caterpillar factories and product distribution centers. We do not expect a significant increase in dealer inventory in 2022.

Sales and Revenues by Segment

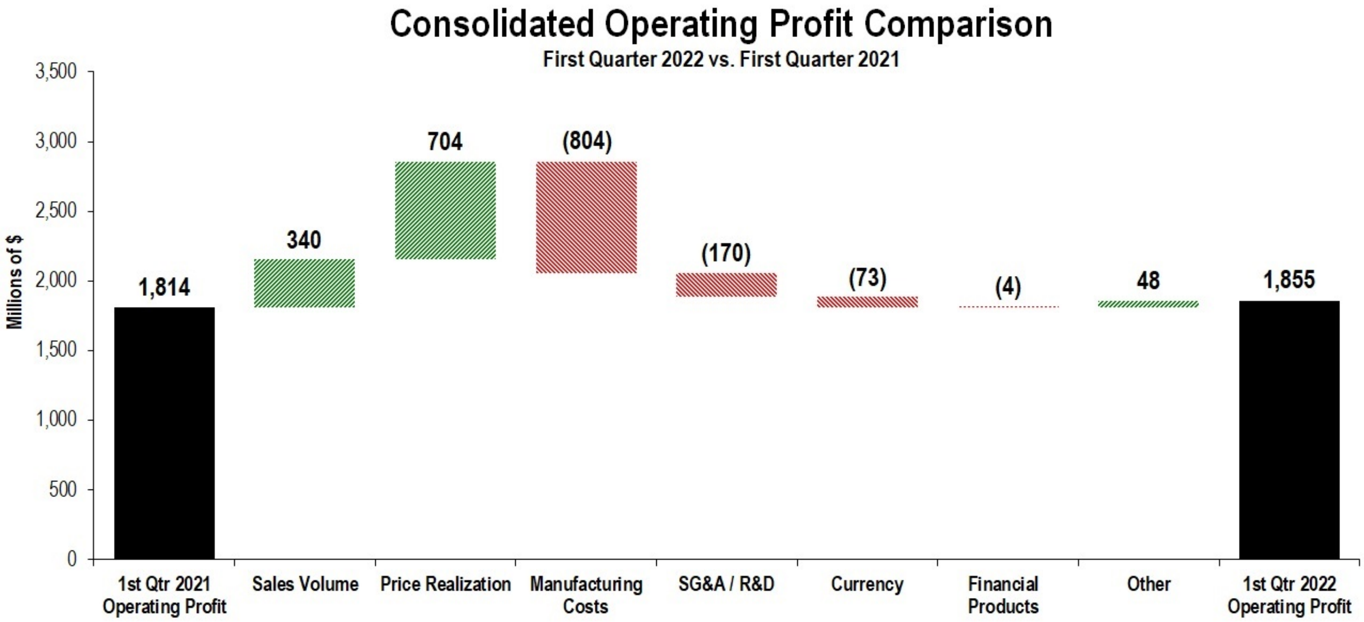
(Millions of dollars)	First Quarter 2021	Sales Volume	Price Realization	Currency	Inter-Segment / Other	First Quarter 2022	$ Change	% Change
Construction Industries	$ 5,459	$ 325	$ 421	$ (101)	$ 11	$ 6,115	$ 656	12%
Resource Industries	2,178	527	169	(34)	(10)	2,830	652	30%
Energy & Transportation	4,507	333	115	(74)	157	5,038	531	12%
All Other Segment	130	2	—	(1)	(13)	118	(12)	(9%)
Corporate Items and Eliminations	(1,083)	15	(1)	(1)	(145)	(1,215)	(132)	
***Machinery, Energy & Transportation* Sales**	11,191	1,202	704	(211)	—	12,886	1,695	15%
Financial Products Segment	761	—	—	—	22	783	22	3%
Corporate Items and Eliminations	(65)	—	—	—	(15)	(80)	(15)	
***Financial Products* Revenues**	696	—	—	—	7	703	7	1%
Consolidated Sales and Revenues	$ 11,887	$ 1,202	$ 704	$ (211)	$ 7	$ 13,589	$ 1,702	14%

Sales and Revenues by Geographic Region

	North America		Latin America		EAME		Asia/Pacific		External Sales and Revenues		Inter-Segment		Total Sales and Revenues	
(Millions of dollars)	$	% Chg	$	% Chg	$	% Chg	$	% Chg	$	% Chg	$	% Chg	$	% Chg
First Quarter 2022														
Construction Industries	$ 2,720	28%	$ 627	60%	$ 1,277	18%	$ 1,462	(21%)	$ 6,086	12%	$ 29	61%	$ 6,115	12%
Resource Industries	1,018	55%	399	(1%)	594	25%	748	33%	2,759	32%	71	(12%)	2,830	30%
Energy & Transportation	1,938	9%	310	21%	1,184	8%	600	14%	4,032	10%	1,006	18%	5,038	12%
All Other Segment	18	38%	—	—%	5	67%	16	(27%)	39	3%	79	(14%)	118	(9%)
Corporate Items and Eliminations	(24)		1		(2)		(5)		(30)		(1,185)		(1,215)	
Machinery, Energy & Transportation Sales	5,670	25%	1,337	27%	3,058	15%	2,821	(4%)	12,886	15%	—	—	12,886	15%
Financial Products Segment	503	6%	73	18%	96	(4%)	111	(10%)	783 [1]	3%	—	—	783	3%
Corporate Items and Eliminations	(36)		(17)		(9)		(18)		(80)		—		(80)	
Financial Products Revenues	467	3%	56	10%	87	(5%)	93	(8%)	703	1%	—	—	703	1%
Consolidated Sales and Revenues	$ 6,137	23%	$ 1,393	26%	$ 3,145	15%	$ 2,914	(4%)	$ 13,589	14%	$ —	—	$ 13,589	14%
First Quarter 2021														
Construction Industries	$ 2,126		$ 392		$ 1,081		$ 1,842		$ 5,441		$ 18		$ 5,459	
Resource Industries	657		405		474		561		2,097		81		2,178	
Energy & Transportation	1,782		256		1,093		527		3,658		849		4,507	
All Other Segment	13		—		3		22		38		92		130	
Corporate Items and Eliminations	(39)		—		—		(4)		(43)		(1,040)		(1,083)	
Machinery, Energy & Transportation Sales	4,539		1,053		2,651		2,948		11,191		—		11,191	
Financial Products Segment	476		62		100		123		761 [1]		—		761	
Corporate Items and Eliminations	(24)		(11)		(8)		(22)		(65)		—		(65)	
Financial Products Revenues	452		51		92		101		696		—		696	
Consolidated Sales and Revenues	$ 4,991		$ 1,104		$ 2,743		$ 3,049		$ 11,887		$ —		$ 11,887	

[1] Includes revenues from Machinery, Energy & Transportation of $100 million and $84 million in the first quarter of 2022 and 2021, respectively.

CONSOLIDATED OPERATING PROFIT



The chart above graphically illustrates reasons for the change in consolidated operating profit between the first quarter of 2021 (at left) and the first quarter of 2022 (at right). Caterpillar management utilizes these charts internally to visually communicate with the company's Board of Directors and employees. The bar titled Other includes ***consolidating adjustments*** and ***Machinery, Energy & Transportation other operating (income) expenses***.

Operating profit for the first quarter of 2022 was $1.855 billion, an increase of $41 million, or 2 percent, compared with $1.814 billion in the first quarter of 2021. Unfavorable manufacturing costs and higher selling, general and administrative (SG&A) and research and development (R&D) expenses were more than offset by favorable price realization and higher sales volume. For 2022, price realization is expected to more than offset manufacturing cost increases.

Unfavorable manufacturing costs primarily reflected higher material and freight costs. The increase in SG&A/R&D expenses was mainly driven by investments aligned with the company's strategy for profitable growth.

Short-term incentive compensation expense was about $340 million in the first quarter of 2022, compared to about $300 million in the first quarter of 2021. For 2022, short-term incentive compensation expense is expected to be about $1.3 billion, about flat compared to 2021.

Operating profit margin was 13.7 percent for the first quarter of 2022, compared with 15.3 percent for the first quarter of 2021.

Profit by Segment

(Millions of dollars)	First Quarter 2022	First Quarter 2021	$ Change	% Change
Construction Industries	$ 1,057	$ 1,042	$ 15	1%
Resource Industries	361	312	49	16%
Energy & Transportation	538	675	(137)	(20%)
All Other Segment	3	3	—	—%
Corporate Items and Eliminations	(244)	(368)	124	
Machinery, Energy & Transportation	1,715	1,664	51	3%
Financial Products Segment	238	244	(6)	(2%)
Corporate Items and Eliminations	(17)	(19)	2	
Financial Products	221	225	(4)	(2%)
Consolidating Adjustments	(81)	(75)	(6)	
Consolidated Operating Profit	$ 1,855	$ 1,814	$ 41	2%

Other Profit/Loss and Tax Items

- Interest expense excluding Financial Products in the first quarter of 2022 was $109 million, compared with $142 million in the first quarter of 2021. The decrease was due to lower average debt outstanding during the first quarter of 2022, compared with the first quarter of 2021.
- Other income (expense) in the first quarter of 2022 was income of $253 million, compared with income of $325 million in the first quarter of 2021. Favorable impacts from higher gains on commodity hedges were more than offset by the unfavorable impacts from lower foreign currency exchange net gains, lower pension and ***other postemployment benefit (OPEB)*** plan income and the unfavorable impacts from unrealized gains (losses) on marketable securities.
- The provision for income taxes for the first quarter of 2022 reflected an estimated annual tax rate of 24 percent, compared with 26 percent for the first quarter of 2021, excluding the discrete items discussed below. The comparative tax rate for full-year 2021 was approximately 23 percent. The increase in the estimated annual tax rate from full-year 2021 was primarily related to changes in the expected geographic mix of profits from a tax perspective for 2022.

  In addition, a discrete tax benefit of $12 million was recorded in the first quarter of 2022, compared with a $43 million benefit in the first quarter of 2021, for the settlement of stock-based compensation awards with associated tax deductions in excess of cumulative U.S. GAAP compensation expense.

Construction Industries

Construction Industries' total sales were $6.115 billion in the first quarter of 2022, an increase of $656 million, or 12 percent, compared with $5.459 billion in the first quarter of 2021. The increase was due to favorable price realization and higher sales volume, partially offset by unfavorable currency impacts related to the euro, Japanese yen and Australian dollar. The increase in sales volume was driven by the impact from changes in dealer inventories and higher end-user demand for aftermarket parts. Across all regions, dealers increased inventories more during the first quarter of 2022 than during the first quarter of 2021.

- In North America, sales increased due to higher sales volume and favorable price realization. Higher sales volume was driven by higher end-user demand for equipment and aftermarket parts from improving non-residential construction, as well as continued strength in residential construction and the impact from changes in dealer inventories.
- Sales increased in Latin America primarily due to higher sales volume, led by higher end-user demand across the region and the impact from changes in dealer inventories, as well as favorable price realization.
- In EAME, sales increased due to higher sales volume and favorable price realization, partially offset by unfavorable currency impacts related to a weaker euro. Higher sales volume was driven by higher end-user demand for equipment and aftermarket parts and the impact from changes in dealer inventories.
- Sales decreased in Asia/Pacific mainly due to lower sales volume and unfavorable currency impacts driven by a weaker Japanese yen and Australian dollar, partially offset by favorable price realization. Lower sales volume was driven by lower end-user demand, partially offset by the impact from changes in dealer inventories. Lower sales in China primarily driven by lower end-user demand were partially offset by increased sales across the majority of the region.

Construction Industries' profit was $1.057 billion in the first quarter of 2022, an increase of $15 million, or 1 percent, compared with $1.042 billion in the first quarter of 2021. Unfavorable manufacturing costs were more than offset by favorable price realization and higher sales volume. Unfavorable manufacturing costs largely reflected higher material and freight costs.

Construction Industries' profit as a percent of total sales was 17.3 percent in the first quarter of 2022, compared with 19.1 percent in the first quarter of 2021.

Resource Industries

Resource Industries' total sales were $2.830 billion in the first quarter of 2022, an increase of $652 million, or 30 percent, compared with $2.178 billion in the first quarter of 2021. The increase was primarily due to higher sales volume and favorable price realization. The increase in sales volume was driven by higher end-user demand for equipment and aftermarket parts and the impact from changes in dealer inventories. End-user demand was higher in heavy construction and quarry and aggregates as well as mining. Dealers increased inventories during the first quarter of 2022, compared to remaining about flat during the first quarter of 2021.

Resource Industries' profit was $361 million in the first quarter of 2022, an increase of $49 million, or 16 percent, compared with $312 million in the first quarter of 2021. Unfavorable manufacturing costs and higher SG&A/R&D expenses were more than offset by higher sales volume and favorable price realization. Unfavorable manufacturing costs largely reflected higher freight and material costs. The increase in SG&A/R&D expenses was driven by investments aligned with growth initiatives.

Resource Industries' profit as a percent of total sales was 12.8 percent in the first quarter of 2022, compared with 14.3 percent in the first quarter of 2021.

Energy & Transportation

Sales by Application (Millions of dollars)	First Quarter 2022	First Quarter 2021	$ Change	% Change
Oil and Gas	$ 948	$ 915	$ 33	4%
Power Generation	1,012	963	49	5%
Industrial	1,020	813	207	25%
Transportation	1,052	967	85	9%
External Sales	4,032	3,658	374	10%
Inter-segment	1,006	849	157	18%
Total Sales	$ 5,038	$ 4,507	$ 531	12%

Energy & Transportation's total sales were $5.038 billion in the first quarter of 2022, an increase of $531 million, or 12 percent, compared with $4.507 billion in the first quarter of 2021. Sales increased across all applications and inter-segment sales.

- Oil and Gas – Sales increased for reciprocating engines, primarily aftermarket parts, partially offset by lower sales for turbines and turbine-related services.
- Power Generation – Sales rose due to higher sales volume in small reciprocating engine applications, partially offset by lower sales in turbines and turbine-related services.
- Industrial – Sales were up due to higher demand across all regions.
- Transportation – Sales increased in reciprocating engines, primarily aftermarket parts and marine applications.

Energy & Transportation's profit was $538 million in the first quarter of 2022, a decrease of $137 million, or 20 percent, compared with $675 million in the first quarter of 2021. The decrease was mainly due to unfavorable manufacturing costs and higher SG&A/R&D expenses, partially offset by higher sales volume and favorable price realization. Unfavorable manufacturing costs largely reflected higher freight and material costs. The increase in SG&A/R&D expenses was driven by investments aligned with growth initiatives.

Energy & Transportation's profit as a percent of total sales was 10.7 percent in the first quarter of 2022, compared with 15.0 percent in the first quarter of 2021.

Financial Products Segment

Financial Products' segment revenues were $783 million in the first quarter of 2022, an increase of $22 million, or 3 percent, from the first quarter of 2021. The increase was mostly in North America, driven by a favorable impact from returned or repossessed equipment and higher average ***earning assets***, partially offset by lower average financing rates.

Financial Products' segment profit was $238 million in the first quarter of 2022, a decrease of $6 million, or 2 percent, compared with $244 million in the first quarter of 2021. The decrease was mainly due to higher provision for credit losses at Cat Financial and an increase in SG&A expenses, partially offset by a favorable impact from returned or repossessed equipment. The impact of lower average financing rates was mostly offset by lower interest expense.

At the end of the first quarter of 2022, past dues at Cat Financial were 2.05 percent, compared with 2.90 percent at the end of the first quarter of 2021. The decrease in past dues was mostly driven by the North America, Caterpillar Power Finance and EAME portfolios. Write-offs, net of recoveries, were $8 million for the first quarter of 2022, compared with $24 million for the first quarter of 2021. As of March 31, 2022, Cat Financial's allowance for credit losses totaled $357 million, or 1.29 percent of finance receivables, compared with $337 million, or 1.22 percent of finance receivables at December 31, 2021. The increase in allowance for credit losses included a higher reserve for the Russia and Ukraine portfolios.

Corporate Items and Eliminations

Expense for corporate items and eliminations was $261 million in the first quarter of 2022, a decrease of $126 million from the first quarter of 2021, primarily due to favorable impacts of segment reporting methodology differences and a favorable change in fair value adjustments related to deferred compensation plans.

RESTRUCTURING COSTS

In 2022, we expect to incur about $600 million of restructuring costs primarily related to strategic actions to address a small number of products. We expect that prior restructuring actions will result in an incremental benefit to operating costs, primarily Cost of goods sold and SG&A expenses of about $75 million in 2022 compared with 2021.

Additional information related to restructuring costs is included in Note 20 - "Restructuring Costs" of Part I, Item 1 "Financial Statements".

GLOSSARY OF TERMS

1. **Adjusted Operating Profit Margin** – Operating profit excluding restructuring costs as a percent of sales and revenues.
2. **Adjusted Profit Per Share** – Profit per share excluding restructuring costs.
3. **All Other Segment** – Primarily includes activities such as: business strategy; product management and development; manufacturing and sourcing of filters and fluids, undercarriage, ground-engaging tools, fluid transfer products, precision seals, rubber sealing and connecting components primarily for Cat® products; parts distribution; integrated logistics solutions; distribution services responsible for dealer development and administration, including a wholly owned dealer in Japan; dealer portfolio management and ensuring the most efficient and effective distribution of machines, engines and parts; brand management and marketing strategy; and digital investments for new customer and dealer solutions that integrate data analytics with state-of-the-art digital technologies while transforming the buying experience.
4. **Consolidating Adjustments** – Elimination of transactions between Machinery, Energy & Transportation and Financial Products.
5. **Construction Industries** – A segment primarily responsible for supporting customers using machinery in infrastructure and building construction applications. Responsibilities include business strategy, product design, product management and development, manufacturing, marketing and sales and product support. The product portfolio includes asphalt pavers; backhoe loaders; compactors; cold planers; compact track and multi-terrain loaders; mini, small, medium and large track excavators; motor graders; pipelayers; road reclaimers; skid steer loaders; telehandlers; small and medium track-type tractors; track-type loaders; wheel excavators; compact, small and medium wheel loaders; and related parts and work tools.
6. **Corporate Items and Eliminations** – Includes corporate-level expenses, timing differences (as some expenses are reported in segment profit on a cash basis), methodology differences between segment and consolidated external reporting, certain restructuring costs and inter-segment eliminations.
7. **Currency** – With respect to sales and revenues, currency represents the translation impact on sales resulting from changes in foreign currency exchange rates versus the U.S. dollar. With respect to operating profit, currency represents the net translation impact on sales and operating costs resulting from changes in foreign currency exchange rates versus the U.S. dollar. Currency only includes the impact on sales and operating profit for the Machinery, Energy & Transportation line of business; currency impacts on Financial Products revenues and operating profit are included in the Financial Products portions of the respective analyses. With respect to other income/expense, currency represents the effects of forward and option contracts entered into by the company to reduce the risk of fluctuations in exchange rates (hedging) and the net effect of changes in foreign currency exchange rates on our foreign currency assets and liabilities for consolidated results (translation).
8. **Dealer Inventories** – Represents dealer machine and engine inventories, excluding aftermarket parts.
9. **EAME** – A geographic region including Europe, Africa, the Middle East and the Commonwealth of Independent States (CIS).
10. **Earning Assets** – Assets consisting primarily of total finance receivables net of unearned income, plus equipment on operating leases, less accumulated depreciation at Cat Financial.

11. **Energy & Transportation** – A segment primarily responsible for supporting customers using reciprocating engines, turbines, diesel-electric locomotives and related services across industries serving Oil and Gas, Power Generation, Industrial and Transportation applications, including marine- and rail-related businesses. Responsibilities include business strategy, product design, product management, development and testing manufacturing, marketing and sales and product support. The product and services portfolio includes turbines, centrifugal gas compressors, and turbine-related services; reciprocating engine-powered generator sets; integrated systems and solutions used in the electric power generation industry; reciprocating engines, drivetrain and integrated systems and solutions for the marine and oil and gas industries; reciprocating engines, drivetrain and integrated systems and solutions supplied to the industrial industry as well as Cat machinery; and diesel-electric locomotives and components and other rail-related products and services, including remanufacturing and leasing. Responsibilities also include the remanufacturing of Caterpillar reciprocating engines and components and remanufacturing services for other companies; and product support of on-highway vocational trucks for North America.
12. **Financial Products** – The company defines Financial Products as our finance and insurance subsidiaries, primarily Caterpillar Financial Services Corporation (Cat Financial) and Caterpillar Insurance Holdings Inc. (Insurance Services). Financial Products' information relates to the financing to customers and dealers for the purchase and lease of Caterpillar and other equipment.
13. **Financial Products Segment** – Provides financing alternatives to customers and dealers around the world for Caterpillar products and services, as well as financing for vehicles, power generation facilities and marine vessels that, in most cases, incorporate Caterpillar products. Financing plans include operating and finance leases, installment sale contracts, repair/rebuild financing, working capital loans and wholesale financing plans. The segment also provides insurance and risk management products and services that help customers and dealers manage their business risk. Insurance and risk management products offered include physical damage insurance, inventory protection plans, extended service coverage and maintenance plans for machines and engines, and dealer property and casualty insurance. The various forms of financing, insurance and risk management products offered to customers and dealers help support the purchase and lease of Caterpillar equipment. The segment also earns revenues from Machinery, Energy & Transportation, but the related costs are not allocated to operating segments. Financial Products' segment profit is determined on a pretax basis and includes other income/expense items.
14. **Latin America** – A geographic region including Central and South American countries and Mexico.
15. **Machinery, Energy & Transportation (ME&T)** – The company defines ME&T as Caterpillar Inc. and its subsidiaries, excluding Financial Products. ME&T's information relates to the design, manufacturing and marketing of its products.
16. **Machinery, Energy & Transportation Other Operating (Income) Expenses** – Comprised primarily of gains/losses on disposal of long-lived assets, gains/losses on divestitures and legal settlements and accruals.
17. **Manufacturing Costs** – Manufacturing costs exclude the impacts of currency and represent the volume-adjusted change for variable costs and the absolute dollar change for period manufacturing costs. Variable manufacturing costs are defined as having a direct relationship with the volume of production. This includes material costs, direct labor and other costs that vary directly with production volume, such as freight, power to operate machines and supplies that are consumed in the manufacturing process. Period manufacturing costs support production but are defined as generally not having a direct relationship to short-term changes in volume. Examples include machinery and equipment repair, depreciation on manufacturing assets, facility support, procurement, factory scheduling, manufacturing planning and operations management.
18. **Mark-to-market gains/losses** – Represents the net gain or loss of actual results differing from the company's assumptions and the effects of changing assumptions for our defined benefit pension and OPEB plans. These gains and losses are immediately recognized through earnings upon the annual remeasurement in the fourth quarter, or on an interim basis as triggering events warrant remeasurement.
19. **Pension and Other Postemployment Benefits (OPEB)** – The company's defined-benefit pension and postretirement benefit plans.
20. **Price Realization** – The impact of net price changes excluding currency and new product introductions. Price realization includes geographic mix of sales, which is the impact of changes in the relative weighting of sales prices between geographic regions.

21. **Resource Industries** – A segment primarily responsible for supporting customers using machinery in mining, heavy construction and quarry and aggregates. Responsibilities include business strategy, product design, product management and development, manufacturing, marketing and sales and product support. The product portfolio includes large track-type tractors; large mining trucks; hard rock vehicles; longwall miners; electric rope shovels; draglines; hydraulic shovels; rotary drills; large wheel loaders; off-highway trucks; articulated trucks; wheel tractor scrapers; wheel dozers; landfill compactors; soil compactors; select work tools; machinery components; electronics and control systems and related parts. In addition to equipment, Resource Industries also develops and sells technology products and services to provide customers fleet management, equipment management analytics, autonomous machine capabilities, safety services and mining performance solutions. Resource Industries also manages areas that provide services to other parts of the company, including strategic procurement, lean center of excellence, integrated manufacturing, research and development for hydraulic systems, automation, electronics and software for Cat machines and engines.
22. **Restructuring Costs** – May include costs for employee separation, long-lived asset impairments and contract terminations. These costs are included in Other operating (income) expenses except for defined-benefit plan curtailment losses and special termination benefits, which are included in Other income (expense). Restructuring costs also include other exit-related costs, which may consist of accelerated depreciation, inventory write-downs, building demolition, equipment relocation and project management costs and LIFO inventory decrement benefits from inventory liquidations at closed facilities, all of which are primarily included in Cost of goods sold.
23. **Sales Volume** – With respect to sales and revenues, sales volume represents the impact of changes in the quantities sold for Machinery, Energy & Transportation as well as the incremental sales impact of new product introductions, including emissions-related product updates. With respect to operating profit, sales volume represents the impact of changes in the quantities sold for Machinery, Energy & Transportation combined with product mix as well as the net operating profit impact of new product introductions, including emissions-related product updates. Product mix represents the net operating profit impact of changes in the relative weighting of Machinery, Energy & Transportation sales with respect to total sales. The impact of sales volume on segment profit includes inter-segment sales.
24. **Services** – Enterprise services include, but are not limited to, aftermarket parts, Financial Products revenues and other service-related revenues. Machinery, Energy & Transportation segments exclude most Financial Products revenues.

LIQUIDITY AND CAPITAL RESOURCES

Sources of funds

We generate significant capital resources from operating activities, which are the primary source of funding for our ME&T operations. Funding for these businesses is also available from commercial paper and long-term debt issuances. Financial Products' operations are funded primarily from commercial paper, term debt issuances and collections from its existing portfolio. On a consolidated basis, we had positive operating cash flow in the first three months of 2022 and ended the first quarter with $6.53 billion of cash, a decrease of $2.72 billion from year-end 2021. In addition, ME&T has invested in available-for-sale debt securities and bank time deposits with varying maturity dates within one year that are considered highly liquid and are available for current operations. These securities are included in Prepaid expenses and other current assets and Other assets in the Consolidated Statement of Financial Position and were $1.73 billion at the end of March 31, 2022. We intend to maintain a strong cash and liquidity position.

Consolidated operating cash flow for the first three months of 2022 was $313 million, down $1.62 billion compared to the same period a year ago. The decrease was primarily due to payments for short-term incentive compensation in the first quarter of 2022. In addition, there were increased working capital requirements during the first three months of 2022 compared to the same period last year. Within working capital, changes in inventory, accounts payable and accrued expenses unfavorably impacted cash flow but were partially offset by favorable changes in customer advances and accounts receivable.

Total debt as of March 31, 2022 was $37.58 billion, a decrease of $205 million from year-end 2021. Debt related to ME&T decreased $35 million in the first three months of 2022 while debt related to Financial Products decreased $168 million.

As of March 31, 2022, we had three global credit facilities with a syndicate of banks totaling $10.50 billion (Credit Facility) available in the aggregate to both Caterpillar and Cat Financial for general liquidity purposes. Based on management's allocation decision, which can be revised from time to time, the portion of the Credit Facility available to ME&T as of March 31, 2022 was $2.75 billion. Information on our Credit Facility is as follows:

- The 364-day facility of $3.15 billion (of which $825 million is available to ME&T) expires on September 1, 2022.

- The three-year facility, as amended and restated in September 2021, of $2.73 billion (of which $715 million is available to ME&T) expires in September 2024.
- The five-year facility, as amended and restated in September 2021, of $4.62 billion (of which $1.21 billion is available to ME&T) expires in September 2026.

At March 31, 2022, Caterpillar's consolidated net worth was $17.16 billion, which was above the $9.00 billion required under the Credit Facility. The consolidated net worth is defined in the Credit Facility as the consolidated shareholders' equity including preferred stock but excluding the pension and other postretirement benefits balance within Accumulated other comprehensive income (loss).

At March 31, 2022, Cat Financial's covenant interest coverage ratio was 2.56 to 1. This was above the 1.15 to 1 minimum ratio calculated as (1) profit excluding income taxes, interest expense and net gain (loss) from interest rate derivatives to (2) interest expense calculated at the end of each calendar quarter for the rolling four quarter period then most recently ended, required by the Credit Facility.

In addition, at March 31, 2022, Cat Financial's six-month covenant leverage ratio was 7.53 to 1. This was below the maximum ratio of debt to net worth of 10 to 1, calculated (1) on a monthly basis as the average of the leverage ratios determined on the last day of each of the six preceding calendar months and (2) at each December 31, required by the Credit Facility.

In the event Caterpillar or Cat Financial does not meet one or more of their respective financial covenants under the Credit Facility in the future (and are unable to obtain a consent or waiver), the syndicate of banks may terminate the commitments allocated to the party that does not meet its covenants. Additionally, in such event, certain of Cat Financial's other lenders under other loan agreements where similar financial covenants or cross default provisions are applicable may, at their election, choose to pursue remedies under those loan agreements, including accelerating the repayment of outstanding borrowings. At March 31, 2022, there were no borrowings under the Credit Facility.

Our total credit commitments and available credit as of March 31, 2022 were:

	March 31, 2022		
(Millions of dollars)	**Consolidated**	**Machinery, Energy & Transportation**	**Financial Products**
Credit lines available:			
Global credit facilities	$ 10,500	$ 2,750	$ 7,750
Other external	3,376	182	3,194
Total credit lines available	13,876	2,932	10,944
Less: Commercial paper outstanding	(4,044)	—	(4,044)
Less: Utilized credit	(666)	—	(666)
Available credit	$ 9,166	$ 2,932	$ 6,234

The other external consolidated credit lines with banks as of March 31, 2022 totaled $3.38 billion. These committed and uncommitted credit lines, which may be eligible for renewal at various future dates or have no specified expiration date, are used primarily by our subsidiaries for local funding requirements. Caterpillar or Cat Financial may guarantee subsidiary borrowings under these lines.

We receive debt ratings from the major credit rating agencies. Moody's, Fitch and S&P maintain a "mid-A" debt rating. A downgrade of our credit ratings by any of the major credit rating agencies would result in increased borrowing costs and could make access to certain credit markets more difficult. In the event economic conditions deteriorate such that access to debt markets becomes unavailable, ME&T's operations would rely on cash flow from operations, use of existing cash balances, borrowings from Cat Financial and access to our committed credit facilities. Our Financial Products' operations would rely on cash flow from its existing portfolio, existing cash balances, access to our committed credit facilities and other credit line facilities of Cat Financial, and potential borrowings from Caterpillar. In addition, we maintain a support agreement with Cat Financial, which requires Caterpillar to remain the sole owner of Cat Financial and may, under certain circumstances, require Caterpillar to make payments to Cat Financial should Cat Financial fail to maintain certain financial ratios.

We facilitate voluntary supply chain finance programs (the "Programs") through participating financial institutions. The Programs are available to a wide range of suppliers and allows them the option to manage their cash flow. We are not a party to the agreements between the participating financial institutions and the suppliers in connection with the Programs. The range of payment terms we negotiate with our suppliers is consistent, irrespective of whether a supplier participates in the Programs. The amounts payable to participating financial institutions for suppliers who voluntarily participate in the Programs and included in accounts payable in the Consolidated Statement of Financial Position were $942 million and $822 million at March 31, 2022 and December 31, 2021, respectively. The amounts settled through the Programs and paid to participating financial institutions were $1.2 billion and $845 million during the first three months of 2022 and 2021, respectively. We account for payments made under the Programs, the same as our other accounts payable, as a reduction to our cash flows from operations. We do not believe that changes in the availability of supply chain financing will have a significant impact on our liquidity.

Machinery, Energy & Transportation

Net cash used by operating activities was $78 million in the first three months of 2022, compared with net cash provided of $1.92 billion for the same period in 2021. The decrease was primarily due to payments for short-term incentive compensation in the first quarter of 2022. In addition, there were increased working capital requirements during the first three months of 2022 compared to the same period last year. Within working capital, changes in inventory, accounts payable, accounts receivable and accrued expenses unfavorably impacted cash flow but were partially offset by favorable changes in customer advances.

Net cash used by investing activities in the first three months of 2022 was $1.09 billion, compared with net cash provided of $427 million in the first three months of 2021. The change was primarily due to decreased activity related to intercompany lending with Financial Products and increases in investment activity. During the first quarter of 2022, we had net investment activity of $796 million which included $944 million of investments in debt securities and proceeds related to maturing time deposits of $150 million.

Net cash used for financing activities during the first three months of 2022 was $1.57 billion, compared with net cash used of $659 million in the same period of 2021. The change was primarily due to the repurchase of $820 million of Caterpillar common stock during the first three months of 2022.

While our short-term priorities for the use of cash may vary from time to time as business needs and conditions dictate, our long-term cash deployment strategy is focused on the following priorities. Our top priority is to maintain a strong financial position in support of a mid-A rating. Next, we intend to fund operational requirements and commitments. Then, we intend to fund priorities that profitably grow the company and return capital to shareholders through dividend growth and share repurchases. Additional information on cash deployment is as follows:

Strong financial position – Our top priority is to maintain a strong financial position in support of a mid-A rating. We track a diverse group of financial metrics that focus on liquidity, leverage, cash flow and margins which align with our cash deployment actions and the various methodologies used by the major credit rating agencies.

Operational excellence and commitments – Capital expenditures were $348 million during the first three months of 2022, compared to $255 million for the same period in 2021. We expect ME&T's capital expenditures in 2022 to be about $1.5 billion. We made $210 million of contributions to our pension and other postretirement benefit plans during the first three months of 2022. We currently anticipate full-year 2022 contributions of approximately $357 million. In comparison, we made $106 million of contributions to our pension and other postretirement benefit plans during the first three months of 2021.

Fund strategic growth initiatives and return capital to shareholders – We intend to utilize our liquidity and debt capacity to fund targeted investments that drive long-term profitable growth focused in the areas of expanded offerings and services, including acquisitions.

As part of our capital allocation strategy, ME&T free cash flow is a liquidity measure we use to determine the cash generated and available for financing activities including debt repayments, dividends and share repurchases. We define ME&T free cash flow as cash from ME&T operations excluding discretionary pension and other postretirement benefit plan contributions less capital expenditures. A goal of our capital allocation strategy is to return substantially all ME&T free cash flow to shareholders over time in the form of dividends and share repurchases, while maintaining our mid-A rating.

Our share repurchase plans are subject to the company's cash deployment priorities and are evaluated on an ongoing basis considering the financial condition of the company and the economic outlook, corporate cash flow, the company's liquidity needs, and the health and stability of global credit markets. The timing and amount of future repurchases may vary depending on market conditions and investing priorities. In July 2018, the Board of Directors approved an authorization to repurchase up to $10 billion of Caterpillar common stock (the 2018 Authorization) effective January 1, 2019, with no expiration. In the first three months of 2022, we repurchased $0.82 billion of Caterpillar common stock, with $1.37 billion remaining under the 2018 Authorization as of March 31, 2022. Our basic shares outstanding as of March 31, 2022 were approximately 533 million.

Each quarter, our Board of Directors reviews the company's dividend for the applicable quarter. The Board evaluates the financial condition of the company and considers the economic outlook, corporate cash flow, the company's liquidity needs, and the health and stability of global credit markets to determine whether to maintain or change the quarterly dividend. In April 2022, the Board of Directors approved maintaining our quarterly dividend at $1.11 per share and we continue to expect our strong financial position to support the dividend. Dividends paid totaled $595 million in the first three months of 2022.

Financial Products

Financial Products operating cash flow was $393 million in the first three months of 2022, compared with $369 million for the same period a year ago. Net cash used for investing activities was $221 million for the first three months of 2022, compared with net cash used of $261 million for the same period in 2021. The change was primarily due to portfolio related activity. Net cash used for financing activities was $142 million for the first three months of 2022 compared with net cash provided of $205 million for the same period in 2021. The change was primarily due to lower portfolio funding requirements related to net intercompany purchased receivables.

RECENT ACCOUNTING PRONOUNCEMENTS

For a discussion of recent accounting pronouncements, see Part I, Item 1. Note 2 - "New accounting guidance".

CRITICAL ACCOUNTING ESTIMATES

For a discussion of the company's critical accounting estimates, see Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations in our 2021 Annual Report on Form 10-K. There have been no significant changes to our critical accounting estimates since our 2021 Annual Report on Form 10-K.

OTHER MATTERS

Information related to legal proceedings appears in Note 14—Environmental and Legal Matters of Part II, Item 8 "Financial Statements and Supplementary Data."

Order Backlog

At the end of the first quarter of 2022, the dollar amount of backlog believed to be firm was approximately $26.5 billion, about $3.4 billion higher than the fourth quarter of 2021. The order backlog increased across the three primary segments, with the largest increase in Energy & Transportation. Of the total backlog at March 31, 2022, approximately $4.5 billion was not expected to be filled in the following twelve months.

NON-GAAP FINANCIAL MEASURES

We provide the following definitions for the non-GAAP financial measures used in this report. These non-GAAP financial measures have no standardized meaning prescribed by U.S. GAAP and therefore are unlikely to be comparable to the calculation of similar measures for other companies. Management does not intend these items to be considered in isolation or as a substitute for the related GAAP measures.

We believe it is important to separately quantify the profit impact of one significant item in order for our results to be meaningful to our readers. This item consists of (i) restructuring costs, which were incurred to generate longer-term benefits. We do not consider this item indicative of earnings from ongoing business activities and believe the non-GAAP measure provides investors with useful perspective on underlying business results and trends and aids with assessing our period-over-period results. In addition, we provide a calculation of ME&T free cash flow as we believe it is an important measure for investors to determine the cash generation available for financing activities including debt repayments, dividends and share repurchases.

Reconciliations of adjusted results to the most directly comparable GAAP measures are as follows:

(Dollars in millions except per share data)	Operating Profit	Operating Profit Margin	Profit Before Taxes	Provision (Benefit) for Income Taxes	Effective Tax Rate	Profit	Profit per Share
Three Months Ended March 31, 2022 - U.S. GAAP	**$ 1,855**	**13.7 %**	**$ 1,999**	**$ 469**	**23.4 %**	**$ 1,537**	**$ 2.86**
Restructuring costs	13	0.1 %	13	2	13.0 %	11	$ 0.02
Three Months Ended March 31, 2022 - Adjusted	$ 1,868	13.7 %	$ 2,012	$ 471	23.4 %	$ 1,548	$ 2.88
Three Months Ended March 31, 2021 - U.S. GAAP	**$ 1,814**	**15.3 %**	**$ 1,997**	**$ 475**	**23.8 %**	**$ 1,530**	**$ 2.77**
Restructuring costs	64	0.5 %	64	10	15.0 %	54	$ 0.10
Three Months Ended March 31, 2021 - Adjusted	$ 1,878	15.8 %	$ 2,061	$ 485	23.5 %	$ 1,584	$ 2.87

Reconciliations of ME&T free cash flow to the most directly comparable GAAP measure, net cash provided by operating activities are as follows:

(Millions of dollars)	**Three Months Ended March 31**	
	2022	**2021**
ME&T net cash provided by operating activities [1]	$ (78)	$ 1,916
ME&T capital expenditures	(348)	(255)
ME&T free cash flow	$ (426)	$ 1,661

[1] See reconciliation of ME&T net cash provided by operating activities to consolidated net cash provided by operating activities on pages 59 - 60.

Supplemental Consolidating Data

We are providing supplemental consolidating data for the purpose of additional analysis. The data has been grouped as follows:

Consolidated – Caterpillar Inc. and its subsidiaries.

Machinery, Energy & Transportation – We define ME&T as it is presented in the supplemental data as Caterpillar Inc. and its subsidiaries, excluding Financial Products. ME&T's information relates to the design, manufacturing and marketing of our products.

Financial Products – We define Financial Products as it is presented in the supplemental data as our finance and insurance subsidiaries, primarily Caterpillar Financial Services Corporation (Cat Financial) and Caterpillar Insurance Holdings Inc. (Insurance Services). Financial Products' information relates to the financing to customers and dealers for the purchase and lease of Caterpillar and other equipment.

Consolidating Adjustments – Eliminations of transactions between ME&T and Financial Products.

The nature of the ME&T and Financial Products businesses is different, especially with regard to the financial position and cash flow items. Caterpillar management utilizes this presentation internally to highlight these differences. We believe this presentation will assist readers in understanding our business.

Pages 55 to 60 reconcile ME&T and Financial Products to Caterpillar Inc. consolidated financial information. Certain amounts for prior periods have been reclassified to conform to the current period presentation.

Caterpillar Inc.
Supplemental Data for Results of Operations
For the Three Months Ended March 31, 2022
(Unaudited)
(Millions of dollars)

	Consolidated	Supplemental Consolidating Data: Machinery, Energy & Transportation	Financial Products	Consolidating Adjustments	
Sales and revenues:					
Sales of Machinery, Energy & Transportation	$ 12,886	$ 12,886	$ —	$ —	
Revenues of Financial Products	703	—	813	(110)	1
Total sales and revenues	13,589	12,886	813	(110)	
Operating costs:					
Cost of goods sold	9,559	9,560	—	(1)	2
Selling, general and administrative expenses	1,346	1,182	172	(8)	2
Research and development expenses	457	457	—	—	
Interest expense of Financial Products	106	—	106	—	
Other operating (income) expenses	266	(28)	314	(20)	2
Total operating costs	11,734	11,171	592	(29)	
Operating profit	1,855	1,715	221	(81)	
Interest expense excluding Financial Products	109	109	—	—	
Other income (expense)	253	157	15	81	3
Consolidated profit before taxes	1,999	1,763	236	—	
Provision (benefit) for income taxes	469	412	57	—	
Profit of consolidated companies	1,530	1,351	179	—	
Equity in profit (loss) of unconsolidated affiliated companies	7	8	—	(1)	4
Profit of consolidated and affiliated companies	1,537	1,359	179	(1)	
Less: Profit (loss) attributable to noncontrolling interests	—	—	1	(1)	5
Profit [6]	$ 1,537	$ 1,359	$ 178	$ —	

1 Elimination of Financial Products' revenues earned from ME&T.
2 Elimination of net expenses recorded by ME&T paid to Financial Products.
3 Elimination of discount recorded by ME&T on receivables sold to Financial Products and of interest earned between ME&T and Financial Products as well as dividends paid by Financial Products to ME&T.
4 Elimination of equity profit (loss) earned from Financial Products' subsidiaries partially owned by ME&T subsidiaries.
5 Elimination of noncontrolling interest profit (loss) recorded by Financial Products for subsidiaries partially owned by ME&T subsidiaries.
6 Profit attributable to common shareholders.

Caterpillar Inc.
Supplemental Data for Results of Operations
For the Three Months Ended March 31, 2021
(Unaudited)
(Millions of dollars)

		Supplemental Consolidating Data		
	Consolidated	Machinery, Energy & Transportation	Financial Products	Consolidating Adjustments
Sales and revenues:				
Sales of Machinery, Energy & Transportation	$ 11,191	$ 11,191	$ —	$ —
Revenues of Financial Products	696	—	788	(92) [1]
Total sales and revenues	11,887	11,191	788	(92)
Operating costs:				
Cost of goods sold	8,012	8,013	—	(1) [2]
Selling, general and administrative expenses	1,239	1,114	124	1 [2]
Research and development expenses	374	374	—	—
Interest expense of Financial Products	125	—	125	—
Other operating (income) expenses	323	26	314	(17) [2]
Total operating costs	10,073	9,527	563	(17)
Operating profit	1,814	1,664	225	(75)
Interest expense excluding Financial Products	142	142	—	—
Other income (expense)	325	231	19	75 [3]
Consolidated profit before taxes	1,997	1,753	244	—
Provision (benefit) for income taxes	475	412	63	—
Profit of consolidated companies	1,522	1,341	181	—
Equity in profit (loss) of unconsolidated affiliated companies	9	12	—	(3) [4]
Profit of consolidated and affiliated companies	1,531	1,353	181	(3)
Less: Profit (loss) attributable to noncontrolling interests	1	1	3	(3) [5]
Profit [6]	$ 1,530	$ 1,352	$ 178	$ —

1 Elimination of Financial Products' revenues earned from ME&T.
2 Elimination of net expenses recorded by ME&T paid to Financial Products.
3 Elimination of discount recorded by ME&T on receivables sold to Financial Products and of interest earned between ME&T and Financial Products as well as dividends paid by Financial Products to ME&T.
4 Elimination of equity profit (loss) earned from Financial Products' subsidiaries partially owned by ME&T subsidiaries.
5 Elimination of noncontrolling interest profit (loss) recorded by Financial Products for subsidiaries partially owned by ME&T subsidiaries.
6 Profit attributable to common shareholders.

Caterpillar Inc.
Supplemental Data for Financial Position
At March 31, 2022
(Unaudited)
(Millions of dollars)

		Supplemental Consolidating Data			
	Consolidated	Machinery, Energy & Transportation	Financial Products	Consolidating Adjustments	
Assets					
Current assets:					
Cash and cash equivalents	$ 6,526	$ 5,662	$ 864	$ —	
Receivables – trade and other	9,135	3,734	435	4,966	[1,2]
Receivables – finance	9,003	—	14,117	(5,114)	[2]
Prepaid expenses and other current assets	2,868	2,626	345	(103)	[3]
Inventories	15,038	15,038	—	—	
Total current assets	42,570	27,060	15,761	(251)	
Property, plant and equipment – net	11,932	8,010	3,922	—	
Long-term receivables – trade and other	1,204	434	216	554	[1,2]
Long-term receivables – finance	12,665	—	13,247	(582)	[2]
Noncurrent deferred and refundable income taxes	1,973	2,506	111	(644)	[4]
Intangible assets	967	967	—	—	
Goodwill	6,293	6,293	—	—	
Other assets	4,672	3,919	1,960	(1,207)	[5]
Total assets	$ 82,276	$ 49,189	$ 35,217	$ (2,130)	
Liabilities					
Current liabilities:					
Short-term borrowings	$ 4,501	$ —	$ 4,501	$ —	
Accounts payable	8,361	8,238	271	(148)	[6]
Accrued expenses	3,846	3,403	443	—	
Accrued wages, salaries and employee benefits	1,275	1,247	28	—	
Customer advances	1,388	1,387	1	—	
Other current liabilities	2,355	1,780	701	(126)	[4,7]
Long-term debt due within one year	7,806	127	7,679	—	
Total current liabilities	29,532	16,182	13,624	(274)	
Long-term debt due after one year	25,277	9,664	15,641	(28)	[8]
Liability for postemployment benefits	5,363	5,363	—	—	
Other liabilities	5,007	4,169	1,542	(704)	[4]
Total liabilities	65,179	35,378	30,807	(1,006)	
Commitments and contingencies					
Shareholders' equity					
Common stock	6,281	6,281	919	(919)	[9]
Treasury stock	(28,326)	(28,326)	—	—	
Profit employed in the business	40,820	36,750	4,059	11	[9]
Accumulated other comprehensive income (loss)	(1,710)	(928)	(782)	—	
Noncontrolling interests	32	34	214	(216)	[9]
Total shareholders' equity	17,097	13,811	4,410	(1,124)	
Total liabilities and shareholders' equity	$ 82,276	$ 49,189	$ 35,217	$ (2,130)	

1 Elimination of receivables between ME&T and Financial Products.
2 Reclassification of ME&T's trade receivables purchased by Financial Products and Financial Products' wholesale inventory receivables.
3 Elimination of ME&T's insurance premiums that are prepaid to Financial Products.
4 Reclassification reflecting required netting of deferred tax assets/liabilities by taxing jurisdiction.
5 Elimination of other intercompany assets between ME&T and Financial Products.
6 Elimination of payables between ME&T and Financial Products.
7 Elimination of prepaid insurance in Financial Products' other liabilities.
8 Elimination of debt between ME&T and Financial Products.
9 Eliminations associated with ME&T's investments in Financial Products' subsidiaries.

Caterpillar Inc.
Supplemental Data for Financial Position
At December 31, 2021
(Unaudited)
(Millions of dollars)

		Supplemental Consolidating Data		
	Consolidated	Machinery, Energy & Transportation	Financial Products	Consolidating Adjustments
Assets				
Current assets:				
Cash and cash equivalents	$ 9,254	$ 8,428	$ 826	$ —
Receivables – trade and other	8,477	3,279	435	4,763 [1,2]
Receivables – finance	8,898	—	13,828	(4,930) [2]
Prepaid expenses and other current assets	2,788	2,567	358	(137) [3]
Inventories	14,038	14,038	—	—
Total current assets	43,455	28,312	15,447	(304)
Property, plant and equipment – net	12,090	8,172	3,918	—
Long-term receivables – trade and other	1,204	375	204	625 [1,2]
Long-term receivables – finance	12,707	—	13,358	(651) [2]
Noncurrent deferred and refundable income taxes	1,840	2,396	105	(661) [4]
Intangible assets	1,042	1,042	—	—
Goodwill	6,324	6,324	—	—
Other assets	4,131	3,388	1,952	(1,209) [5]
Total assets	$ 82,793	$ 50,009	$ 34,984	$ (2,200)
Liabilities				
Current liabilities:				
Short-term borrowings	$ 5,404	$ 9	$ 5,395	$ —
Accounts payable	8,154	8,079	242	(167) [6]
Accrued expenses	3,757	3,385	372	—
Accrued wages, salaries and employee benefits	2,242	2,186	56	—
Customer advances	1,087	1,086	1	—
Dividends payable	595	595	—	—
Other current liabilities	2,256	1,773	642	(159) [4,7]
Long-term debt due within one year	6,352	45	6,307	—
Total current liabilities	29,847	17,158	13,015	(326)
Long-term debt due after one year	26,033	9,772	16,287	(26) [8]
Liability for postemployment benefits	5,592	5,592	—	—
Other liabilities	4,805	4,106	1,425	(726) [4]
Total liabilities	66,277	36,628	30,727	(1,078)
Commitments and contingencies				
Shareholders' equity				
Common stock	6,398	6,398	919	(919) [9]
Treasury stock	(27,643)	(27,643)	—	—
Profit employed in the business	39,282	35,390	3,881	11 [9]
Accumulated other comprehensive income (loss)	(1,553)	(799)	(754)	—
Noncontrolling interests	32	35	211	(214) [9]
Total shareholders' equity	16,516	13,381	4,257	(1,122)
Total liabilities and shareholders' equity	$ 82,793	$ 50,009	$ 34,984	$ (2,200)

1 Elimination of receivables between ME&T and Financial Products.
2 Reclassification of ME&T's trade receivables purchased by Financial Products and Financial Products' wholesale inventory receivables.
3 Elimination of ME&T's insurance premiums that are prepaid to Financial Products.
4 Reclassification reflecting required netting of deferred tax assets/liabilities by taxing jurisdiction.
5 Elimination of other intercompany assets between ME&T and Financial Products.
6 Elimination of payables between ME&T and Financial Products.
7 Elimination of prepaid insurance in Financial Products' other liabilities.
8 Elimination of debt between ME&T and Financial Products.
9 Eliminations associated with ME&T's investments in Financial Products' subsidiaries.

Caterpillar Inc.
Supplemental Data for Cash Flow
For the Three Months Ended March 31, 2022
(Unaudited)
(Millions of dollars)

	Consolidated	Supplemental Consolidating Data: Machinery, Energy & Transportation	Supplemental Consolidating Data: Financial Products	Supplemental Consolidating Data: Consolidating Adjustments
Cash flow from operating activities:				
Profit of consolidated and affiliated companies	$ 1,537	$ 1,359	$ 179	$ (1) [1]
Adjustments for non-cash items:				
Depreciation and amortization	557	358	199	—
Provision (benefit) for deferred income taxes	(99)	(83)	(16)	—
Other	(52)	(46)	(89)	83 [2]
Changes in assets and liabilities, net of acquisitions and divestitures:				
Receivables – trade and other	(372)	(257)	(7)	(108) [2,3]
Inventories	(1,032)	(1,030)	—	(2) [2]
Accounts payable	452	393	40	19 [2]
Accrued expenses	(74)	(1)	(73)	—
Accrued wages, salaries and employee benefits	(965)	(940)	(25)	—
Customer advances	311	311	—	—
Other assets – net	99	137	(17)	(21) [2]
Other liabilities – net	(49)	(279)	202	28 [2]
Net cash provided by (used for) operating activities	313	(78)	393	(2)
Cash flow from investing activities:				
Capital expenditures – excluding equipment leased to others	(346)	(344)	(3)	1 [2]
Expenditures for equipment leased to others	(333)	(4)	(335)	6 [2]
Proceeds from disposals of leased assets and property, plant and equipment	269	33	241	(5) [2]
Additions to finance receivables	(2,988)	—	(3,139)	151 [3]
Collections of finance receivables	2,966	—	3,159	(193) [3]
Net intercompany purchased receivables	—	—	(42)	42 [3]
Proceeds from sale of finance receivables	9	—	9	—
Net intercompany borrowings	—	—	1	(1) [4]
Investments and acquisitions (net of cash acquired)	(8)	(8)	—	—
Proceeds from sale of securities	571	478	93	—
Investments in securities	(1,438)	(1,266)	(172)	—
Other – net	(15)	18	(33)	—
Net cash provided by (used for) investing activities	(1,313)	(1,093)	(221)	1
Cash flow from financing activities:				
Dividends paid	(595)	(595)	—	—
Common stock issued, including treasury shares reissued	(28)	(28)	—	—
Common shares repurchased	(820)	(820)	—	—
Net intercompany borrowings	—	(1)	—	1 [4]
Proceeds from debt issued (original maturities greater than three months)	2,131	—	2,131	—
Payments on debt (original maturities greater than three months)	(1,387)	(6)	(1,381)	—
Short-term borrowings – net (original maturities three months or less)	(1,016)	(124)	(892)	—
Net cash provided by (used for) financing activities	(1,715)	(1,574)	(142)	1
Effect of exchange rate changes on cash	(16)	(21)	5	—
Increase (decrease) in cash, cash equivalents and restricted cash	(2,731)	(2,766)	35	—
Cash, cash equivalents and restricted cash at beginning of period	9,263	8,433	830	—
Cash, cash equivalents and restricted cash at end of period	$ 6,532	$ 5,667	$ 865	$ —

1 Elimination of equity profit earned from Financial Products' subsidiaries partially owned by ME&T subsidiaries.
2 Elimination of non-cash adjustments and changes in assets and liabilities related to consolidated reporting.
3 Reclassification of Financial Products' cash flow activity from investing to operating for receivables that arose from the sale of inventory.
4 Elimination of net proceeds and payments to/from ME&T and Financial Products.

Caterpillar Inc.
Supplemental Data for Cash Flow
For the Three Months Ended March 31, 2021
(Unaudited)
(Millions of dollars)

		Supplemental Consolidating Data		
	Consolidated	Machinery, Energy & Transportation	Financial Products	Consolidating Adjustments
Cash flow from operating activities:				
Profit of consolidated and affiliated companies	$ 1,531	$ 1,353	$ 181	$ (3) [1]
Adjustments for non-cash items:				
Depreciation and amortization	586	383	203	—
Provision (benefit) for deferred income taxes	109	127	(18)	—
Other	(104)	(52)	(83)	31 [2]
Changes in assets and liabilities, net of acquisitions and divestitures:				
Receivables – trade and other	(543)	(104)	(32)	(407) [2,3]
Inventories	(657)	(657)	—	—
Accounts payable	733	706	13	14 [2]
Accrued expenses	84	58	26	—
Accrued wages, salaries and employee benefits	191	179	12	—
Customer advances	58	58	—	—
Other assets – net	56	(4)	(12)	72 [2]
Other liabilities – net	(116)	(131)	79	(64) [2]
Net cash provided by (used for) operating activities	1,928	1,916	369	(357)
Cash flow from investing activities:				
Capital expenditures – excluding equipment leased to others	(252)	(251)	(4)	3 [2]
Expenditures for equipment leased to others	(252)	(4)	(249)	1 [2]
Proceeds from disposals of leased assets and property, plant and equipment	309	27	286	(4) [2]
Additions to finance receivables	(2,629)	—	(2,867)	238 [3]
Collections of finance receivables	2,770	—	3,062	(292) [3]
Net intercompany purchased receivables	—	—	(411)	411 [3]
Proceeds from sale of finance receivables	5	—	5	—
Net intercompany borrowings	—	1,000	—	(1,000) [4]
Investments and acquisitions (net of cash acquired)	(386)	(386)	—	—
Proceeds from sale of businesses and investments (net of cash sold)	28	28	—	—
Proceeds from sale of securities	126	11	115	—
Investments in securities	(148)	—	(148)	—
Other – net	(48)	2	(50)	—
Net cash provided by (used for) investing activities	(477)	427	(261)	(643)
Cash flow from financing activities:				
Dividends paid	(562)	(562)	—	—
Common stock issued, including treasury shares reissued	65	65	—	—
Net intercompany borrowings	—	—	(1,000)	1,000 [4]
Proceeds from debt issued (original maturities greater than three months)	2,273	494	1,779	—
Payments on debt (original maturities greater than three months)	(2,887)	(644)	(2,243)	—
Short-term borrowings – net (original maturities three months or less)	1,659	(10)	1,669	—
Other – net	(2)	(2)	—	—
Net cash provided by (used for) financing activities	546	(659)	205	1,000
Effect of exchange rate changes on cash	(12)	(14)	2	—
Increase (decrease) in cash, cash equivalents and restricted cash	1,985	1,670	315	—
Cash, cash equivalents and restricted cash at beginning of period	9,366	8,822	544	—
Cash, cash equivalents and restricted cash at end of period	$ 11,351	$ 10,492	$ 859	$ —

[1] Elimination of equity profit earned from Financial Products' subsidiaries partially owned by ME&T subsidiaries.
[2] Elimination of non-cash adjustments and changes in assets and liabilities related to consolidated reporting.
[3] Reclassification of Financial Products’ cash flow activity from investing to operating for receivables that arose from the sale of inventory.
[4] Elimination of net proceeds and payments to/from ME&T and Financial Products.

Forward-looking Statements

Certain statements in this Form 10-Q relate to future events and expectations and are forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Words such as “believe,” “estimate,” “will be,” “will,” “would,” “expect,” “anticipate,” “plan,” “forecast,” “target,” “guide,” “project,” “intend,” “could,” “should” or other similar words or expressions often identify forward-looking statements. All statements other than statements of historical fact are forward-looking statements, including, without limitation, statements regarding our outlook, projections, forecasts or trend descriptions. These statements do not guarantee future performance and speak only as of the date they are made, and we do not undertake to update our forward-looking statements.

Caterpillar’s actual results may differ materially from those described or implied in our forward-looking statements based on a number of factors, including, but not limited to: (i) global and regional economic conditions and economic conditions in the industries we serve; (ii) commodity price changes, material price increases, fluctuations in demand for our products or significant shortages of material; (iii) government monetary or fiscal policies; (iv) political and economic risks, commercial instability and events beyond our control in the countries in which we operate; (v) international trade policies and their impact on demand for our products and our competitive position, including the imposition of new tariffs or changes in existing tariff rates; (vi) our ability to develop, produce and market quality products that meet our customers’ needs; (vii) the impact of the highly competitive environment in which we operate on our sales and pricing; (viii) information technology security threats and computer crime; (ix) inventory management decisions and sourcing practices of our dealers and our OEM customers; (x) a failure to realize, or a delay in realizing, all of the anticipated benefits of our acquisitions, joint ventures or divestitures; (xi) union disputes or other employee relations issues; (xii) adverse effects of unexpected events; (xiii) disruptions or volatility in global financial markets limiting our sources of liquidity or the liquidity of our customers, dealers and suppliers; (xiv) failure to maintain our credit ratings and potential resulting increases to our cost of borrowing and adverse effects on our cost of funds, liquidity, competitive position and access to capital markets; (xv) our Financial Products segment’s risks associated with the financial services industry; (xvi) changes in interest rates or market liquidity conditions; (xvii) an increase in delinquencies, repossessions or net losses of Cat Financial’s customers; (xviii) currency fluctuations; (xix) our or Cat Financial’s compliance with financial and other restrictive covenants in debt agreements; (xx) increased pension plan funding obligations; (xxi) alleged or actual violations of trade or anti-corruption laws and regulations; (xxii) additional tax expense or exposure, including the impact of U.S. tax reform; (xxiii) significant legal proceedings, claims, lawsuits or government investigations; (xxiv) new regulations or changes in financial services regulations; (xxv) compliance with environmental laws and regulations; (xxvi) the duration and geographic spread of, business disruptions caused by, and the overall global economic impact of, the COVID-19 pandemic; and (xxvii) other factors described in more detail under the section entitled "Part I - Item 1A. Risk Factors" of Caterpillar's Annual Report on Form 10-K for the fiscal year ended December 31, 2021, as such factors may be updated from time to time in Caterpillar's periodic filings with the Securities and Exchange Commission.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

The information required by this Item is incorporated by reference from Note 5 – “Derivative financial instruments and risk management” included in Part I, Item 1 and Management’s Discussion and Analysis included in Part I, Item 2 of this Form 10-Q.

Item 4. Controls and Procedures

Evaluation of disclosure controls and procedures

An evaluation was performed under the supervision and with the participation of the company’s management, including the Chief Executive Officer (CEO) and Chief Financial Officer (CFO), of the effectiveness of the design and operation of the company’s disclosure controls and procedures, as that term is defined in Rule 13a-15(e) under the Securities Exchange Act of 1934, as amended, as of the end of the period covered by this quarterly report. Based on that evaluation, the CEO and CFO concluded that the company’s disclosure controls and procedures were effective as of the end of the period covered by this quarterly report.

Changes in internal control over financial reporting

During the first quarter of 2022, there has been no change in the company’s internal control over financial reporting that has materially affected, or is reasonably likely to materially affect, the company’s internal control over financial reporting.

PART II. OTHER INFORMATION

Item 1. Legal Proceedings

The information required by this Item is incorporated by reference from Note 14 – "Environmental and legal matters" included in Part I, Item 1 of this Form 10-Q.

Item 1A. Risk Factors

There have been no material changes to the risk factors we previously disclosed in our Annual Report on Form 10-K for the year ended December 31, 2021.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

Issuer Purchases of Equity Securities

Period	Total Number of Shares Purchased[2,3]	Average Price Paid per Share[2,3]	Total Number of Shares Purchased as Part of Publicly Announced Program	Approximate Dollar Value of Shares that May Yet be Purchased under the Program (in billions)[1]
January 1-31, 2022	405,023	$ 210.71	405,023	$ 2.013
February 1-28, 2022	2,724,039	$ 203.19	2,724,039	$ 1.460
March 1-31, 2022	442,622	$ 193.89	442,622	$ 1.374
Total	3,571,684	$ 202.89	3,571,684	

[1] In July 2018, the Board approved a share repurchase authorization of up to $10.0 billion of Caterpillar common stock effective January 1, 2019, with no expiration (the 2018 Authorization). As of March 31, 2022, approximately $1.4 billion remained available under the 2018 Authorization.

[2] During the first quarter of 2022, we entered into an ASR with a third-party financial institution to purchase $500 million of our common stock. In February 2022, upon payment of the $500 million to the financial institution, we received 2.0 million shares. In April 2022, upon final settlement of the ASR, we received an additional 0.4 million shares. In total, we repurchased 2.4 million shares under this ASR at an average price per share of $206.37.

[3] In January, February and March of 2022, we repurchased 0.4 million, 0.8 million and 0.4 million shares respectively, for an aggregate of $320 million in open market transactions at an average price per share of $210.71, $195.00 and $193.89, respectively.

Non-U.S. Employee Stock Purchase Plans

As of March 31, 2022, we had 28 employee stock purchase plans (the "EIP Plans") that are administered outside the United States for our non-U.S. employees, which had approximately 13,000 active participants in the aggregate. During the first quarter of 2022, approximately 72,000 shares of Caterpillar common stock were purchased by the EIP Plans pursuant to the terms of such plans.

Item 5. Other Information

Disclosures Required Pursuant to Section 13(r) of the Securities Exchange Act of 1934

During the first quarter ended March 31, 2022, Caterpillar Eurasia LLC, one of our affiliates, engaged in limited transactions or dealings with the Federal Security Service of Russia (the "FSB"). Specifically, Caterpillar Eurasia LLC, from time to time, directly or indirectly, makes required submissions to and receives regulatory authorizations from the FSB related to the importation of software used in the on-board telematics and control systems of Caterpillar machines that are imported into Russia. Caterpillar Eurasia LLC did not generate any net revenue or net profits from such approval activity and does not make any sales to or have other dealings with the FSB. Caterpillar Eurasia LLC plans to continue these activities as long as it remains lawful to do so.

Item 6. Exhibits

10.1	Form of Restricted Stock Unit Award pursuant to the 2014 Long-Term Incentive Plan*
10.2	Form of Restricted Stock Unit Award for Directors pursuant to the 2014 Long-Term Incentive Plan*
10.3	Form of Nonqualified Stock Options Award pursuant to the 2014 Long-Term Incentive Plan*
10.4	Form of Performance-Based Restricted Stock Unit Award pursuant to the 2014 Long-Term Incentive Plan*
31.1	Certification of Chief Executive Officer of Caterpillar Inc., as required pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2	Certification of Chief Financial Officer of Caterpillar Inc., as required pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32	Certification of Chief Executive Officer of Caterpillar Inc. and Chief Financial Officer of Caterpillar Inc., as required pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
101.INS	Inline XBRL Instance Document (the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document)
101.SCH	Inline XBRL Taxonomy Extension Schema Document
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document
104	Cover Page Interactive File (embedded within the Inline XBRL document and included in Exhibit 101)

*Management contracts and compensatory plans and arrangements required to be filed as exhibits pursuant to Item 6 of this report.

The agreements and other documents filed as exhibits to this report are not intended to provide factual information or other disclosure other than with respect to the terms of the agreements or other documents themselves, and you should not rely on them for that purpose. In particular, any representations and warranties made by us in these agreements or other documents were made solely within the specific context of the relevant agreement or document and may not describe the actual state of affairs as of the date they were made or at any other time.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

CATERPILLAR INC.

May 4, 2022	*/s/ D. James Umpleby III* D. James Umpleby III	Chairman of the Board & Chief Executive Officer
May 4, 2022	*/s/ Andrew R.J. Bonfield* Andrew R.J. Bonfield	Chief Financial Officer
May 4, 2022	*/s/ Suzette M. Long* Suzette M. Long	Chief Legal Officer and General Counsel
May 4, 2022	*/s/ William E. Schaupp* William E. Schaupp	Chief Accounting Officer

Caterpillar Inc.
2014 Long-Term Incentive Plan
Restricted Stock Unit Award Notice

%%FIRST_NAME_MIDDLE_NAME_LAST_NAME%-%

Grant Date:	%%OPTION_DATE,'Month DD, YYYY'%-%
Grant Number:	%%OPTION_NUMBER%-%
Units Granted:	%%TOTAL_SHARES_GRANTED,'999,999,999'%-%

The Board of Directors of Caterpillar Inc. (the "Company") has granted you the number of restricted stock units ("RSUs") specified above on the date specified above (the "Grant Date") pursuant to, and subject to the restrictions, terms and conditions set forth in, the Caterpillar Inc. 2014 Long-Term Incentive Plan (the "Plan"). This Award Notice and the Plan specify the material terms and provisions applicable to such restricted stock unit award (the "RSU Award"). Capitalized terms not defined herein shall have the meanings specified in the Plan.

Vesting

Except to the extent the RSUs are forfeited upon your termination of employment as provided below, the RSUs will become vested in the amounts and on the vesting date(s) specified below (each such date, a "Vesting Date").

Vesting Date	Units Vesting
%%VEST_DATE_PERIOD1,'Month DD, YYYY'%-%	%%SHARES_PERIOD1%-%
%%VEST_DATE_PERIOD2,'Month DD, YYYY'%-%	%%SHARES_PERIOD2%-%
%%VEST_DATE_PERIOD3,'Month DD, YYYY'%-%	%%SHARES_PERIOD3%-%

As soon as administratively practicable, but not later than 60 days, after the applicable Vesting Date, the Company shall issue or deliver to you, subject to the conditions of this Award Notice, unrestricted shares of Common Stock equal to the number of RSUs that become vested, rounded up or down to the nearest whole number, less any shares withheld to satisfy any applicable income and payroll tax withholding requirements.

If you terminate employment prior to the date the RSUs have become fully vested for any reason other than Long-Service Separation, death or in connection with a Change in Control (as described more fully below), the unvested RSUs will be forfeited. Your RSU Award is also subject to certain additional forfeiture conditions set forth in Sections 5.16 and 5.17 of the Plan and in the Post-Employment Restrictions section of this Award Notice.

Voting Rights

During the period between the Grant Date and the date any RSUs become vested and the shares subject to such RSUs are issued or delivered to you (the "Restriction Period"), you are not entitled to any voting rights with respect to such RSUs. From and after the date shares are actually issued or delivered, you then will have full voting rights with respect to those shares.

Dividend Equivalents; Dividends

On each date that a cash dividend is paid to holders of Common Stock, an amount equal to the cash dividend that is paid on each share of Common Stock, multiplied by the number of RSUs that remain unvested and outstanding as of the dividend payment date (the "Dividend Equivalent Amount") shall be credited for your benefit. Unless otherwise determined by the Board or Committee in its discretion, the aggregate Dividend Equivalent Amount, if any, credited to you shall be converted into an additional number of RSUs determined by dividing the Dividend Equivalent Amount by the Fair Market Value of a share of Common Stock on the dividend payment date (the "Dividend Equivalent RSUs"). The Dividend Equivalent RSUs, if any, will vest on the same Vesting Date corresponding to the underlying RSUs with respect to which the Dividend Equivalent RSUs were credited, and will otherwise be subject to the same conditions applicable to the underlying RSUs, including, without limitation, the provisions governing time and form of settlement; *provided however, that* Dividend Equivalent RSUs will not accrue on Dividend Equivalent RSUs. Unless expressly provided otherwise, as used elsewhere in this Agreement "RSUs" shall include any Dividend Equivalent RSUs that have been credited to you. From and after the date shares of Common Stock are actually issued or delivered upon settlement of the RSUs, you then will have dividend rights with respect to those shares.

Termination of Employment
Your termination of employment with the Company prior to the date the RSUs become fully vested will impact the unvested RSUs as follows:

- **Long-Service Separation**
  If your employment with the Company terminates at least six months after the Grant Date by reason of Long-Service Separation (as defined below), your unvested RSUs will continue to become vested as of each Vesting Date as though your employment with the Company had continued through the last scheduled Vesting Date, and shares of Common Stock, less any shares withheld to satisfy any applicable income and payroll tax withholding requirements, will be issued or delivered to you as soon as administratively practicable, but not later than 60 days, following the applicable Vesting Date. For purposes of this RSU Award, "Long-Service Separation" means termination of employment for any reason other than for Cause after attainment of age 55 with 5 or more years of continuous service with the Company, as determined by the Company in its sole discretion.
- **Death**
  If your employment with the Company terminates by reason of death, your unvested RSUs will become fully vested and shares of Common Stock, less any shares withheld to satisfy any applicable income and payroll tax withholding requirements, will be issued or delivered to your beneficiary or your estate (as applicable), as soon as administratively practicable, but not later than 2½ months, following the date of your death.
- **Change in Control**
  In the event of a Change in Control prior to the end of the Restriction Period pursuant to which your RSU Award is effectively continued, assumed or replaced by the surviving or acquiring corporation in such Change in Control (with appropriate adjustments to the number and kind of shares, in each case, that preserve the material terms and conditions of the outstanding RSU Award as in effect immediately prior to the Change in Control) and your employment is terminated either by the Company or its successor without Cause or by you for Good Reason, as defined in the Plan, within the 24–month period commencing on the date of the Change in Control, your unvested RSUs will immediately become fully vested and shares of Common Stock, less any shares withheld to satisfy any applicable income and payroll tax withholding requirements, will be issued or delivered to you as soon as administratively practicable, but not later than 60 days, following (1) the applicable Vesting Date; or (2) the date which is six months after the date of your termination of employment, if such date is earlier than the applicable Vesting Date; provided that if you are or will become eligible for Long-Service Separation during the Restriction Period and the Change in Control is not a "change in control event," within the meaning of Section 409A of the Internal Revenue Code of 1986, as amended ("Code Section 409A"), then the unvested RSUs will immediately become fully vested, as provided above, but the shares of Common Stock, less any shares withheld to satisfy any applicable income and payroll tax withholding requirements, will be issued or delivered to you as soon as administratively practicable, but not later than 60 days following the applicable Vesting Date. In the event of a vesting acceleration event upon a Change in Control pursuant to Section 5.9(a)(ii) or (iii) of the Plan, the shares of Common Stock (or cash amount, as applicable), less any shares (or cash amount, as applicable) withheld to satisfy any applicable income and payroll tax withholding requirements, will be issued or delivered to you as soon as administratively practicable, but not later than 60 days, following the date of the Change in Control, provided that if the RSUs are non-qualified deferred compensation subject to Code Section 409A and the Change in Control is not a "change in control event" within the meaning of U.S. Treas. Reg. §1.409A-3(i)(5), the RSUs will vest in accordance with Section 5.9(a)(ii) of the Plan, but the vested portion of the RSUs shall instead be settled in cash (in an amount calculated consistent with the methodology described in Section 5.9(a)(iii)), less any amount withheld to satisfy any applicable income and payroll tax withholding requirements, as soon as administratively practicable, but not later than 60 days following the applicable Vesting Date.

- **Other**
  If your employment with the Company terminates prior to the date the RSUs become fully vested for any reason other than Long-Service Separation, Disability, death or in connection with a Change in Control, all unvested RSUs subject to this RSU Award will lapse and shall be immediately forfeited.

For purposes of this RSU Award, references to employment with the Company shall also mean employment with a Subsidiary. The extent to which you shall be considered employed during any periods during which you are on a leave of absence shall be determined in accordance with Company policy.

Disability
Upon a determination by the Company's Director of Total Rewards that you have a Disability (as defined below), your unvested RSUs will become fully vested and shares of Common Stock, less any shares withheld to satisfy any applicable income and payroll tax withholding requirements, will be issued or delivered to you as soon as administratively practicable, but not later than 60 days, following the date of such determination. For purposes of this RSU Award, "Disability" means that you are unable to engage in any substantial gainful business activity by reason of any medically determinable physical or mental impairment that can be expected to result in death, or which has lasted or can be expected to last for a continuous period of not less than 12 months, as determined by the Company's Director of Total Rewards, based upon medical evidence.

Transferability of Award
Subject to certain exceptions set forth in the Plan, the RSU Award may not be assigned, transferred, pledged or hypothecated in any way. The RSU Award is not subject to execution, attachment or similar process. Any attempt at such, contrary to the provisions of the Plan, will be null and void and without effect. Note that once RSUs vest and shares of Common Stock are actually issued or delivered, you will have the ability to transfer those shares.

Designation of Beneficiary
You may designate a beneficiary (or beneficiaries) to whom any shares of Common Stock that are issued to your stock plan account with the Company's stock plan administrator upon the vesting of the RSUs will be paid upon your death. If you do not designate a beneficiary, such shares will be paid to your estate or to such other payee determined in accordance with procedures established by the Company's stock plan administrator.

Administration of the Plan
The RSU Award shall at all times be subject to the terms and provisions of the Plan and the Plan shall be administered in accordance with the terms of, and as provided in, the Plan. In the event of conflict between the terms and provisions of this Award Notice and the terms and provisions of the Plan, the provisions of the Plan shall control.

Code Section 409A
It is intended that this Award Notice and the administration of the RSU Award comply with Section 409A of the Internal Revenue Code of 1986, as amended, and the Treasury Regulations promulgated, and other official guidance issued thereunder ("Code Section 409A"), to the extent applicable. The Plan and this Award Notice shall be interpreted and construed on a basis consistent with such intent. Notwithstanding anything contained herein to the contrary, no shares may be issued or delivered unless in compliance with Code Section 409A to the extent that Code Section 409A applies. To the extent this Award Notice provides for the RSU Award to be settled by reference to your termination of employment, your employment shall be deemed to have terminated upon your "separation from service," within the meaning of Code Section 409A. The Committee reserves the right (including the right to delegate such right) to unilaterally amend this Award Notice (and thus the terms of the RSU Award) without your consent solely in order to maintain an exclusion from the application of, or to maintain compliance with, Code Section 409A. Your acceptance of this RSU Award constitutes acknowledgement and consent to such rights of the Committee. This provision does not create an obligation on the part of the Company to modify the terms of this Award Notice or the Plan and does not guarantee that this RSU Award or the delivery of shares of Common Stock upon settlement of the RSU Award will not be subject to taxes, interest and penalties or any other adverse tax consequences under Code Section 409A. Nothing in this Award Notice shall provide a basis for any person to take any action against the Company or any of its Subsidiaries or affiliates based on

matters covered by Code Section 409A, including the tax treatment of any amounts paid under this Award Notice, and neither the Company nor any of its Subsidiaries or affiliates will have any liability under any circumstances to you or any other party if the RSU Award, the delivery of shares of Common Stock upon vesting/settlement of the RSU Award or other payment or tax event hereunder that is intended to be exempt from, or compliant with, Code Section 409A, is not so exempt or compliant or for any action taken by the Committee with respect thereto.

Tax Impact
Please refer to the Plan prospectus and support materials for a general description of the tax consequences of an RSU Award. You may also wish to consult with your personal tax advisor regarding how the RSU Award impacts your individual tax situation. Nothing contained in this Award Notice or in the Plan prospectus shall be construed as a guarantee of any particular tax effect for any benefits or amounts deferred or paid pursuant to this Award Notice.

Withholding
The distribution of shares of Common Stock in connection with the vesting of the RSU Award is a taxable event in many taxing jurisdictions. In some countries, including the United States, the Company is required to withhold taxes upon the taxable event. To satisfy this withholding obligation, you hereby authorize the Company to withhold that number of shares that would satisfy the withholding obligation from the shares otherwise to be issued or delivered to you under the RSU Award. The following conditions apply to such withholding: (a) the value of the shares of Common Stock withheld must equal the minimum withholding obligation; and (b) the value of the shares of Common Stock withheld shall be the Fair Market Value determined as of the date the RSUs become vested. For this purpose and for all purposes of this RSU Award, Fair Market Value shall mean the mean between the high and low prices at which a share of Common Stock of the Company is traded on the New York Stock Exchange. Alternatively, by your acceptance of this RSU Award, you hereby authorize the Company (or your employer), or their respective agents, to select any of the following methods to satisfy withholding obligations upon a taxable event applicable to your RSU Award (i) a cash payment by you to the Company, (ii) your delivery (either actual delivery or by attestation procedures established by the Company) to the Company of previously issued whole shares of Common Stock having an aggregate Fair Market Value equal to the amount necessary to satisfy any such obligation, or (iii) any other method of withholding determined by the Company and permitted by applicable laws and the Plan; provided, however, that if you are subject to Section 16 of the Exchange Act, you shall be permitted to select among the methods set forth in (i) through (iii) above in lieu of the net share withholding method set forth in the immediately preceding sentence. Notwithstanding the foregoing, the net share withholding method described above will not be used for social security, FICA or other employment tax-related withholding obligations that become payable in a year prior to the year that shares are issued or delivered to you and, instead, you authorize the Company (or your employer) to use a method determined appropriate by the Company and permitted by applicable laws and the Plan.

Compliance with Securities Laws
The RSU Award is subject to the condition that if the listing, registration or qualification of the shares of Common Stock subject to the RSU Award upon any securities exchange or under any law, or the consent or approval of any governmental body, or the taking of any other action is necessary or desirable as a condition of, or in connection with, the issuance or delivery of shares hereunder, the shares of Common Stock subject to the RSU Award shall not be issued or delivered, in whole or in part, unless such listing, registration, qualification, consent, approval or other action shall have been effected or obtained, free of any conditions not acceptable to the Company. The Company agrees to use reasonable efforts to effect or obtain any such listing, registration, qualification, consent, approval or other action.

Adjustment of Shares
Provisions are made within the Plan covering the effect of stock dividends, stock splits, changes in par value, changes in kind of stock, sale, merger, recapitalization, reorganization, etc.

Awards Subject to Forfeiture, Clawback and Setoff
The RSU Award is subject to certain forfeiture conditions set forth in the Plan, which in the event such conditions are determined to have occurred, may result in immediate forfeiture and cancellation of your outstanding RSU Award or an obligation to repay the Company the total amount of award gain realized upon settlement of your

RSU Award. Also, the Company generally may deduct from and set off against any amounts the Company owes to you, including amounts payable in connection with this RSU Award, such amounts you may owe to the Company.

Effect on Other Benefits
The RSU Award is not intended to and shall not impact the coverage of or the amount of any other employee benefit plans in which you participate that are sponsored by the Company or any of its Subsidiaries or affiliates.

Award Confers No Rights to Continued Employment
In no event shall the granting of the RSU Award or its acceptance by you, or any provision of the Award Notice or the Plan, give or be deemed to give you any right to continued employment by the Company, any Subsidiary or any affiliate of the Company or affect in any manner the right of the Company, any Subsidiary or any affiliate of the Company to terminate your employment at any time.

Decisions of Board or Committee
The Board or the Committee shall have the right to resolve all questions which may arise in connection with the RSU Award. Any interpretation, determination or other action made or taken by the Board or the Committee regarding the Plan or this RSU Award shall be final, binding and conclusive.

Successors
This Award Notice shall be binding upon and inure to the benefit of any successor or successors of the Company and any person or persons who shall acquire any rights hereunder in accordance with this Award Notice or the Plan.

Severability
The invalidity or unenforceability of any particular provision of this Award Notice shall not affect the other provisions hereof and this Award Notice shall be construed in all respects as if such invalid or unenforceable provision was omitted.

Governing Law & Venue
This Award Notice, the RSU Award and all determinations made and actions taken pursuant hereto and thereto, to the extent not governed by the laws of the United States, shall be governed by the laws of the State of Delaware and construed in accordance therewith without giving effect to principles of conflicts of laws. You expressly consent to the exclusive jurisdiction of the federal and state courts serving Deerfield, Illinois for all lawsuits and actions arising out of or relating to the RSU Award and this Award Notice, and you expressly waive any defense that such courts lack personal jurisdiction over you. All such lawsuits and actions shall be tried in the federal or state courts serving Deerfield, Illinois to the exclusion of all other courts.

Entire Agreement
This Award Notice and the Plan constitute the entire agreement between you and the Company with respect to the subject matter hereof and supersede in their entirety all prior undertakings and agreements between you and the Company with respect to the subject matter hereof, and except as provided herein, may not be modified adversely to your interest except by means of a writing signed by you and the Company.

Acceptance of Award
You are required to electronically accept this Award Notice within your stock plan account with the Company's stock plan administrator according to the procedures then in effect in order to receive the RSU Award. Your acceptance of this Award Notice constitutes acknowledgement of receipt of the Plan and this RSU Award and consent to the terms of the Plan and this Award Notice as described in the Plan and this Award Notice. You have at least 14 calendar days to consider this Award Notice before accepting it, but you may voluntarily waive this period and accept sooner. Please be advised that you may consult with an attorney of your own choosing to seek independent advice before accepting this RSU Award. By accepting this Award Notice, you acknowledge that you have accepted it knowingly and voluntarily and with the full knowledge and understanding of its provisions after being given the opportunity to consult with counsel.

Notices
All notices, requests or other communications provided for in this Award Notice shall be made, if to the Company, to Caterpillar Inc., Equity Compensation Administration, 100 N.E. Adams Street, Peoria, IL 61629-4440 (or, if applicable, to any updated address provided by the Company for such purposes), and if to you, to your last known mailing address on file with the Company's stock plan administrator. All notices, requests or other communications provided for in this Award Notice shall be made in writing either (a) by personal delivery, (b) by facsimile or electronic mail with confirmation of receipt, (c) by mailing in the United States mail or (d) by express courier service. The notice, request or other communication shall be deemed to be received upon personal delivery, upon confirmation of receipt of facsimile or electronic mail transmission or upon receipt by the party entitled thereto if by United States mail or express courier service; provided, however, that if a notice, request or other communication sent to the Company is not received during regular business hours, it shall be deemed to be received on the next succeeding business day of the Company.

Post-Employment Restrictions
By accepting this RSU Award, you agree that until 12 months following your termination of employment you will not directly or indirectly, without the prior written consent of Caterpillar Inc., do any of the following:

i. solicit any business competitive with any Company business from any person or entity who: (a) was a provider or customer to the Company within the 18 months before your termination of employment date and (b) with whom you had contact to further the Company's business or for whom you performed services, or supervised the provision of services for, during your employment;
ii. hire, employ, recruit or solicit any employee of or consultant to the Company who possesses confidential information of the Company;
iii. induce or influence any employee, consultant, customer or provider to the Company to terminate his, her or its employment or other relationship with the Company;
iv. engage or participate in, or in any way render services or assistance to, any business that competes, directly or indirectly, with any Company product or service that you participated in, engaged in, or had confidential information regarding, in any geographic territory over which you had responsibilities, during the 18 months before your termination of employment date; or
v. assist anyone in any of the activities listed above.

For purposes of the preceding, "Company" also includes each and all of the Company's parents, Subsidiaries, and affiliates. If you reside or work in the State of California, only subsection (ii) above is applicable to you.

If you engage in any of the activities listed above without the prior written consent of Caterpillar Inc. within the first 12 months following your termination of employment, all unvested RSUs subject to this RSU Award will lapse and shall be immediately forfeited. For avoidance of doubt, any RSUs that would have continued to vest following your termination of employment due to Long Service Separation shall be forfeited and no further shares of Common Stock associated with this RSU Award will be issued or delivered to you.

Further Information
For more detailed information about the Plan, please refer to the Plan prospectus or the Plan itself. Copies of these documents can be obtained on the Documents & Forms tab in the Executive Compensation portal on cat@work. If you have any questions regarding the administration of Caterpillar's equity compensation program, please contact executivecompensation@cat.com

Caterpillar Inc.
2014 Long-Term Incentive Plan
Restricted Stock Unit Award Notice

%%FIRST_NAME_MIDDLE_NAME_LAST_NAME%-%

Grant Date:	%%OPTION_DATE,'Month DD, YYYY'%-%
Grant Number:	%%OPTION_NUMBER%-%
Units Granted:	%%TOTAL_SHARES_GRANTED,'999,999,999'%-%
Vesting Date:	%%VEST_DATE_PERIOD1,'Month DD, YYYY'%-%

The Board of Directors of Caterpillar Inc. (the "Company") has granted you the number of restricted stock units ("RSUs") specified above on the date specified above (the "Grant Date") pursuant to, and subject to the restrictions, terms and conditions set forth in, the Caterpillar Inc. 2014 Long-Term Incentive Plan (the "Plan"). This Award Notice and the Plan specify the material terms and provisions applicable to such restricted stock unit award (the "RSU Award"). Capitalized terms not defined herein shall have the meanings specified in the Plan.

Vesting

The RSU Award will become fully vested on the vesting date specified above (the "Vesting Date"). As soon as administratively practicable, but not later than 60 days, after the Vesting Date, the Company shall issue or deliver to you, subject to the conditions of this Award Notice, unrestricted shares of Common Stock equal to the number of RSUs that become vested, rounded up or down to the nearest whole number, less any shares withheld to satisfy any applicable income and payroll tax withholding requirements.

With limited exception as described more fully below, if your service on the Caterpillar Inc. Board of Directors (the "Board") terminates prior to the Vesting Date, the RSU Award will be forfeited. Your RSU Award is also subject to certain additional forfeiture conditions set forth in Sections 5.16 and 5.17 of the Plan.

Voting Rights

During the period between the Grant Date and the date the shares subject to such RSUs are issued or delivered to you (the "Restriction Period"), you are not entitled to any voting rights with respect to such RSUs. From and after the date shares are actually issued or delivered, you then will have full voting rights with respect to those shares.

Dividend Equivalents; Dividends

On each date that a cash dividend is paid to holders of Common Stock, an amount equal to the cash dividend that is paid on each share of Common Stock, multiplied by the number of RSUs that remain unvested and outstanding as of the dividend payment date (the "Dividend Equivalent Amount") shall be credited for your benefit. Unless otherwise determined by the Board or Committee in its discretion, the aggregate Dividend Equivalent Amount, if any, credited to you shall be converted into an additional number of RSUs determined by dividing the Dividend Equivalent Amount by the Fair Market Value of a share of Common Stock on the dividend payment date (the "Dividend Equivalent RSUs"). The Dividend Equivalent RSUs, if any, will vest on the same Vesting Date corresponding to the underlying RSUs with respect to which the Dividend Equivalent RSUs were credited, and will otherwise be subject to the same conditions applicable to the underlying RSUs, including, without limitation, the provisions governing time and form of settlement; *provided however, that* Dividend Equivalent RSUs will not accrue on Dividend Equivalent RSUs. Unless expressly provided otherwise, as used elsewhere in this Agreement "RSUs" shall include any Dividend Equivalent RSUs that have been credited to you. From and after the date shares of Common Stock are actually issued or delivered upon settlement of the RSUs, you then will have dividend rights with respect to those shares.

Termination of Service as Director

Your termination of service on the Board prior to the Vesting Date will impact the unvested RSUs as follows:

- **Six-Month Continuous Service Period**
  If your service on the Board terminates at least six months after the Grant Date, the RSU Award will continue to become vested as of the Vesting Date as though your service on the Board had continued

through the Vesting Date, and shares of Common Stock, less any shares withheld to satisfy any applicable income and payroll tax withholding requirements, will be issued or delivered to you as soon as administratively practicable, but not later than 60 days, following the Vesting Date.

- **Death**
  If your service on the Board terminates by reason of death, the RSU Award will become fully vested and shares of Common Stock, less any shares withheld to satisfy any applicable income and payroll tax withholding requirements, will be issued or delivered to your beneficiary or your estate (as applicable), as soon as administratively practicable, but not later than 2½ months, following the date of your death.
- **Change in Control**
  In the event of a Change in Control prior to the end of the Restriction Period pursuant to which your RSU Award is effectively continued, assumed or replaced by the surviving or acquiring corporation in such Change in Control (with appropriate adjustments to the number and kind of shares, in each case, that preserve the material terms and conditions of the outstanding RSU Award as in effect immediately prior to the Change in Control) and your service on the Board ceases in connection with such Change in Control, the RSU Award will immediately become fully vested and shares of Common Stock, less any shares withheld to satisfy any applicable income and payroll tax withholding requirements, will be issued or delivered to you as soon as administratively practicable, but not later than 60 days, following the Vesting Date. In the event of a vesting acceleration event upon a Change in Control pursuant to Section 5.9(a)(ii) or (iii) of the Plan, the shares of Common Stock (or cash amount, as applicable), less any shares (or cash amount, as applicable) withheld to satisfy any applicable income and payroll tax withholding requirements, will be issued or delivered to you as soon as administratively practicable, but not later than 60 days, following the date of the Change in Control, provided that if the RSUs are non-qualified deferred compensation subject to Code Section 409A and the Change in Control is not a "change in control event" within the meaning of U.S. Treas. Reg. §1.409A-3(i)(5), the RSUs will vest in accordance with Section 5.9(a)(ii) of the Plan, but the vested portion of the RSUs shall instead be settled in cash (in an amount calculated consistent with the methodology described in Section 5.9(a)(iii)), less any amount withheld to satisfy any applicable income and payroll tax withholding requirements, as soon as administratively practicable, but not later than 60 days following the applicable Vesting Date.
- **Other**
  If your service on the Board terminates prior to the Vesting Date for any reason other than as described above, all unvested RSUs subject to this RSU Award will lapse and shall be immediately forfeited.

Disability
Upon a determination by the Company's Director of Total Rewards that you have a Disability (as defined below), the RSU Award will become fully vested and shares of Common Stock, less any shares withheld to satisfy any applicable income and payroll tax withholding requirements, will be issued or delivered to you as soon as administratively practicable, but not later than 60 days, following the date of such determination. For purposes of this RSU Award, "Disability" means that you are unable to engage in any substantial gainful business activity by reason of any medically determinable physical or mental impairment that can be expected to result in death, or which has lasted or can be expected to last for a continuous period of not less than 12 months, as determined by the Company's Director of Total Rewards, based upon medical evidence.

Transferability of Award
Subject to certain exceptions set forth in the Plan, the RSU Award may not be assigned, transferred, pledged or hypothecated in any way. The RSU Award is not subject to execution, attachment or similar process. Any attempt at such, contrary to the provisions of the Plan, will be null and void and without effect. Note that once RSUs vest and shares of Common Stock are actually issued or delivered, you will have the ability to transfer those shares.

Designation of Beneficiary
You may designate a beneficiary (or beneficiaries) to whom any shares of Common Stock that are issued to your stock plan account with the Company's stock plan administrator upon the vesting of the RSUs will be paid upon your death. If you do not designate a beneficiary, such shares will be paid to your estate or to such other payee determined in accordance with procedures established by the Company's stock plan administrator.

Administration of the Plan

The RSU Award shall at all times be subject to the terms and provisions of the Plan and the Plan shall be administered in accordance with the terms of, and as provided in, the Plan. In the event of conflict between the terms and provisions of this Award Notice and the terms and provisions of the Plan, the provisions of the Plan shall control.

Code Section 409A

It is intended that this Award Notice and the administration of the RSU Award comply with Section 409A of the Internal Revenue Code of 1986, as amended, and the Treasury Regulations promulgated, and other official guidance issued thereunder ("Code Section 409A"), to the extent applicable. The Plan and this Award Notice shall be interpreted and construed on a basis consistent with such intent. Notwithstanding anything contained herein to the contrary, no shares may be issued or delivered unless in compliance with Code Section 409A to the extent that Code Section 409A applies. To the extent this Award Notice provides for the RSU Award to be settled by reference to your termination of service, your service shall be deemed to have terminated upon your "separation from service," within the meaning of Code Section 409A. The Committee reserves the right (including the right to delegate such right) to unilaterally amend this Award Notice (and thus the terms of the RSU Award) without your consent solely in order to maintain an exclusion from the application of, or to maintain compliance with, Code Section 409A. Your acceptance of this RSU Award constitutes acknowledgement and consent to such rights of the Committee. This provision does not create an obligation on the part of the Company to modify the terms of this Award Notice or the Plan and does not guarantee that this RSU Award or the delivery of shares of Common Stock upon settlement of the RSU Award will not be subject to taxes, interest and penalties or any other adverse tax consequences under Code Section 409A. Nothing in this Award Notice shall provide a basis for any person to take any action against the Company or any of its Subsidiaries or affiliates based on matters covered by Code Section 409A, including the tax treatment of any amounts paid under this Award Notice, and neither the Company nor any of its Subsidiaries or affiliates will have any liability under any circumstances to you or any other party if the RSU Award, the delivery of shares of Common Stock upon vesting/settlement of the RSU Award or other payment or tax event hereunder that is intended to be exempt from, or compliant with, Code Section 409A, is not so exempt or compliant or for any action taken by the Committee with respect thereto.

Tax Impact

Please refer to the Plan prospectus and support materials for a general description of the tax consequences of an RSU Award. You may also wish to consult with your personal tax advisor regarding how the RSU Award impacts your individual tax situation. Nothing contained in this Award Notice or in the Plan prospectus shall be construed as a guarantee of any particular tax effect for any benefits or amounts deferred or paid pursuant to this Award Notice.

Withholding

The distribution of shares of Common Stock in connection with the vesting of the RSU Award is a taxable event in many taxing jurisdictions. At your election, the Company may withhold taxes upon the taxable event. To satisfy this withholding obligation, you hereby authorize the Company to withhold that number of shares that would satisfy the withholding obligation from the shares otherwise to be issued or delivered to you under the RSU Award. The following conditions apply to such withholding: (a) the value of the shares of Common Stock withheld must equal the minimum withholding obligation; and (b) the value of the shares of Common Stock withheld shall be the Fair Market Value determined as of the date the RSUs become vested. For this purpose and for all purposes of this RSU Award, Fair Market Value shall mean the mean between the high and low prices at which a share of Common Stock of the Company is traded on the New York Stock Exchange. Alternatively, you may select any of the following methods to satisfy withholding obligations upon a taxable event applicable to your RSU Award in lieu of the net share withholding method described in the immediately preceding sentence: (i) a cash payment by you to the Company, (ii) your delivery (either actual delivery or by attestation procedures established by the Company) to the Company of previously issued whole shares of Common Stock having an aggregate Fair Market Value equal to the amount necessary to satisfy any such obligation, or (iii) any other method of withholding determined by the Company and permitted by applicable laws and the Plan. Notwithstanding the foregoing, the net share withholding method described above will not be used for any tax-related withholding obligations that become payable in a year prior to the year that shares are issued or delivered to you and, instead, you authorize the Company (or your employer) to use a method determined appropriate by the Company and permitted by applicable laws and the Plan.

Compliance with Securities Laws
The RSU Award is subject to the condition that if the listing, registration or qualification of the shares of Common Stock subject to the RSU Award upon any securities exchange or under any law, or the consent or approval of any governmental body, or the taking of any other action is necessary or desirable as a condition of, or in connection with, the issuance or delivery of shares hereunder, the shares of Common Stock subject to the RSU Award shall not be issued or delivered, in whole or in part, unless such listing, registration, qualification, consent, approval or other action shall have been effected or obtained, free of any conditions not acceptable to the Company. The Company agrees to use reasonable efforts to effect or obtain any such listing, registration, qualification, consent, approval or other action.

Adjustment of Shares
Provisions are made within the Plan covering the effect of stock dividends, stock splits, changes in par value, changes in kind of stock, sale, merger, recapitalization, reorganization, etc.

Awards Subject to Forfeiture, Clawback and Setoff
The RSU Award is subject to certain forfeiture conditions set forth in the Plan, which in the event such conditions are determined to have occurred, may result in immediate forfeiture and cancellation of your outstanding RSU Award or an obligation to repay the Company the total amount of award gain realized upon settlement of your RSU Award. Also, the Company generally may deduct from and set off against any amounts the Company owes to you, including amounts payable in connection with this RSU Award, such amounts you may owe to the Company.

Effect on Other Benefits
The RSU Award is not intended to and shall not impact the coverage of or the amount of any other benefit plans in which you participate that are sponsored by the Company or any of its Subsidiaries or affiliates.

Award Confers No Rights to Continued Service on the Board
In no event shall the granting of the RSU Award or its acceptance by you, or any provision of the Award Notice or the Plan, give or be deemed to give you any right to continued service on the Board.

Decisions of Board or Committee
The Board or the Committee shall have the right to resolve all questions which may arise in connection with the RSU Award. Any interpretation, determination or other action made or taken by the Board or the Committee regarding the Plan or this RSU Award shall be final, binding and conclusive.

Successors
This Award Notice shall be binding upon and inure to the benefit of any successor or successors of the Company and any person or persons who shall acquire any rights hereunder in accordance with this Award Notice or the Plan.

Severability
The invalidity or unenforceability of any particular provision of this Award Notice shall not affect the other provisions hereof and this Award Notice shall be construed in all respects as if such invalid or unenforceable provision was omitted.

Governing Law & Venue
This Award Notice, the RSU Award and all determinations made and actions taken pursuant hereto and thereto, to the extent not governed by the laws of the United States, shall be governed by the laws of the State of Delaware and construed in accordance therewith without giving effect to principles of conflicts of laws. You expressly consent to the exclusive jurisdiction of the federal and state courts serving Deerfield, Illinois for all lawsuits and actions arising out of or relating to the RSU Award and this Award Notice, and you expressly waive any defense

that such courts lack personal jurisdiction over you. All such lawsuits and actions shall be tried in the federal or state courts serving Deerfield, Illinois to the exclusion of all other courts.

Entire Agreement

This Award Notice and the Plan constitute the entire agreement between you and the Company with respect to the subject matter hereof and supersede in their entirety all prior undertakings and agreements between you and the Company with respect to the subject matter hereof, and except as provided herein, may not be modified adversely to your interest except by means of a writing signed by you and the Company.

Acceptance of Award

You are required to accept this Award Notice within your stock plan account with the Company's stock plan administrator according to the procedures then in effect. Your acceptance of this Award Notice constitutes acknowledgement of receipt of the Plan and this RSU Award and consent to the terms of the Plan and this Award Notice as described in the Plan and this Award Notice.

Notices

All notices, requests or other communications provided for in this Award Notice shall be made, if to the Company, to Caterpillar Inc., Equity Compensation Administration, 100 N.E. Adams Street, Peoria, IL 61629-4440 (or, if applicable, to any updated address provided by the Company for such purposes), and if to you, to your last known mailing address on file with the Company's stock plan administrator. All notices, requests or other communications provided for in this Award Notice shall be made in writing either (a) by personal delivery, (b) by facsimile or electronic mail with confirmation of receipt, (c) by mailing in the United States mail or (d) by express courier service. The notice, request or other communication shall be deemed to be received upon personal delivery, upon confirmation of receipt of facsimile or electronic mail transmission or upon receipt by the party entitled thereto if by United States mail or express courier service; provided, however, that if a notice, request or other communication sent to the Company is not received during regular business hours, it shall be deemed to be received on the next succeeding business day of the Company.

Further Information

For more detailed information about the Plan, please refer to the Plan prospectus or the Plan itself. If you have any questions regarding the administration of Caterpillar's equity compensation program, please reach out to your Executive Compensation contact at Caterpillar or e-mail executivecompensation@cat.com.

Caterpillar Inc.
2014 Long-Term Incentive Plan
Nonqualified Stock Option Award Notice

%%FIRST_NAME_MIDDLE_NAME_LAST_NAME%-%

Grant Date:	%%OPTION_DATE,'Month DD, YYYY'%-%
Grant Number:	%%OPTION_NUMBER%-%
Units Granted:	%%TOTAL_SHARES_GRANTED,'999,999,999'%-%
Option Price:	%%OPTION_PRICE,'$999,999,999.99'%-%
Expiration Date:	%%EXPIRE_DATE_PERIOD1,'Month DD, YYYY'%-%

The Board of Directors of Caterpillar Inc. (the "Company") has granted you the number of nonqualified stock options ("NQSOs") specified above on the date specified above (the "Grant Date") pursuant to, and subject to the restrictions, terms and conditions set forth in, the Caterpillar Inc. 2014 Long-Term Incentive Plan (the "Plan") at the price specified above per share, which is the closing transaction price of a share of Company Common Stock as reported on the New York Stock Exchange on the Grant Date. This Award Notice and the Plan specify the material terms and provisions applicable to such nonqualified stock option award (the "Option Award"). Capitalized terms not defined herein shall have the meanings specified in the Plan.

Vesting

Except to the extent the NQSOs are forfeited upon your termination of employment, as provided below, the NQSOs will become vested in the amounts and on the vesting date(s) specified below (each such date, a "Vesting Date").

Vesting Date	NQSOs Vesting
%%VEST_DATE_PERIOD1,'Month DD, YYYY'%-%	%%SHARES_PERIOD1%-%
%%VEST_DATE_PERIOD2,'Month DD, YYYY'%-%	%%SHARES_PERIOD2%-%
%%VEST_DATE_PERIOD3,'Month DD, YYYY'%-%	%%SHARES_PERIOD3%-%

If you terminate employment prior to the date the NQSOs have become fully vested for any reason other than Long-Service Separation, Disability, death or in connection with a Change in Control (as described more fully below), the unvested NQSOs will be forfeited. Your Option Award is also subject to certain additional forfeiture conditions set forth in Sections 5.16 and 5.17 of the Plan and in the Post-Employment Restrictions section of this Award Notice.

Exercise of Award

The Option Award may only be exercised through the Plan's designated administrator, currently E*TRADE, or through such other means as the Company may designate. You may exercise the Option Award by providing notice of exercise, in a manner specified by the Company, setting forth the number of shares to be exercised, accompanied by full payment for the shares. The exercise price shall be payable at your election by: (1) tendering cash, (2) tendering previously acquired shares of Company Common Stock, (3) except as may be prohibited by applicable law, a broker-dealer, acceptable to the Company and to whom you submitted an irrevocable notice of exercise, tendering cash, (4) authorizing the Company to withhold whole shares of Common Stock which would otherwise be delivered, or (5) any combination of (1), (2), (3) and (4).

The Option Award will expire unless exercised by the expiration date specified above (the "Expiration Date"), the tenth anniversary of the Grant Date. If the Expiration Date occurs during any period in which you are prohibited from trading Company Common Stock pursuant to the Company's insider trading policy or during a period when the exercise of the Option Award would violate applicable securities law (a "Blackout Period"), then the Option Award will not expire on the Expiration Date. Instead, the Option Award will not expire until the date that is 30 days after the expiration of the Blackout Period.

Voting Rights
During the period between the Grant Date and the date you exercise your vested NQSOs and the shares subject to such NQSOs are issued or delivered to you (the "Restriction Period"), you are not entitled to any voting rights with respect to such NQSOs. From and after the date shares are actually issued or delivered, you then will have full voting rights with respect to those shares.

Dividends and Other Distributions
During the Restriction Period, you will not receive or be credited with dividends or any other distributions (*e.g.,* dividend equivalents) with respect to the NQSOs. From and after the date shares are actually issued or delivered, you then will have dividend rights with respect to those shares.

Termination of Employment
Your termination of employment with the Company prior to the date the NQSOs become fully vested will impact the unvested NQSOs as follows:

- **Long-Service Separation**
  If your employment with the Company terminates at least six months after the Grant Date by reason of Long-Service Separation (as defined below), your unvested NQSOs will continue to become vested and exercisable as of each Vesting Date as though your employment with the Company had continued through the last scheduled Vesting Date. In such event, your Option Award will remain exercisable until the Expiration Date. For purposes of this Option Award, "Long-Service Separation" means termination of employment after attainment of age 55 with 5 or more years of continuous service with the Company, as determined by the Company in its sole discretion.
- **Disability**
  If your employment with the Company terminates by reason of Disability (as defined below), your unvested NQSOs will become fully vested. In such event, your Option Award will remain exercisable until the Expiration Date. For purposes of this Option Award, "Disability" means, unless otherwise provided for in an employment, change in control or similar agreement in effect between you and the Company or a Subsidiary, qualifying for long-term disability benefits under any long-term disability program sponsored by the Company or a Subsidiary in which you participate or, if you do not participate in any such program, your inability to engage in any substantial gainful business activity by reason of any medically determinable physical or mental impairment that can be expected to result in death, or which has lasted or can be expected to last for a continuous period of not less than 12 months, as determined by the Company's Director of Total Rewards, based upon medical evidence.
- **Death**
  If your employment with the Company terminates by reason of death, your unvested NQSOs will become fully vested and your estate or your beneficiary (as applicable) will have until the Expiration Date to exercise the Option Award. If you die after your termination of employment when the Option Award is otherwise exercisable, the Option Award will remain exercisable by your estate or your beneficiary (as applicable) until: (a) the Expiration Date if your termination of employment was due to Long-Service Separation, Disability or in connection with a Change in Control; or (b) the earlier of: (1) the Expiration Date or (2) 38 months following your termination of employment if your termination of employment was for any reason other than Long-Service Separation, Disability or in connection with a Change in Control.
- **Change in Control**
  In the event of a Change in Control prior to the date the NQSOs become fully vested pursuant to which your Option Award is effectively continued, assumed or replaced by the surviving or acquiring corporation in such Change in Control (with appropriate adjustments to the number and kind of shares, in each case, that preserve the material terms and conditions of the outstanding Option Award as in effect immediately prior to the Change in Control) and your employment is terminated either by the Company without Cause or by you for Good Reason, as defined in the Plan, within the 24–month period commencing on the date of the Change in Control, your unvested NQSOs will immediately become fully vested. In such event, your Option Award will remain exercisable until the Expiration Date.
- **Cause**

If your employment with the Company is terminated for Cause (as defined in the Plan), all of your unexercised NQSOs associated with the Option Award (whether vested or non-vested) shall expire immediately and all rights thereunder cease upon such termination.

- **Other**
  If your employment with the Company terminates prior to the date the NQSOs become fully vested for any reason other than Long-Service Separation, Disability, death, Cause or in connection with a Change in Control, all unvested NQSOs associated with this Option Award shall be immediately forfeited to the Company. In such event, with respect to vested NQSOs, you will have until the earlier of (1) the Expiration Date or (2) the date which is 60 days following the date of your termination of employment to exercise the Option Award.

For purposes of this Option Award, references to employment with the Company shall also mean employment with a Subsidiary. The extent to which you shall be considered employed during any periods during which you are on a leave of absence shall be determined in accordance with Company policy.

Transferability of Award
Subject to certain exceptions set forth in the Plan, the Option Award is only exercisable by you (or your beneficiary, estate or representative, as applicable) and may not be assigned, transferred, pledged or hypothecated in any way. The Option Award is not subject to execution, attachment or similar process. Any attempt at such, contrary to the provisions of the Plan, will be null and void and without effect. Note that once your Option Award is exercised and shares of Common Stock are actually issued or delivered, you will have the ability to transfer those shares.

Designation of Beneficiary
Any vested and unexercised NQSOs will transfer to your estate upon your death. If you wish to designate a beneficiary for the NQSOs, contact executivecompensation@cat.com for additional information. You may designate a beneficiary (or beneficiaries) to whom any shares of Common Stock issued to your stock plan account with the Company's stock plan administrator upon the exercise of the NQSOs will be paid upon your death. If you do not designate a beneficiary, such shares will be paid to your estate or to such other payee determined in accordance with procedures established by the Company's stock plan administrator.

Administration of the Plan
The Option Award shall, at all times, be subject to the terms and provisions of the Plan and the Plan shall be administered in accordance with the terms of, and as provided in, the Plan. In the event of conflict between the terms and provisions of this Award Notice and the terms and provisions of the Plan, the provisions of the Plan shall control.

Code Section 409A
It is intended that this Award Notice and the administration of the Option Award will be exempt from Section 409A of the Internal Revenue Code of 1986, as amended, and the Treasury Regulations promulgated and other official guidance issued thereunder ("Code Section 409A"). The Plan and this Award Notice shall be interpreted and construed on a basis consistent with such intent. Notwithstanding anything contained herein to the contrary, the Committee reserves the right (including the right to delegate such right) to unilaterally amend this Award Notice (and thus the terms of the Option Award) without your consent solely in order to maintain an exclusion from the application of, or to maintain compliance with, Code Section 409A. Your acceptance of this Option Award constitutes acknowledgement and consent to such rights of the Committee. This provision does not create an obligation on the part of the Company to modify the terms of this Award Notice or the Plan and does not guarantee that this Option Award or the delivery of shares of Common Stock upon exercise of the Option Award will not be subject to taxes, interest and penalties or any other adverse tax consequences under Code Section 409A. Nothing in this Award Notice shall provide a basis for any person to take any action against the Company or any of its Subsidiaries or affiliates based on matters covered by Code Section 409A, including the tax treatment of any amounts paid under this Award Notice, and neither the Company nor any of its Subsidiaries or affiliates will have any liability under any circumstances to you or any other party if the Option Award, the delivery of shares of Common Stock upon exercise of the Option Award or other payment or tax event hereunder that is

intended to be exempt from, or compliant with, Code Section 409A, is not so exempt or compliant or for any action taken by the Committee with respect thereto.

Tax Impact

Please refer to the Plan prospectus and support materials for a general description of the tax consequences of an Option Award. You may also wish to consult with your personal tax advisor regarding how the Option Award impacts your individual tax situation. Nothing contained in this Award Notice or in the Plan prospectus shall be construed as a guarantee of any particular tax effect for any benefits or amounts deferred or paid pursuant to this Award Notice.

Withholding

The exercise of an NQSO is a taxable event in many taxing jurisdictions. In some countries, including the United States, the Company is required to withhold taxes upon the taxable event. To satisfy this withholding obligation, you hereby authorize the Company to withhold that number of shares that would satisfy the withholding obligation from the shares otherwise to be issued or delivered to you under the Option Award. The following conditions apply to such withholding: (a) the value of the shares of Common Stock withheld must equal the minimum withholding obligation; and (b) the value of the shares of Common Stock withheld shall be the Fair Market Value determined as of the exercise date. For this purpose and for all other purposes of this Option Award except the Option price as described above, Fair Market Value shall mean the mean between the high and low prices at which a share of Common Stock of the Company is traded on the New York Stock Exchange. Alternatively, by your acceptance of this Option Award, you hereby authorize the Company (or your employer), or their respective agents, to select any of the following methods to satisfy withholding obligations upon a taxable event applicable to your Option Award (i) a cash payment by you to the Company, (ii) your delivery (either actual delivery or by attestation procedures established by the Company) to the Company of previously issued whole shares of Common Stock having an aggregate Fair Market Value equal to the amount necessary to satisfy any such obligation, or (iii) any other method of withholding determined by the Company and permitted by applicable laws and the Plan; provided, however, that if you are subject to Section 16 of the Exchange Act, you shall be permitted to select among the methods set forth in subsection (i) through (iii) in lieu of the net share withholding method set forth in the immediately preceding sentence.

Compliance with Securities Laws

The Company will take steps required to achieve compliance with all applicable United States federal and state securities laws (and other laws, including registration requirements) and with the rules and practices of the stock exchanges upon which the stock of the Company is listed and the Option Award is subject to the requirements of such laws and rules. The Option Award is subject to the condition that if the listing, registration or qualification of the shares of Common Stock subject to the Option Award upon any securities exchange or under any law, or the consent or approval of any governmental body, or the taking of any other action is necessary or desirable as a condition of, or in connection with, the issuance or delivery of shares hereunder, the shares of Common Stock subject to the Option Award shall not be issued or delivered, in whole or in part, unless such listing, registration, qualification, consent, approval or other action shall have been effected or obtained, free of any conditions not acceptable to the Company. The Company agrees to use reasonable efforts to effect or obtain any such listing, registration, qualification, consent, approval or other action.

Adjustment of Shares

Provisions are made within the Plan covering the effect of stock dividends, stock splits, changes in par value, changes in kind of stock, sale, merger, recapitalization, reorganization, etc.

Awards Subject to Forfeiture, Clawback and Setoff

The Option Award (and its exercise) is subject to certain forfeiture conditions set forth in the Plan which, in the event such conditions are determined to have occurred, may result in immediate forfeiture and cancellation of your outstanding Option Award or an obligation to repay the Company the total amount of award gain realized upon exercise of your Option Award. Also, the Company generally may deduct from and set off against any amounts the Company owes to you, including amounts payable in connection with this Option Award, such amounts you may owe to the Company.

Effect on Other Benefits
The Option Award is not intended to and shall not impact the coverage of or the amount of any other employee benefit plans in which you participate that are sponsored by the Company or any of its Subsidiaries or affiliates.

Award Confers No Rights to Continued Employment
In no event shall the granting of the Option Award or its acceptance by you, or any provision of the Award Notice or the Plan, give or be deemed to give you any right to continued employment by the Company, any Subsidiary or any affiliate of the Company or affect in any manner the right of the Company, any Subsidiary or any affiliate of the Company to terminate your employment at any time.

Decisions of Board or Committee
The Board or the Committee shall have the right to resolve all questions which may arise in connection with the Option Award. Any interpretation, determination or other action made or taken by the Board or the Committee regarding the Plan or this Option Award shall be final, binding and conclusive.

Successors
This Award Notice shall be binding upon and inure to the benefit of any successor or successors of the Company and any person or persons who shall acquire any rights hereunder in accordance with this Award Notice or the Plan.

Severability
The invalidity or unenforceability of any particular provision of this Award Notice shall not affect the other provisions hereof and this Award Notice shall be construed in all respects as if such invalid or unenforceable provision was omitted.

Governing Law & Venue
This Award Notice, the Option Award and all determinations made and actions taken pursuant hereto and thereto, to the extent not governed by the laws of the United States, shall be governed by the laws of the State of Delaware and construed in accordance therewith without giving effect to principles of conflicts of laws. You expressly consent to the exclusive jurisdiction of the federal and state courts serving Deerfield, Illinois for all lawsuits and actions arising out of or relating to the Option Award and this Award Notice, and you expressly waive any defense that such courts lack personal jurisdiction over you. All such lawsuits and actions shall be tried in the federal or state courts serving Deerfield, Illinois to the exclusion of all other courts.

Entire Agreement
This Award Notice and the Plan constitute the entire agreement between you and the Company with respect to the subject matter hereof and supersede in their entirety all prior undertakings and agreements between you and the Company with respect to the subject matter hereof, and except as provided herein, may not be modified adversely to your interest except by means of a writing signed by you and the Company.

Acceptance of Award
You are required to electronically accept this Award Notice within your stock plan account with the Company's stock plan administrator according to the procedures then in effect in order to receive the Option Award. Your acceptance of this Award Notice constitutes acknowledgement of receipt of the Plan and this Option Award and consent to the terms of the Plan and this Award Notice as described in the Plan and this Award Notice. You have at least 14 calendar days to consider this Award Notice before accepting it, but you may voluntarily waive this period and accept sooner. Please be advised that you may consult with an attorney of your own choosing to seek independent advice before accepting this Option Award. By accepting this Award Notice, you acknowledge that you have accepted it knowingly and voluntarily and with the full knowledge and understanding of its provisions after being given the opportunity to consult with counsel.

Notices
All notices, requests or other communications provided for in this Award Notice shall be made, if to the Company, to Caterpillar Inc., Equity Compensation Administration, 100 N.E. Adams Street, Peoria, IL 61629-4440 (or, if applicable, to any updated address provided by the Company for such purposes), and if to you,

to your last known mailing address on file with the Company's stock plan administrator. All notices, requests or other communications provided for in this Award Notice shall be made in writing either (a) by personal delivery, (b) by facsimile or electronic mail with confirmation of receipt, (c) by mailing in the United States mail or (d) by express courier service. The notice, request or other communication shall be deemed to be received upon personal delivery, upon confirmation of receipt of facsimile or electronic mail transmission or upon receipt by the party entitled thereto if by United States mail or express courier service; provided, however, that if a notice, request or other communication sent to the Company is not received during regular business hours, it shall be deemed to be received on the next succeeding business day of the Company.

Post-Employment Restrictions

By accepting this Option Award, you agree that until 12 months following your termination of employment, you will not directly or indirectly, without the prior written consent of Caterpillar Inc., do any of the following:

i. solicit any business competitive with any Company business from any person or entity who: (a) was a provider or customer to the Company within the 18 months before your termination of employment date and (b) with whom you had contact to further the Company's business or for whom you performed services, or supervised the provision of services for, during your employment;
ii. hire, employ, recruit or solicit any employee of or consultant to the Company who possesses confidential information of the Company;
iii. induce or influence any employee, consultant, customer or provider to the Company to terminate his, her or its employment or other relationship with the Company;
iv. engage or participate in, or in any way render services or assistance to, any business that competes, directly or indirectly, with any Company product or service that you participated in, engaged in, or had confidential information regarding, in any geographic territory over which you had responsibilities, during the 18 months before your termination of employment date; or
v. assist anyone in any of the activities listed above.

For purposes of the preceding, "Company" also includes each and all of the Company's parents, Subsidiaries, and affiliates. If you reside or work in the State of California, only subsection (ii) above is applicable to you.

If you engage in any of the activities listed above without the prior written consent of Caterpillar Inc. within the first 12 months following your termination of employment, all of your unexercised NQSOs associated with the Option Award (whether vested or non-vested) shall expire immediately and all rights thereunder cease upon such termination.

Further Information

For more detailed information about the Plan, please refer to the Plan prospectus or the Plan itself. Copies of these documents can be obtained on the Documents & Forms tab in the Executive Compensation portal on cat@work. If you have any questions regarding the administration of Caterpillar's equity compensation program, please contact executivecompensation@cat.com.

Caterpillar Inc.
2014 Long-Term Incentive Plan
Performance-Based Restricted Stock Unit Award Notice

%%FIRST_NAME_MIDDLE_NAME_LAST_NAME%-%

Grant Date:	%%OPTION_DATE,'Month DD, YYYY'%-%
Grant Number:	%%OPTION_NUMBER%-%
Units Granted:	%%TOTAL_SHARES_GRANTED,'999,999,999'%-%
Vesting Date:	%%VEST_DATE_PERIOD1,'Month DD, YYYY'%-%

The Board of Directors of Caterpillar Inc. (the "Company") has granted you the number of restricted stock units ("RSUs") specified above on the date specified above (the "Grant Date") pursuant to, and subject to the restrictions, terms and conditions set forth in, the Caterpillar Inc. 2014 Long-Term Incentive Plan (the "Plan"). This Award Notice and the Plan specify the material terms and provisions applicable to such restricted stock unit award (the "RSU Award"). Capitalized terms not defined herein shall have the meanings specified in the Plan.

Vesting

Except to the extent the RSUs are forfeited upon your termination of employment as provided below, the RSU Award will vest as of the vesting date specified above (the "Vesting Date") if the Company achieves the performance goal(s) established by the Committee (the "Performance Goals") for the performance period below (the "Performance Period"), as set forth in Appendix A hereto.

Performance Period Start Date:	%%GRANT_USER_DEFINED_FIELD_11%-%
Performance Period End Date:	%%GRANT_USER_DEFINED_FIELD_12%-%

As soon as administratively practicable, but not later than two and one-half months, after the Performance Period End Date specified above, the Company shall issue or deliver to you, subject to the achievement of the Performance Goals and the other conditions of this Award Notice, unrestricted shares of Common Stock equal to the number of RSUs that become vested, rounded up or down to the nearest whole number, less any shares withheld to satisfy any applicable income and payroll tax withholding requirements.

If you terminate employment prior to the date the RSUs have become fully vested for any reason other than Long-Service Separation, Disability, death or in connection with a Change in Control (as described more fully below), all of the unvested RSUs will be forfeited. Your RSU Award is also subject to certain additional forfeiture conditions set forth in Sections 5.16 and 5.17 of the Plan and in the Post-Employment Restrictions section of this Award Notice.

Voting Rights

During the period between the Grant Date and the date the RSUs become vested and the shares subject to such RSUs are issued or delivered to you (the "Restriction Period"), you are not entitled to any voting rights with respect to such RSUs. From and after the date shares are actually issued or delivered, you then will have full voting rights with respect to those shares.

Dividend Equivalents; Dividends

On each date that a cash dividend is paid to holders of Common Stock, an amount equal to the cash dividend that is paid on each share of Common Stock, multiplied by the number of RSUs that remain unvested and outstanding as of the dividend payment date (the "Dividend Equivalent Amount") shall be credited for your benefit. Unless otherwise determined by the Board or Committee in its discretion, the aggregate Dividend Equivalent Amount, if any, credited to you shall be converted into an additional number of RSUs determined by dividing the Dividend Equivalent Amount by the Fair Market Value of a share of Common Stock on the dividend payment date (the "Dividend Equivalent RSUs"). The Dividend Equivalent RSUs, if any, will vest on the same Vesting Date corresponding to the underlying RSUs with respect to which the Dividend Equivalent RSUs were credited, and will otherwise be subject to the same conditions applicable to the underlying RSUs, including, without limitation, the provisions governing time and form of settlement; *provided however, that* Dividend Equivalent RSUs will not accrue on Dividend Equivalent RSUs. Unless expressly provided otherwise, as used elsewhere in this Agreement "RSUs" shall include any Dividend Equivalent RSUs that have been credited to you. From and after the date shares of Common Stock are actually issued or delivered upon settlement of the RSUs, you then will have dividend rights with respect to those shares.

Termination of Employment
If your employment with the Company terminates prior to the Vesting Date, all unvested RSUs subject to this RSU Award will lapse and shall be immediately forfeited, except as follows:

- **Long-Service Separation**
  If your employment with the Company terminates at least six months after the Grant Date by reason of Long-Service Separation (as defined below), the RSU Award will remain outstanding and the RSUs will become vested if and to the extent the Performance Goals for the full Performance Period are achieved. For purposes of this RSU Award, "Long-Service Separation" means termination of employment for any reason other than for Cause after attainment of age 55 with 5 or more years of continuous service with the Company, as determined by the Company in its sole discretion.
- **Disability**
  If your employment with the Company terminates by reason of Disability, the RSU Award will remain outstanding and the RSUs will become vested if and to the extent the Performance Goals are achieved. For purposes of this RSU Award, "Disability" means, unless otherwise provided for in an employment, change in control or similar agreement in effect between you and the Company or a Subsidiary, qualifying for long-term disability benefits under any long-term disability program sponsored by the Company or a Subsidiary in which you participate or, if you do not participate in any such program, your inability to engage in any substantial gainful business activity by reason of any medically determinable physical or mental impairment that can be expected to result in death, or which has lasted or can be expected to last for a continuous period of not less than 12 months, as determined by the Company's Director of Total Rewards, based upon medical evidence.
- **Death**
  If your employment with the Company terminates by reason of death, your unvested RSUs will become fully vested and shares of Common Stock, less any shares withheld to satisfy any applicable income and payroll tax withholding requirements, will be issued or delivered to your beneficiary or your estate (as applicable), as soon as administratively practicable, but not later than 2½ months, following the date of your death.
- **Change in Control**
  In the event of a Change in Control prior to the end of the Restriction Period pursuant to which your RSU Award is effectively continued, assumed or replaced by the surviving or acquiring corporation in such Change in Control (with appropriate adjustments to the number and kind of shares, in each case, that preserve the material terms and conditions of the outstanding RSU Award as in effect immediately prior to the Change in Control) and your employment is terminated either by the Company or its successor without Cause or by you for Good Reason, as defined in the Plan, within the 24–month period commencing on the date of the Change in Control, all of the RSUs will immediately become fully vested and shares of Common Stock, less any shares withheld to satisfy any applicable income and payroll tax withholding requirements, will be issued or delivered to you as soon as administratively practicable, but not later than two and one-half months, after your termination of employment.

For purposes of this RSU Award, references to employment with the Company shall also mean employment with a Subsidiary. The extent to which you shall be considered employed during any periods during which you are on a leave of absence shall be determined in accordance with Company policy.

Transferability of Award
Subject to certain exceptions set forth in the Plan, the RSU Award may not be assigned, transferred, pledged or hypothecated in any way. The RSU Award is not subject to execution, attachment or similar process. Any attempt

at such, contrary to the provisions of the Plan, will be null and void and without effect. Note that once RSUs vest and shares of Common Stock are actually issued or delivered, you will have the ability to transfer those shares.

Designation of Beneficiary

You may designate a beneficiary (or beneficiaries) to whom any shares of Common Stock that are issued to your stock plan account with the Company's stock plan administrator upon the vesting of the RSUs will be paid upon your death. If you do not designate a beneficiary, such shares will be paid to your estate or to such other payee determined in accordance with procedures established by the Company's stock plan administrator.

Administration of the Plan

The RSU Award shall, at all times, be subject to the terms and provisions of the Plan and the Plan shall be administered in accordance with the terms of, and as provided in, the Plan. In the event of conflict between the terms and provisions of this Award Notice and the terms and provisions of the Plan, the provisions of the Plan shall control.

Code Section 409A

It is intended that this Award Notice and the administration of the RSU Award comply with Section 409A of the Internal Revenue Code of 1986, as amended, and the Treasury Regulations promulgated, and other official guidance issued thereunder ("Code Section 409A"), to the extent applicable. The Plan and this Award Notice shall be interpreted and construed on a basis consistent with such intent. Notwithstanding anything contained herein to the contrary, no shares may be issued or delivered unless in compliance with Code Section 409A to the extent that Code Section 409A applies. To the extent this Award Notice provides for the RSU Award to be settled by reference to your termination of employment, your employment shall be deemed to have terminated upon your "separation from service," within the meaning of Code Section 409A. The Committee reserves the right (including the right to delegate such right) to unilaterally amend this Award Notice (and thus the terms of the RSU Award) without your consent solely in order to maintain an exclusion from the application of, or to maintain compliance with, Code Section 409A. Your acceptance of this RSU Award constitutes acknowledgement and consent to such rights of the Committee. This provision does not create an obligation on the part of the Company to modify the terms of this Award Notice or the Plan and does not guarantee that this RSU Award or the delivery of shares of Common Stock upon settlement of the RSU Award will not be subject to taxes, interest and penalties or any other adverse tax consequences under Code Section 409A. Nothing in this Award Notice shall provide a basis for any person to take any action against the Company or any of its Subsidiaries or affiliates based on matters covered by Code Section 409A, including the tax treatment of any amounts paid under this Award Notice, and neither the Company nor any of its Subsidiaries or affiliates will have any liability under any circumstances to you or any other party if the RSU Award, the delivery of shares of Common Stock upon vesting/settlement of the RSU Award or other payment or tax event hereunder that is intended to be exempt from, or compliant with, Code Section 409A, is not so exempt or compliant or for any action taken by the Committee with respect thereto.

Tax Impact

Please refer to the Plan prospectus and support materials for a general description of the tax consequences of an RSU Award. You may also wish to consult with your personal tax advisor regarding how the RSU Award impacts your individual tax situation. Nothing contained in this Award Notice or in the Plan prospectus shall be construed as a guarantee of any particular tax effect for any benefits or amounts deferred or paid pursuant to this Award Notice.

Withholding

The distribution of shares of Common Stock in connection with the vesting of the RSU Award is a taxable event in many taxing jurisdictions. In some countries, including the United States, the Company is required to withhold taxes upon the taxable event. To satisfy this withholding obligation, you hereby authorize the Company to withhold that number of shares that would satisfy the withholding obligation from the shares otherwise to be issued or delivered to you under the RSU Award. The following conditions apply to such withholding: (a) the value of the shares of Common Stock withheld must equal the minimum withholding obligation; and (b) the value of the shares of Common Stock withheld shall be the Fair Market Value determined as of the date the RSUs become vested. For this purpose and for all purposes of this RSU Award, Fair Market Value shall mean the mean between the high and low prices at which a share of Common Stock of the Company is traded on the New York

Stock Exchange. Alternatively, by your acceptance of this RSU Award, you hereby authorize the Company (or your employer), or their respective agents, to select any of the following methods to satisfy withholding obligations upon a taxable event applicable to your RSU Award (i) a cash payment by you to the Company, (ii) your delivery (either actual delivery or by attestation procedures established by the Company) to the Company of previously issued whole shares of Common Stock having an aggregate Fair Market Value equal to the amount necessary to satisfy any such obligation, or (iii) any other method of withholding determined by the Company and permitted by applicable laws and the Plan; provided, however, that if you are subject to Section 16 of the Exchange Act, you shall be permitted to select among the methods set forth in (i) through (iii) above in lieu of the net share withholding method set forth in the immediately preceding sentence. Notwithstanding the foregoing, the net share withholding method described above will not be used for social security, FICA or other employment tax-related withholding obligations that become payable in a year prior to the year that shares are issued or delivered to you and, instead, you authorize the Company (or your employer) to use a method determined appropriate by the Company and permitted by applicable laws and the Plan.

Compliance with Securities Laws
The RSU Award is subject to the condition that if the listing, registration or qualification of the shares of Common Stock subject to the RSU Award upon any securities exchange or under any law, or the consent or approval of any governmental body, or the taking of any other action is necessary or desirable as a condition of, or in connection with, the issuance or delivery of shares hereunder, the shares of Common Stock subject to the RSU Award shall not be issued or delivered, in whole or in part, unless such listing, registration, qualification, consent, approval or other action shall have been effected or obtained, free of any conditions not acceptable to the Company. The Company agrees to use reasonable efforts to effect or obtain any such listing, registration, qualification, consent, approval or other action.

Adjustment of Shares
Provisions are made within the Plan covering the effect of stock dividends, stock splits, changes in par value, changes in kind of stock, sale, merger, recapitalization, reorganization, etc.

Awards Subject to Forfeiture, Clawback and Setoff
The RSU Award is subject to certain forfeiture conditions set forth in the Plan, which in the event such conditions are determined to have occurred, may result in immediate forfeiture and cancellation of your outstanding RSU Award or an obligation to repay the Company the total amount of award gain realized upon settlement of your RSU Award. Also, the Company generally may deduct from and set off against any amounts the Company owes to you, including amounts payable in connection with this RSU Award, such amounts you may owe to the Company.

Effect on Other Benefits
The RSU Award is not intended to and shall not impact the coverage of or the amount of any other employee benefit plans in which you participate that are sponsored by the Company or any of its Subsidiaries or affiliates.

Award Confers No Rights to Continued Employment
In no event shall the granting of the RSU Award or its acceptance by you, or any provision of the Award Notice or the Plan, give or be deemed to give you any right to continued employment by the Company, any Subsidiary or any affiliate of the Company or affect in any manner the right of the Company, any Subsidiary or any affiliate of the Company to terminate your employment at any time.

Decisions of Board or Committee
The Board or the Committee shall have the right to resolve all questions which may arise in connection with the RSU Award. Any interpretation, determination or other action made or taken by the Board or the Committee regarding the Plan or this RSU Award shall be final, binding and conclusive.

Successors
This Award Notice shall be binding upon and inure to the benefit of any successor or successors of the Company and any person or persons who shall acquire any rights hereunder in accordance with this Award Notice or the Plan.

Severability

The invalidity or unenforceability of any particular provision of this Award Notice shall not affect the other provisions hereof and this Award Notice shall be construed in all respects as if such invalid or unenforceable provision was omitted.

Governing Law & Venue

This Award Notice, the RSU Award and all determinations made and actions taken pursuant hereto and thereto, to the extent not governed by the laws of the United States, shall be governed by the laws of the State of Delaware and construed in accordance therewith without giving effect to principles of conflicts of laws. You expressly consent to the exclusive jurisdiction of the federal and state courts serving Deerfield, Illinois for all lawsuits and actions arising out of or relating to the RSU Award and this Award Notice, and you expressly waive any defense that such courts lack personal jurisdiction over you. All such lawsuits and actions shall be tried in the federal or state courts serving Deerfield, Illinois to the exclusion of all other courts.

Entire Agreement

This Award Notice and the Plan constitute the entire agreement between you and the Company with respect to the subject matter hereof and supersede in their entirety all prior undertakings and agreements between you and the Company with respect to the subject matter hereof, and except as provided herein, may not be modified adversely to your interest except by means of a writing signed by you and the Company.

Acceptance of Award

You are required to electronically accept this Award Notice within your stock plan account with the Company's stock plan administrator according to the procedures then in effect in order to receive the RSU Award. Your acceptance of this Award Notice constitutes acknowledgement of receipt of the Plan and this RSU Award and consent to the terms of the Plan and this Award Notice as described in the Plan and this Award Notice. You have at least 14 calendar days to consider this Award Notice before accepting it, but you may voluntarily waive this period and accept sooner. Please be advised that you may consult with an attorney of your own choosing to seek independent advice before accepting this RSU Award. By accepting this Award Notice, you acknowledge that you have accepted it knowingly and voluntarily and with the full knowledge and understanding of its provisions after being given the opportunity to consult with counsel.

Notices

All notices, requests or other communications provided for in this Award Notice shall be made, if to the Company, to Caterpillar Inc., Equity Compensation Administration, 100 N.E. Adams Street, Peoria, IL 61629-4440 (or, if applicable, to any updated address provided by the Company for such purposes), and if to you, to your last known mailing address on file with the Company's stock plan administrator. All notices, requests or other communications provided for in this Award Notice shall be made in writing either (a) by personal delivery, (b) by facsimile or electronic mail with confirmation of receipt, (c) by mailing in the United States mail or (d) by express courier service. The notice, request or other communication shall be deemed to be received upon personal delivery, upon confirmation of receipt of facsimile or electronic mail transmission or upon receipt by the party entitled thereto if by United States mail or express courier service; provided, however, that if a notice, request or other communication sent to the Company is not received during regular business hours, it shall be deemed to be received on the next succeeding business day of the Company.

Post-Employment Restrictions

By accepting this RSU Award, you agree that until 12 months following your termination of employment, you will not directly or indirectly, without the prior written consent of Caterpillar Inc., do any of the following:

i. solicit any business competitive with any Company business from any person or entity who: (a) was a provider or customer to the Company within the 18 months before your termination of employment date and (b) with whom you had contact to further the Company's business or for whom you performed services, or supervised the provision of services for, during your employment;

ii. hire, employ, recruit or solicit any employee of or consultant to the Company who possesses confidential information of the Company;

iii. induce or influence any employee, consultant, customer or provider to the Company to terminate his, her or its employment or other relationship with the Company;

iv. engage or participate in, or in any way render services or assistance to, any business that competes, directly or indirectly, with any Company product or service that you participated in, engaged in, or had confidential information regarding, in any geographic territory over which you had responsibilities, during the 18 months before your termination of employment date; or

v. assist anyone in any of the activities listed above.

For purposes of the preceding, "Company" also includes each and all of the Company's parents, Subsidiaries, and affiliates. If you reside or work in the State of California, only subsection (ii) above is applicable to you.

If you engage in any of the activities listed above without the prior written consent of Caterpillar Inc. within the first 12 months following your termination of employment, all unvested RSUs subject to this RSU Award will lapse and shall be immediately forfeited. For avoidance of doubt, any RSUs that would have otherwise vested upon achievement of the Performance Goals following your termination of employment due to Long Service Separation shall be forfeited.

Further Information

For more detailed information about the Plan, please refer to the Plan prospectus or the Plan itself. Copies of these documents can be obtained on the Documents & Forms tab in the Executive Compensation portal on cat@work. If you have any questions regarding the administration of Caterpillar's equity compensation program, please contact executivecompensation@cat.com.

Appendix A
Performance-Based Restricted Stock Unit Award

Performance Period Start Date:	%%GRANT_USER_DEFINED_FIELD_11%-%
Performance Period End Date:	%%GRANT_USER_DEFINED_FIELD_12%-%
Performance Goal:	%%GRANT_USER_DEFINED_FIELD_13%-%

The Performance Goal shall be [INSERT DESCRIPTION OF PERFORMANCE GOAL].

Capitalized terms not defined in this Appendix A shall have the meanings specified in the Plan and in the Award Notice.

EXHIBIT 31.1

SECTION 302 CERTIFICATION

I, D. James Umpleby III, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Caterpillar Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent function):

   a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

May 4, 2022	*/s/ D. James Umpleby III*	Chief Executive Officer
	D. James Umpleby III	

EXHIBIT 31.2

SECTION 302 CERTIFICATION

I, Andrew R.J. Bonfield, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Caterpillar Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent function):

   a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

May 4, 2022 *_/s/ Andrew R.J. Bonfield_* Chief Financial Officer
Andrew R.J. Bonfield

EXHIBIT 32

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the quarterly report of Caterpillar Inc. (the “Company”) on Form 10-Q for the period ending March 31, 2022 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), the undersigned hereby certify pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to the best of our knowledge:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

May 4, 2022	*/s/ D. James Umpleby III*	Chief Executive Officer
	D. James Umpleby III	
May 4, 2022	*/s/ Andrew R.J. Bonfield*	Chief Financial Officer
	Andrew R.J. Bonfield	

A signed original of this written statement required by Section 906 has been provided to Caterpillar Inc. and will be retained by Caterpillar Inc. and furnished to the Securities and Exchange Commission or its staff upon request.