UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-Q

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

For the quarterly period ended March 31, 2019

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**

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 ☒

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
9 3/8% Debentures due March 15, 2021	CAT21	New York Stock Exchange
8% Debentures due February 15, 2023	CAT23	New York Stock Exchange
5.3% Debentures due September 15, 2035	CAT35	New York Stock Exchange

At March 31, 2019, 571,702,278 shares of common stock of the registrant were outstanding.

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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	
	2019	**2018**
Sales and revenues:		
Sales of Machinery, Energy & Transportation	$ 12,724	$ 12,150
Revenues of Financial Products	742	709
Total sales and revenues	13,466	12,859
Operating costs:		
Cost of goods sold	9,003	8,566
Selling, general and administrative expenses	1,319	1,276
Research and development expenses	435	443
Interest expense of Financial Products	190	166
Other operating (income) expenses	312	300
Total operating costs	11,259	10,751
Operating profit	2,207	2,108
Interest expense excluding Financial Products	103	101
Other income (expense)	160	127
Consolidated profit before taxes	2,264	2,134
Provision (benefit) for income taxes	387	472
Profit of consolidated companies	1,877	1,662
Equity in profit (loss) of unconsolidated affiliated companies	7	5
Profit of consolidated and affiliated companies	1,884	1,667
Less: Profit (loss) attributable to noncontrolling interests	3	2
Profit [1]	$ 1,881	$ 1,665
Profit per common share	$ 3.29	$ 2.78
Profit per common share – diluted [2]	$ 3.25	$ 2.74
Weighted-average common shares outstanding (millions)		
– Basic	572.4	598.0
– Diluted [2]	578.8	608.0

[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	
	2019	**2018**
Profit of consolidated and affiliated companies	$ 1,884	$ 1,667
Other comprehensive income (loss), net of tax:		
Foreign currency translation, net of tax (provision)/benefit of: 2019 - $(4); 2018 - $15	(22)	184
Pension and other postretirement benefits:		
Current year prior service credit (cost), net of tax (provision)/benefit of: 2019 - $0; 2018 - $1	—	(2)
Amortization of prior service (credit) cost, net of tax (provision)/benefit of: 2019 - $3; 2018 - $2	(7)	(7)
Derivative financial instruments:		
Gains (losses) deferred, net of tax (provision)/benefit of: 2019 - $(3); 2018 - $(1)	10	5
(Gains) losses reclassified to earnings, net of tax (provision)/benefit of: 2019 - $2; 2018 - $(6)	(9)	18
Available-for-sale securities:		
Gains (losses) deferred, net of tax (provision)/benefit of: 2019 - $(6); 2018 - $2	15	(11)
(Gains) losses reclassified to earnings, net of tax (provision)/benefit of: 2019 - $0; 2018 - $0	1	—
Total other comprehensive income (loss), net of tax	(12)	187
Comprehensive income	1,872	1,854
Less: comprehensive income attributable to the noncontrolling interests	3	2
Comprehensive income attributable to shareholders	$ 1,869	$ 1,852

See accompanying notes to Consolidated Financial Statements.

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

	March 31, 2019	December 31, 2018
Assets		
Current assets:		
Cash and short-term investments	$ 7,128	$ 7,857
Receivables – trade and other	8,961	8,802
Receivables – finance	8,932	8,650
Prepaid expenses and other current assets	1,765	1,765
Inventories	12,340	11,529
Total current assets	39,126	38,603
Property, plant and equipment – net	13,259	13,574
Long-term receivables – trade and other	1,149	1,161
Long-term receivables – finance	12,674	13,286
Noncurrent deferred and refundable income taxes	1,378	1,439
Intangible assets	1,807	1,897
Goodwill	6,191	6,217
Other assets	3,142	2,332
Total assets	$ 78,726	$ 78,509
Liabilities		
Current liabilities:		
Short-term borrowings:		
Machinery, Energy & Transportation	$ 4	$ —
Financial Products	5,586	5,723
Accounts payable	7,198	7,051
Accrued expenses	3,746	3,573
Accrued wages, salaries and employee benefits	1,200	2,384
Customer advances	1,354	1,243
Dividends payable	—	495
Other current liabilities	2,348	1,919
Long-term debt due within one year:		
Machinery, Energy & Transportation	13	10
Financial Products	5,939	5,820
Total current liabilities	27,388	28,218
Long-term debt due after one year:		
Machinery, Energy & Transportation	7,650	8,005
Financial Products	16,590	16,995
Liability for postemployment benefits	7,441	7,455
Other liabilities	4,179	3,756
Total liabilities	63,248	64,429
Commitments and contingencies (Notes 11 and 14)		
Shareholders' equity		
Common stock of $1.00 par value:		
Authorized shares: 2,000,000,000 Issued shares: (3/31/19 and 12/31/18 – 814,894,624) at paid-in amount	5,804	5,827
Treasury stock (3/31/19 – 243,192,346 shares; 12/31/18 – 239,351,886 shares) at cost	(21,214)	(20,531)
Profit employed in the business	32,435	30,427
Accumulated other comprehensive income (loss)	(1,588)	(1,684)
Noncontrolling interests	41	41
Total shareholders' equity	15,478	14,080
Total liabilities and shareholders' equity	$ 78,726	$ 78,509

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, 2018						
Balance at December 31, 2017	$ 5,593	$ (17,005)	$ 26,301	$ (1,192)	$ 69	$ 13,766
Adjustments to adopt new accounting guidance						
Revenue recognition	—	—	(12)	—	—	(12)
Tax accounting for intra-entity asset transfers	—	—	(35)	—	—	(35)
Recognition and measurement of financial assets and liabilities	—	—	11	(11)	—	—
Balance at January 1, 2018	5,593	(17,005)	26,265	(1,203)	69	13,719
Profit of consolidated and affiliated companies	—	—	1,665	—	2	1,667
Foreign currency translation, net of tax	—	—	—	184	—	184
Pension and other postretirement benefits, net of tax	—	—	—	(9)	—	(9)
Derivative financial instruments, net of tax	—	—	—	23	—	23
Available-for-sale securities, net of tax	—	—	—	(11)	—	(11)
Change in ownership from noncontrolling interests	2	—	—	—	(5)	(3)
Dividends declared	—	—	(1)	—	—	(1)
Common shares issued from treasury stock for stock-based compensation: 3,426,757	(9)	158	—	—	—	149
Stock-based compensation expense	50	—	—	—	—	50
Common shares repurchased: 3,147,629 [2]	—	(500)	—	—	—	(500)
Other	4	—	—	—	—	4
Balance at March 31, 2018	**$ 5,640**	**$ (17,347)**	**$ 27,929**	**$ (1,016)**	**$ 66**	**$ 15,272**
Three Months Ended March 31, 2019						
Balance at December 31, 2018	$ 5,827	$ (20,531)	$ 30,427	$ (1,684)	$ 41	$ 14,080
Adjustments to adopt new accounting guidance[1]						
Lease accounting	—	—	235	—	—	235
Reclassification of certain tax effects from accumulated other comprehensive income	—	—	(108)	108	—	—
Balance at January 1, 2019	5,827	(20,531)	30,554	(1,576)	41	14,315
Profit of consolidated and affiliated companies	—	—	1,881	—	3	1,884
Foreign currency translation, net of tax	—	—	—	(22)	—	(22)
Pension and other postretirement benefits, net of tax	—	—	—	(7)	—	(7)
Derivative financial instruments, net of tax	—	—	—	1	—	1
Available-for-sale securities, net of tax	—	—	—	16	—	16
Distribution to noncontrolling interests	—	—	—	—	(1)	(1)
Common shares issued from treasury stock for stock-based compensation: 1,859,065	(73)	68	—	—	—	(5)
Stock-based compensation expense	45	—	—	—	—	45
Common shares repurchased: 5,699,525 [2]	—	(751)	—	—	—	(751)
Other	5	—	—	—	(2)	3
Balance at March 31, 2019	**$ 5,804**	**$ (21,214)**	**$ 32,435**	**$ (1,588)**	**$ 41**	**$ 15,478**

[1] See Note 2 for additional information.

[2] 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	
	2019	**2018**
Cash flow from operating activities:		
Profit of consolidated and affiliated companies	$ 1,884	$ 1,667
Adjustments for non-cash items:		
Depreciation and amortization	641	681
Other	88	148
Changes in assets and liabilities, net of acquisitions and divestitures:		
Receivables – trade and other	(150)	(326)
Inventories	(813)	(803)
Accounts payable	355	486
Accrued expenses	135	66
Accrued wages, salaries and employee benefits	(1,185)	(1,110)
Customer advances	105	(46)
Other assets – net	(44)	165
Other liabilities – net	105	7
Net cash provided by (used for) operating activities	1,121	935
Cash flow from investing activities:		
Capital expenditures – excluding equipment leased to others	(278)	(412)
Expenditures for equipment leased to others	(269)	(345)
Proceeds from disposals of leased assets and property, plant and equipment	209	258
Additions to finance receivables	(2,615)	(2,621)
Collections of finance receivables	2,818	2,671
Proceeds from sale of finance receivables	44	69
Investments and acquisitions (net of cash acquired)	(2)	(340)
Proceeds from sale of businesses and investments (net of cash sold)	—	12
Proceeds from sale of securities	57	89
Investments in securities	(107)	(197)
Other – net	(38)	16
Net cash provided by (used for) investing activities	(181)	(800)
Cash flow from financing activities:		
Dividends paid	(494)	(467)
Common stock issued, including treasury shares reissued	(5)	149
Common shares repurchased	(751)	(500)
Proceeds from debt issued (original maturities greater than three months):		
Machinery, Energy & Transportation	—	—
Financial Products	2,665	1,541
Payments on debt (original maturities greater than three months):		
Machinery, Energy & Transportation	(2)	(1)
Financial Products	(2,565)	(2,408)
Short-term borrowings – net (original maturities three months or less)	(522)	1,151
Other – net	(1)	(3)
Net cash provided by (used for) financing activities	(1,675)	(538)
Effect of exchange rate changes on cash	3	10
Increase (decrease) in cash and short-term investments and restricted cash	(732)	(393)
Cash and short-term investments and restricted cash at beginning of period	7,890	8,320
Cash and short-term investments and restricted cash at end of period	$ 7,158	$ 7,927

All short-term investments, which consist primarily of highly liquid investments with original maturities of three months or less, are considered to be cash equivalents.

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) – Represents the aggregate total of Construction Industries, Resource Industries, Energy & Transportation and the All Other operating segment and related corporate items and eliminations.

Financial Products – Primarily includes the company's Financial Products Segment. This category includes Caterpillar Financial Services Corporation (Cat Financial), Caterpillar Insurance Holdings Inc. (Insurance Services) and their respective subsidiaries.

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, 2019 and 2018, (b) the consolidated comprehensive income for the three months ended March 31, 2019 and 2018, (c) the consolidated financial position at March 31, 2019 and December 31, 2018, (d) the consolidated changes in shareholders' equity for the three months ended March 31, 2019 and 2018 and (e) the consolidated cash flow for the three months ended March 31, 2019 and 2018. 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, 2018 (2018 Form 10-K).

The December 31, 2018 financial position data included herein is derived from the audited consolidated financial statements included in the 2018 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.

Unconsolidated Variable Interest Entities (VIEs)

We have affiliates, suppliers and dealers that are VIEs of which we are not the primary beneficiary. Although we have provided financial support, we do not have the power to direct the activities that most significantly impact the economic performance of each entity. Our maximum exposure to loss from VIEs for which we are not the primary beneficiary was $145 million and $131 million as of March 31, 2019 and December 31, 2018, respectively.

In addition, Cat Financial has end-user customers that are 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 are evaluated and reflected in our financial statements as part of our overall portfolio of finance receivables and related allowance for credit losses.

2. New accounting guidance

Lease accounting – In February 2016, the Financial Accounting Standards Board (FASB) issued accounting guidance that revises the accounting for leases. Under the new guidance, lessees are required to recognize a right-of-use asset and a lease liability for substantially all leases. The new guidance will continue to classify leases as either financing or operating, with classification affecting the pattern of expense recognition. The accounting applied by a lessor under the new guidance will be substantially equivalent to current lease accounting guidance. The new guidance was effective January 1, 2019 and was applied using a modified retrospective approach through a cumulative effect adjustment to retained earnings as of January 1, 2019. The prior period comparative information has not been recasted and continues to be reported under the accounting guidance in effect for those periods.

The new guidance provides a number of optional practical expedients in transition. We elected the "package of practical expedients," which allows us not to reassess under the new guidance our prior conclusions about lease identification, lease classification and initial direct costs. We did not elect the use-of-hindsight practical expedient. In addition, the new guidance provides practical expedients for an entity's ongoing lessee accounting. For certain property and information technology equipment leases, we have elected to separate payments for lease components from non-lease components. For all other leases, we have elected to not separate lease and non-lease components. We have elected the short-term lease recognition exemption for all leases that qualify which means we will not recognize right-of-use assets or lease liabilities for these leases with a term of twelve months or less.

The most significant effects of adoption relate to the recognition of right-of-use assets and lease liabilities on our balance sheet for operating leases and providing new disclosures about our leasing activities. In addition, we derecognized existing assets and debt obligations for a sale-leaseback transaction that qualified for sale accounting under the new guidance. The gain associated with this change in accounting was recognized through opening retained earnings as of January 1, 2019. The adoption did not have a material impact on our results of operations.

In March 2019, the FASB issued accounting guidance which amended the new leasing guidance. Under these amendments, lessors that are not manufacturers or dealers will use their cost, less any discounts that may apply, as the fair value of the underlying asset, and lessors within the scope of Financial Services-Depository and Lending guidance will present all principal payments received under leases within investment activities on the statement of cash flows. We adopted the new guidance effective January 1, 2019, and the adoption did not have a material impact to our financial statements.

See Note 10 for additional information.

The cumulative effect of initially applying the new lease guidance to our consolidated financial statements on January 1, 2019 was as follows:

Consolidated Statement of Financial Position

(Millions of dollars)	Balance as of December 31, 2018	Cumulative Impact from Adopting New Lease Guidance	Balance as of January 1, 2019
Assets			
Prepaid expenses and other current assets	$ 1,765	$ (17)	$ 1,748
Property, plant and equipment - net	$ 13,574	$ (26)	$ 13,548
Noncurrent deferred and refundable income taxes	$ 1,439	$ (77)	$ 1,362
Other assets	$ 2,332	$ 713	$ 3,045
Liabilities			
Accrued expenses	$ 3,573	$ (27)	$ 3,546
Other current liabilities	$ 1,919	$ 209	$ 2,128
Long-term debt due after one year			
Machinery, Energy & Transportation	$ 8,005	$ (362)	$ 7,643
Other liabilities	$ 3,756	$ 538	$ 4,294
Shareholders' equity			
Profit employed in the business	$ 30,427	$ 235	$ 30,662

Measurement of credit losses on financial instruments – In June 2016, the FASB issued accounting guidance to introduce a new model for recognizing credit losses on financial instruments based on an estimate of current expected credit losses. The new guidance will apply to loans, accounts receivable, trade receivables, other financial assets measured at amortized cost, loan commitments and other off-balance sheet credit exposures. The new guidance will also apply to debt securities and other financial assets measured at fair value through other comprehensive income. The new guidance is effective January 1, 2020, with early adoption permitted beginning January 1, 2019. An implementation team is currently evaluating data requirements and methodologies to assess the effect of the new guidance on our financial statements. We plan to adopt the new guidance effective January 1, 2020.

Premium amortization on purchased callable debt securities – In March 2017, the FASB issued accounting guidance related to the amortization period for certain purchased callable debt securities held at a premium. Securities held at a premium will be required to be amortized to the earliest call date rather than the maturity date. The guidance was effective January 1, 2019, and the adoption did not have a material impact on our financial statements.

Derivatives and hedging – In August 2017, the FASB issued accounting guidance to better align hedge accounting with a company's risk management activities, simplify the application of hedge accounting and improve the disclosures of hedging arrangements. The guidance was effective January 1, 2019. The adoption primarily resulted in the reclassification of our gains (losses) for designated ME&T foreign exchange contracts from Other income (expense) to components of Operating profit in the Consolidated Statement of Results of Operations. This presentation change was applied prospectively and did not have a material impact on our financial statements.

Reclassification of certain tax effects from accumulated other comprehensive income – In February 2018, the FASB issued accounting guidance to allow a reclassification from accumulated other comprehensive income to retained earnings for stranded tax effects resulting from U.S. tax reform legislation. We adopted the guidance effective January 1, 2019, and the resulting reclassification was included in the period of adoption. The adoption did not have a material impact on our financial statements.

Defined benefit plan disclosures – In August 2018, the FASB issued accounting guidance that revises the annual disclosure requirements for employers by removing and adding certain disclosures for these plans. The applicable requirements that were removed include the disclosure of the amount of prior service cost (credit) that will be amortized from Accumulated other comprehensive income (loss) into net periodic benefit cost for the next fiscal year and the effect of a one-percentage-point change in the assumed health care cost trend rates on the service and interest cost components of other postretirement benefit cost and on the accumulated postretirement benefit obligations. The new disclosure requirements include the weighted average interest crediting rates for cash balance plans and other plans with promised interest crediting rates and narrative description of the reasons for significant actuarial gains and losses related to changes in benefit plan obligations or assets for the period. The new guidance is required to be applied on a retrospective basis. The guidance is effective January 1, 2020, with early adoption permitted. We plan to adopt the new guidance effective January 1, 2020, and do not expect the adoption to have a material impact on our financial statements.

Cloud computing arrangements – In August 2018, the FASB issued accounting guidance that aligns the accounting for implementation costs incurred in a cloud computing arrangement service contract with the internal use software costs model. Under the new standard, costs that meet certain criteria will be required to be capitalized on the balance sheet and subsequently amortized over the term of the hosting arrangement. The guidance is effective January 1, 2020, with early adoption permitted. The new guidance allows for either prospective or retrospective transition. We plan to adopt the new guidance effective January 1, 2020 on a prospective basis. We do not expect the adoption 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. Wholesale inventory receivables are included 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 $7,918 million and $7,743 million as of March 31, 2019 and December 31, 2018, respectively, and are recognized in Receivables – trade and other in the Consolidated Statement of Financial Position. Long-term trade receivables from dealers and end users were $640 million and $674 million as of March 31, 2019 and December 31, 2018, respectively, and are recognized in Long-term receivables – trade and other in the Consolidated Statement of Financial Position.

We invoice in advance of recognizing the sale of certain products. Advanced customer payments are recognized as a contract liability in Customer advances and Other liabilities in the Consolidated Statement of Financial Position. Long-term customer advances recognized in Other liabilities in the Consolidated Statement of Financial Position were $430 million and $437 million as of March 31, 2019 and December 31, 2018, respectively. We reduce the contract liability when revenue is recognized. During the three months ended March 31, 2019, we recognized $507 million of revenue that was recorded as a contract liability at the beginning of 2019.

As of March 31, 2019, 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 $5.8 billion, of which $2.5 billion is expected to be completed and revenue recognized in the twelve months following March 31, 2019. We have elected the practical expedient to not 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).

Upon separation from service, if a participant is 55 years of age or older with more than five years of service, the participant meets the criteria for a "Long Service Separation." For PRSU awards granted prior to 2019, only a prorated number of shares may vest at the end of the performance period based upon achievement of the performance target, with the proration based upon the number of months of continuous employment during the three-year performance period. Award terms for the 2019 PRSU grant allow for continued vesting upon achievement of the performance target specified in the award document for employees who meet the criteria for a "Long Service Separation" and fulfill a requisite service period of six months. Compensation expense for the 2019 PRSU grant with respect to employees who have met the criteria for a "Long Service Separation" is recognized over the period from the grant date to the end of the six-month requisite service period. For employees who become eligible for a "Long Service Separation" subsequent to the end date of the six-month requisite service period and prior to the completion of the vesting period, compensation expense is recognized over the period from the grant date to the date eligibility is achieved.

We recognized pretax stock-based compensation expense of $45 million and $50 million for the three months ended March 31, 2019 and 2018, respectively.

The following table illustrates the type and fair value of the stock-based compensation awards granted during the three months ended March 31, 2019 and 2018, respectively:

	Three Months Ended March 31, 2019			Three Months Ended March 31, 2018		
	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	1,499,524	$ 40.98	$ 138.35	1,566,788	$ 46.18	$ 151.12
RSUs	657,389	$ 138.35	$ 138.35	676,228	$ 151.12	$ 151.12
PRSUs	342,097	$ 138.35	$ 138.35	339,559	$ 151.12	$ 151.12

The following table provides the assumptions used in determining the fair value of the stock-based awards for the three months ended March 31, 2019 and 2018, respectively:

	Grant Year	
	2019	**2018**
Weighted-average dividend yield	2.56%	2.70%
Weighted-average volatility	29.1%	30.2%
Range of volatilities	25.1-38.7%	21.5-33.0%
Range of risk-free interest rates	2.48-2.68%	2.02-2.87%
Weighted-average expected lives	7 years	8 years

As of March 31, 2019, the total remaining unrecognized compensation expense related to nonvested stock-based compensation awards was $333 million, which will be amortized over the weighted-average remaining requisite service periods of approximately 1.9 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. Risk management practices, including the use of financial derivative instruments, are presented to the Audit Committee of the Board of Directors at least annually.

All derivatives are recognized on the Consolidated Statement of Financial Position at their fair value. 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. 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, are recorded in current earnings. Changes in the fair value of a derivative that is qualified, designated and highly effective as a cash flow hedge are recorded in Accumulated other comprehensive income (loss) (AOCI), to the extent effective, on the Consolidated Statement of Financial Position until they are reclassified to earnings in the same period or periods during which the hedged transaction affects earnings. Changes in the fair value of undesignated derivative instruments are reported in current earnings. Cash flows from designated derivative financial instruments are classified within the same category as the item being hedged on the Consolidated Statement of Cash Flow. Cash flows from undesignated derivative financial instruments are included 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 Machinery, Energy & Transportation 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 five years. As of March 31, 2019, the maximum term of these outstanding contracts was approximately 51 months.

We generally designate as cash flow hedges at inception of the contract any Australian dollar, Brazilian real, British pound, Canadian dollar, Chinese yuan, Indian rupee, Japanese yen, Mexican peso, Singapore dollar or Thailand baht forward or option contracts that meet the requirements for hedge accounting and the maturity extends beyond the current quarter-end. Designation is performed on a specific exposure basis to support hedge accounting. The remainder of Machinery, Energy & Transportation foreign currency contracts are undesignated.

As of March 31, 2019, $2 million of deferred net gains, net of tax, included in equity (AOCI in the Consolidated Statement of Financial Position), are expected to be reclassified to current earnings (Other income (expense) in the Consolidated Statement of Results of Operations) over the next twelve months when earnings are affected by the hedged transactions. The actual amount recorded in Other income (expense) will vary based on exchange rates at the time the hedged transactions impact earnings.

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 Machinery, Energy & Transportation 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) of Cat Financial's debt portfolio with the interest rate profile of their 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 Machinery, Energy & Transportation and Financial Products. The gains or losses associated with these contracts at the time of liquidation are amortized 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 material. Our policy is to use commodity forward and option contracts to manage the commodity risk and reduce the cost of purchased materials.

Our Machinery, Energy & Transportation 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 are as follows:

(Millions of dollars)	Consolidated Statement of Financial Position Location	Asset (Liability) Fair Value	
		March 31, 2019	December 31, 2018
Designated derivatives			
Foreign exchange contracts			
Machinery, Energy & Transportation	Receivables – trade and other	$ 19	$ 16
Machinery, Energy & Transportation	Accrued expenses	(16)	(26)
Machinery, Energy & Transportation	Other liabilities	(3)	(9)
Financial Products	Receivables – trade and other	44	53
Financial Products	Long-term receivables – trade and other	44	35
Financial Products	Accrued expenses	(5)	(9)
Interest rate contracts			
Financial Products	Receivables – trade and other	—	1
Financial Products	Long-term receivables – trade and other	3	3
Financial Products	Accrued expenses	(58)	(40)
		$ 28	$ 24
Undesignated derivatives			
Foreign exchange contracts			
Machinery, Energy & Transportation	Receivables – trade and other	$ 2	$ 2
Machinery, Energy & Transportation	Accrued expenses	(5)	(21)
Financial Products	Receivables – trade and other	9	15
Financial Products	Long-term receivables – trade and other	6	5
Financial Products	Accrued expenses	(13)	(14)
Commodity contracts			
Machinery, Energy & Transportation	Receivables – trade and other	6	1
Machinery, Energy & Transportation	Accrued expenses	(8)	(31)
		$ (3)	$ (43)

The total notional amounts of the derivative instruments are as follows:

(Millions of dollars)	March 31, 2019	December 31, 2018
Machinery, Energy & Transportation	$ 2,003	$ 1,834
Financial Products	$ 9,001	$ 10,210

The notional amounts of the derivative financial instruments do not represent amounts exchanged by the parties. The amounts exchanged by the parties are calculated by reference to the notional amounts and by other terms of the derivatives, such as foreign currency exchange rates, interest rates or commodity prices.

The effect of derivatives designated as hedging instruments on the Consolidated Statement of Results of Operations is as follows:

Cash Flow Hedges

	Three Months Ended March 31, 2019			
		Recognized in Earnings		
(Millions of dollars)	**Amount of Gains (Losses) Recognized in AOCI**	**Classification of Gains (Losses)**	**Amount of Gains (Losses) Reclassified from AOCI**	**Amount of the line items in the Consolidated Statement of Results of Operations containing hedging gains (losses)**
Foreign exchange contracts				
Machinery, Energy & Transportation	$ 17			
		Sales of Machinery, Energy & Transportation	$ 1	$ 12,724
		Cost of goods sold	(3)	$ 9,003
Financial Products	22			
		Interest expense of Financial Products	7	$ 190
		Other income (expense)	6	$ 160
Interest rate contracts				
Machinery, Energy & Transportation	—	Interest expense excluding Financial Products	(1)	$ 103
Financial Products	(26)	Interest expense of Financial Products	1	$ 190
	$ 13		$ 11	

	Three Months Ended March 31, 2018			
		Recognized in Earnings		
	Amount of Gains (Losses) Recognized in AOCI (Effective Portion)	**Classification of Gains (Losses)**	**Amount of Gains (Losses) Reclassified from AOCI**	**Recognized in Earnings (Ineffective Portion)**
Foreign exchange contracts				
Machinery, Energy & Transportation	$ 39	Other income (expense)	$ 1	$ —
Financial Products	(33)	Other income (expense)	(29)	—
Financial Products		Interest expense of Financial Products	3	—
Interest rate contracts				
Financial Products	—	Interest expense of Financial Products	1	—
	$ 6		$ (24)	$ —

The effect of derivatives not designated as hedging instruments on the Consolidated Statement of Results of Operations is as follows:

(Millions of dollars)	**Classification of Gains (Losses)**	**Three Months Ended March 31, 2019**	**Three Months Ended March 31, 2018**
Foreign exchange contracts			
Machinery, Energy & Transportation	Other income (expense)	$ 6	$ 16
Financial Products	Other income (expense)	(29)	(7)
Commodity contracts			
Machinery, Energy & Transportation	Other income (expense)	23	(9)
		$ —	$ —

We enter into International Swaps and Derivatives Association (ISDA) master netting agreements within Machinery, Energy & Transportation 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, 2019 and December 31, 2018, 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 is as follows:

March 31, 2019				Gross Amounts Not Offset in the Statement of Financial Position		
(Millions of dollars)	Gross Amount of Recognized Assets	Gross Amounts Offset in the Statement of Financial Position	Net Amount of Assets Presented in the Statement of Financial Position	Financial Instruments	Cash Collateral Received	Net Amount of Assets
Derivatives						
Machinery, Energy & Transportation	$ 27	$ —	$ 27	$ (19)	$ —	$ 8
Financial Products	106	—	106	(22)	—	84
Total	$ 133	$ —	$ 133	$ (41)	$ —	$ 92

March 31, 2019				Gross Amounts Not Offset in the Statement of Financial Position		
(Millions of dollars)	Gross Amount of Recognized Liabilities	Gross Amounts Offset in the Statement of Financial Position	Net Amount of Liabilities Presented in the Statement of Financial Position	Financial Instruments	Cash Collateral Pledged	Net Amount of Liabilities
Derivatives						
Machinery, Energy & Transportation	$ (32)	$ —	$ (32)	$ 19	$ —	$ (13)
Financial Products	(76)	—	(76)	22	—	(54)
Total	$ (108)	$ —	$ (108)	$ 41	$ —	$ (67)

December 31, 2018				Gross Amounts Not Offset in the Statement of Financial Position		
(Millions of dollars)	Gross Amount of Recognized Assets	Gross Amounts Offset in the Statement of Financial Position	Net Amount of Assets Presented in the Statement of Financial Position	Financial Instruments	Cash Collateral Received	Net Amount of Assets
Derivatives						
Machinery, Energy & Transportation	$ 19	$ —	$ 19	$ (19)	$ —	$ —
Financial Products	112	—	112	(34)	—	78
Total	$ 131	$ —	$ 131	$ (53)	$ —	$ 78

December 31, 2018				Gross Amounts Not Offset in the Statement of Financial Position		
(Millions of dollars)	Gross Amount of Recognized Liabilities	Gross Amounts Offset in the Statement of Financial Position	Net Amount of Liabilities Presented in the Statement of Financial Position	Financial Instruments	Cash Collateral Pledged	Net Amount of Liabilities
Derivatives						
Machinery, Energy & Transportation	$ (87)	$ —	$ (87)	$ 19	$ —	$ (68)
Financial Products	(63)	—	(63)	34	—	(29)
Total	$ (150)	$ —	$ (150)	$ 53	$ —	$ (97)

6. Inventories

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

(Millions of dollars)	March 31, 2019	December 31, 2018
Raw materials	$ 3,592	$ 3,382
Work-in-process	2,737	2,674
Finished goods	5,785	5,241
Supplies	226	232
Total inventories	$ 12,340	$ 11,529

7. Intangible assets and goodwill

A. Intangible assets

Intangible assets are comprised of the following:

(Millions of dollars)		March 31, 2019		
	Weighted Amortizable Life (Years)	Gross Carrying Amount	Accumulated Amortization	Net
Customer relationships	15	$ 2,450	$ (1,283)	$ 1,167
Intellectual property	12	1,522	(966)	556
Other	13	199	(115)	84
Total finite-lived intangible assets	14	$ 4,171	$ (2,364)	$ 1,807
		December 31, 2018		
	Weighted Amortizable Life (Years)	Gross Carrying Amount	Accumulated Amortization	Net
Customer relationships	15	$ 2,463	$ (1,249)	$ 1,214
Intellectual property	11	1,557	(965)	592
Other	13	199	(108)	91
Total finite-lived intangible assets	14	$ 4,219	$ (2,322)	$ 1,897

Amortization expense for the three months ended March 31, 2019 and 2018 was $82 million and $83 million, respectively. Amortization expense related to intangible assets is expected to be:

(Millions of dollars)

Remaining Nine Months of 2019	2020	2021	2022	2023	Thereafter
$243	$310	$292	$273	$215	$474

B. Goodwill

No goodwill was impaired during the three months ended March 31, 2019 or 2018.

The changes in carrying amount of goodwill by reportable segment for the three months ended March 31, 2019 were as follows:

(Millions of dollars)	December 31, 2018	Other Adjustments [1]	March 31, 2019
Construction Industries			
Goodwill	$ 304	$ (1)	$ 303
Impairments	(22)	—	(22)
Net goodwill	282	(1)	281
Resource Industries			
Goodwill	4,172	(14)	4,158
Impairments	(1,175)	—	(1,175)
Net goodwill	2,997	(14)	2,983
Energy & Transportation			
Goodwill	2,882	(10)	2,872
All Other [2]			
Goodwill	56	(1)	55
Consolidated total			
Goodwill	7,414	(26)	7,388
Impairments	(1,197)	—	(1,197)
Net goodwill	$ 6,217	$ (26)	$ 6,191

[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, primarily at Insurance Services, which are recorded at fair value and are primarily included in Other assets in the Consolidated Statement of Financial Position.

Debt securities have been classified as available-for-sale and the unrealized gains and losses arising from the revaluation of these debt securities are included, net of applicable deferred income taxes, in equity (Accumulated other comprehensive income (loss) in the Consolidated Statement of Financial Position). The unrealized gains and losses arising from the revaluation of the equity securities are included in Other income (expense) in the Consolidated Statement of Results of Operations. Realized gains and losses on sales of investments are generally determined using the specific identification method for debt and equity securities and are included in Other income (expense) in the Consolidated Statement of Results of Operations.

The cost basis and fair value of debt securities with unrealized gains and losses included in equity (Accumulated other comprehensive income (loss) in the Consolidated Statement of Financial Position) were as follows:

(Millions of dollars)	March 31, 2019			December 31, 2018		
	Cost Basis	Unrealized Pretax Net Gains (Losses)	Fair Value	Cost Basis	Unrealized Pretax Net Gains (Losses)	Fair Value
Government debt						
U.S. treasury bonds	$ 9	$ —	$ 9	$ 9	$ —	$ 9
Other U.S. and non-U.S. government bonds	50	—	50	42	—	42
Corporate bonds						
Corporate bonds	775	2	777	735	(15)	720
Asset-backed securities	61	—	61	63	—	63
Mortgage-backed debt securities						
U.S. governmental agency	305	(1)	304	301	(4)	297
Residential	7	—	7	7	—	7
Commercial	17	—	17	14	(1)	13
Total debt securities	$ 1,224	$ 1	$ 1,225	$ 1,171	$ (20)	$ 1,151

Available-for-sale investments in an unrealized loss position that are not other-than-temporarily impaired:

(Millions of dollars)	March 31, 2019					
	Less than 12 months [1]		12 months or more [1]		Total	
	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses
Corporate bonds						
Corporate bonds	$ 20	$ —	$ 342	$ 3	$ 362	$ 3
Mortgage-backed debt securities						
U.S. governmental agency	22	—	156	2	178	2
Total	$ 42	$ —	$ 498	$ 5	$ 540	$ 5

(Millions of dollars)	December 31, 2018					
	Less than 12 months [1]		12 months or more [1]		Total	
	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses
Corporate bonds						
Corporate bonds	$ 280	$ 3	$ 391	$ 11	$ 671	$ 14
Asset-backed securities	6	—	38	1	44	1
Mortgage-backed debt securities						
U.S. governmental agency	52	—	223	5	275	5
Commercial	—	—	14	1	14	1
Total	$ 338	$ 3	$ 666	$ 18	$ 1,004	$ 21

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

Corporate Bonds. The unrealized losses on our investments in corporate bonds 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. We do not consider these investments to be other-than-temporarily impaired as of March 31, 2019.

Mortgage-Backed Debt Securities. The unrealized losses on our investments in U.S. government agency mortgage-backed 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. We do not consider these investments to be other-than-temporarily impaired as of March 31, 2019.

The cost basis and fair value of the available-for-sale debt securities at March 31, 2019, by contractual maturity, is 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, 2019	
(Millions of dollars)	**Cost Basis**	**Fair Value**
Due in one year or less	$ 132	$ 132
Due after one year through five years	617	618
Due after five years through ten years	129	129
Due after ten years	17	18
U.S. governmental agency mortgage-backed securities	305	304
Residential mortgage-backed securities	7	7
Commercial mortgage-backed securities	17	17
Total debt securities – available-for-sale	$ 1,224	$ 1,225

Sales of available-for-sale securities:

	Three Months Ended March 31	
(Millions of dollars)	**2019**	**2018**
Proceeds from the sale of available-for-sale securities	$ 47	$ 73
Gross gains from the sale of available-for-sale securities	$ —	$ —
Gross losses from the sale of available-for-sale securities	$ 1	$ —

For the three months ended March 31, 2019 and March 31, 2018, the net unrealized gains (losses) for equity securities were $38 million and $(2) million, respectively.

9. Postretirement benefits

A. Pension and postretirement benefit costs

	U.S. Pension Benefits		Non-U.S. Pension Benefits		Other Postretirement Benefits	
(Millions of dollars)	**March 31**		**March 31**		**March 31**	
	2019	**2018**	**2019**	**2018**	**2019**	**2018**
For the three months ended:						
Components of net periodic benefit cost:						
Service cost	$ 29	$ 32	$ 21	$ 22	$ 20	$ 21
Interest cost	150	133	23	25	34	31
Expected return on plan assets	(181)	(202)	(37)	(56)	(5)	(8)
Amortization of prior service cost (credit)	—	—	—	—	(10)	(9)
Net periodic benefit cost (benefit) [1]	$ (2)	$ (37)	$ 7	$ (9)	$ 39	$ 35

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

We made $119 million of contributions to our pension and other postretirement plans during the three months ended March 31, 2019. We currently anticipate full-year 2019 contributions of approximately $315 million.

B. Defined contribution benefit costs

Total company costs related to our defined contribution plans were as follows:

	Three Months Ended March 31	
(Millions of dollars)	**2019**	**2018**
U.S. Plans	$ 137	$ 73
Non-U.S. Plans	21	22
	$ 158	$ 95

10. Leases

A. Lessee Arrangements

We lease certain property, information technology equipment, warehouse equipment, vehicles and other equipment through operating leases. We recognize a lease liability and corresponding right-of-use asset based on the present value of lease payments. To determine the present value of lease payments for most of our leases, we use our incremental borrowing rate based on information available on the lease commencement date. For certain property and information technology equipment leases, we have elected to separate payments for lease components from non-lease components. For all other leases, we have elected to not separate payments for lease and non-lease components. Our lease agreements may include options to extend or terminate the lease. When it is reasonably certain that we will exercise that option, we have included the option in the recognition of right-of-use assets and lease liabilities. We have elected not to recognize right-of-use assets or lease liabilities for leases with a term of twelve months or less.

Our finance leases are not significant and therefore, are not included in the following disclosures.

The components of lease costs were as follows:

(Millions of dollars)	Three Months Ended March 31
	2019
Operating lease cost	$ 64
Short-term lease cost	$ 12

Operating lease right-of-use assets are recognized in Other assets in the Consolidated Statement of Financial Position. The operating lease liabilities are recognized in Other current liabilities and Other liabilities.

Supplemental information related to leases was as follows:

(Millions of dollars)	March 31, 2019	January 1, 2019
Operating Leases		
Other assets	$ 689	$ 713
Other current liabilities	$ 188	$ 209
Other liabilities	$ 513	$ 511
Weighted average remaining lease term		
Operating leases	7 years	7 years
Weighted average discount rates		
Operating leases	2%	2%

Maturities of operating lease liabilities at March 31, 2019 and minimum payments for operating leases having initial or remaining non-cancelable terms in excess of one year at December 31, 2018 were as follows:

(Millions of dollars)	March 31, 2019
Amounts Due In	
Remaining nine months of 2019	$ 158
2020	163
2021	119
2022	76
2023	57
Thereafter	197
Total lease payments	770
Less: Imputed interest	(69)
Total	$ 701

	December 31, 2018
Amounts Due In	
2019	$ 205
2020	154
2021	111
2022	67
2023	50
Thereafter	185
Total	$ 772

Supplemental cash flow information related to leases was as follows:

(Millions of dollars)	Three Months Ended March 31
	2019
Cash paid for amounts included in the measurement of lease liabilities	
Operating cash flows from operating leases	$ 51
Right-of-use assets obtained in exchange for lease obligations:	
Operating leases	$ 46

B. Lessor Arrangements

We lease Caterpillar machinery, engines and other equipment to customers and dealers around the world, primarily through Cat Financial. Cat Financial leases to customers primarily through sales-type (non-tax) leases, where the lessee for tax purposes is considered to be the owner of the equipment during the term of the lease. Cat Financial also offers tax leases that are classified as either operating or direct finance leases for financial accounting purposes, depending on the characteristics of the lease. For tax purposes, Cat Financial is considered the owner of the equipment. Our lease agreements may include options for the lessee to purchase the underlying asset at the end of the lease term for either a stated fixed price or fair market value.

The residual values for Cat Financial's leased assets, which are an estimate of the market value of leased equipment at the end of the lease term, are based on an analysis of historical wholesale market sales prices, projected forward on a level trend line without consideration for inflation or possible future pricing action. At the inception of the lease, residual values are estimated with consideration of the following critical factors: market size and demand, any known significant market/product trends, total expected hours of usage, machine configuration, application, location, model changes, quantities, past remarketing experience, third-party residual guarantees and contractual customer purchase options. Many of these factors are gathered in an application survey that is completed prior to quotation. The lease agreement also clearly defines applicable return conditions and remedies for non-compliance, to ensure that the leased equipment will be in good operating condition upon return. Model changes and updates, as well as market strength and product acceptance, are monitored and adjustments are made to residual values in accordance with the significance of any such changes. Remarketing sales staff works closely with customers and dealers to manage the sale of lease returns and the recovery of residual exposure.

During the term of the equipment on operating leases, we evaluate our depreciation on a regular basis taking into consideration expected residual values at lease termination. Adjustments to depreciation expense reflecting revised estimates of expected residual values at the end of the lease terms are recorded prospectively on a straight-line basis. For finance leases, residual value adjustments are recognized through a reduction of finance revenue.

Contractual maturities of finance lease receivables (sales-type and direct finance leases) were as follows:

(Millions of dollars)	March 31, 2019		
Amounts Due In	Retail Leases [1]	Wholesale Leases [2]	Total
Remaining nine months of 2019	$ 2,391	$ 52	$ 2,443
2020	2,272	50	2,322
2021	1,261	33	1,294
2022	551	18	569
2023	220	7	227
Thereafter	74	3	77
Total	6,769	163	6,932
Guaranteed residual value	372	63	435
Unguaranteed residual value	817	34	851
Less: Unearned income	(628)	(15)	(643)
Total	$ 7,330	$ 245	$ 7,575

	December 31, 2018		
Amounts Due In	Retail Leases [1]	Wholesale Leases [2]	Total
2019	$ 2,981	$ 70	$ 3,051
2020	2,026	48	2,074
2021	1,073	30	1,103
2022	453	16	469
2023	166	6	172
Thereafter	56	3	59
Total	6,755	173	6,928
Guaranteed residual value	392	66	458
Unguaranteed residual value	822	35	857
Less: Unearned income	(628)	(16)	(644)
Total	$ 7,341	$ 258	$ 7,599

[1] Included in Receivables - finance and Long-term receivables - finance on the Consolidated Statement of Financial Position.

[2] Included in Receivables - trade and other and Long-term receivables - trade and other in the Consolidated Statement of Financial Position. Wholesale lease receivables are receivables of Cat Financial that arise when Cat Financial provides financing for a dealer's lease of inventory.

Our finance lease receivables generally may be repaid or refinanced without penalty prior to contractual maturity. Accordingly, this presentation should not be regarded as a forecast of future cash collections.

The carrying amount of equipment leased to others, included in Property, plant and equipment - net in the Consolidated Statement of Financial Position, under operating leases was as follows:

(Millions of dollars)	March 31, 2019	December 31, 2018
Equipment leased to others - at original cost	$ 6,411	$ 6,015
Less: Accumulated depreciation	(2,047)	(1,744)
Equipment leased to others - net	$ 4,364	$ 4,271

Payments due for operating leases at March 31, 2019 and scheduled minimum rental payments for operating leases at December 31, 2018 were as follows:

(Millions of dollars)

March 31, 2019

Remaining Nine Months of 2019	2020	2021	2022	2023	Thereafter	Total
$710	$629	$354	$175	$83	$90	$ 2,041

December 31, 2018

2019	2020	2021	2022	2023	Thereafter	Total
$896	$574	$314	$158	$71	$69	$ 2,082

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

(Millions of dollars)	Three Months Ended March 31
	2019
Finance lease revenue	$ 119
Operating lease revenue	316
Total	$ 435

Revenues are presented 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.

Customer loan guarantees

We provide loan guarantees to third-party lenders for financing associated with machinery purchased by customers. These guarantees have varying terms and are secured by the machinery. In addition, Cat Financial participates in standby letters of credit issued to third parties on behalf of their customers. These standby letters of credit have varying terms and beneficiaries and are secured by customer assets.

Supplier consortium performance guarantees

We have provided guarantees to a customer in Brazil and a customer in Europe related to the performance of contractual obligations by supplier consortiums to which our Caterpillar subsidiaries are members. The guarantees cover potential damages incurred by the customers resulting from the supplier consortiums' non-performance. The damages are capped except for failure of the consortiums to meet certain obligations outlined in the contract in the normal course of business. The guarantees will expire when the supplier consortiums perform all their contractual obligations, which are expected to be completed in 2022 for the customer in Europe and 2025 for the customer in Brazil.

Third party logistics business lease guarantees

We have provided guarantees to third-party lessors for certain properties leased by a third party logistics business, formerly Caterpillar Logistics Services LLC, in which we sold our equity interest in 2015. The guarantees are for the possibility that the third party logistics business would default on real estate lease payments. The guarantees were granted at lease inception and generally will expire at the end of the lease terms.

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, 2019 and December 31, 2018, the related liability was $10 million and $8 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 are as follows:

(Millions of dollars)	**March 31, 2019**	**December 31, 2018**
Caterpillar dealer performance guarantees	$ 1,235	$ 1,244
Customer loan guarantees	36	31
Supplier consortium performance guarantees	541	527
Third party logistics business lease guarantees	58	60
Other guarantees	127	116
Total guarantees	$ 1,997	$ 1,978

Cat Financial provides guarantees to repurchase 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 has a loan purchase agreement with the SPC that obligates Cat Financial to purchase certain loans that are not paid at maturity. Cat Financial receives a fee for providing this guarantee, which provides a source of liquidity for the SPC. 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, 2019 and December 31, 2018, the SPC's assets of $1,167 million and $1,149 million, respectively, were primarily comprised of loans to dealers, and the SPC's liabilities of $1,166 million and $1,148 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.

Our product warranty liability is determined by applying historical claim rate experience to the current field population and dealer inventory. Generally, historical claim rates are based on actual warranty experience for each product by machine model/engine size by customer or dealer location (inside or outside North America). Specific rates are developed for each product shipment month and are updated monthly based on actual warranty claim experience.

(Millions of dollars)	**2019**
Warranty liability, January 1	$ 1,391
Reduction in liability (payments)	(199)
Increase in liability (new warranties)	205
Warranty liability, March 31	$ 1,397

(Millions of dollars)	**2018**
Warranty liability, January 1	$ 1,419
Reduction in liability (payments)	(783)
Increase in liability (new warranties)	755
Warranty liability, December 31	$ 1,391

12. Profit per share

Computations of profit per share:	Three Months Ended March 31	
(Dollars in millions except per share data)	**2019**	**2018**
Profit for the period (A) [1]	$ 1,881	$ 1,665
Determination of shares (in millions):		
Weighted-average number of common shares outstanding (B)	572.4	598.0
Shares issuable on exercise of stock awards, net of shares assumed to be purchased out of proceeds at average market price	6.4	10.0
Average common shares outstanding for fully diluted computation (C) [2]	578.8	608.0
Profit per share of common stock:		
Assuming no dilution (A/B)	$ 3.29	$ 2.78
Assuming full dilution (A/C) [2]	$ 3.25	$ 2.74
Shares outstanding as of March 31 (in millions)	571.7	597.9

[1] Profit attributable to common shareholders.

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

Stock options to purchase 2,986,014 and 1,557,275 common shares were outstanding for the three months ended March 31, 2019 and 2018, respectively, which were not included in the computation of diluted earnings per share because the effect would have been anti-dilutive.

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, 2019, approximately $9.2 billion remained available under the 2018 Authorization.

During the first quarter of 2019, we repurchased 5.7 million shares of our common stock at an aggregate cost of $751 million. These purchases were made through a combination of an accelerated stock repurchase agreement with a third-party financial institution and open market transactions.

13. Accumulated other comprehensive income (loss)

Comprehensive income and its components are presented in the Consolidated Statement of Comprehensive Income. Changes in Accumulated other comprehensive income (loss), net of tax, included in the Consolidated Statement of Changes in Shareholders' Equity, consisted of the following:

(Millions of dollars)	Foreign currency translation	Pension and other postretirement benefits	Derivative financial instruments	Available-for-sale securities	Total
Three Months Ended March 31, 2019					
Balance at December 31, 2018	$ (1,601)	$ 12	$ (80)	$ (15)	$ (1,684)
Adjustment to adopt new accounting guidance related to reclassification of certain tax effects from accumulated other comprehensive income	98	19	(9)	—	108
Balance at January 1, 2019	(1,503)	31	(89)	(15)	(1,576)
Other comprehensive income (loss) before reclassifications	(22)	—	10	15	3
Amounts reclassified from accumulated other comprehensive (income) loss	—	(7)	(9)	1	(15)
Other comprehensive income (loss)	(22)	(7)	1	16	(12)
Balance at March 31, 2019	$ (1,525)	$ 24	$ (88)	$ 1	$ (1,588)
Three Months Ended March 31, 2018					
Balance at December 31, 2017	$ (1,205)	$ 46	$ (41)	$ 8	$ (1,192)
Adjustment to adopt recognition and measurement of financial assets and liabilities guidance	—	—	—	(11)	(11)
Balance at January 1, 2018	(1,205)	46	(41)	(3)	(1,203)
Other comprehensive income (loss) before reclassifications	183	(2)	5	(11)	175
Amounts reclassified from accumulated other comprehensive (income) loss	1	(7)	18	—	12
Other comprehensive income (loss)	184	(9)	23	(11)	187
Balance at March 31, 2018	$ (1,021)	$ 37	$ (18)	$ (14)	$ (1,016)

The effect of the reclassifications out of Accumulated other comprehensive income (loss) on the Consolidated Statement of Results of Operations is as follows:

(Millions of dollars)	Classification of income (expense)	Three Months Ended March 31 2019	Three Months Ended March 31 2018
Foreign currency translation			
Gain (loss) on foreign currency translation	Other income (expense)	$ —	$ (1)
Reclassifications net of tax		$ —	$ (1)
Pension and other postretirement benefits:			
Amortization of prior service credit (cost)	Other income (expense)	$ 10	$ 9
Tax (provision) benefit		(3)	(2)
Reclassifications net of tax		$ 7	$ 7
Derivative financial instruments:			
Foreign exchange contracts	Sales of Machinery, Energy & Transportation	$ 1	$ —
Foreign exchange contracts	Cost of goods sold	(3)	—
Foreign exchange contracts	Interest expense of Financial Products	7	3
Foreign exchange contracts	Other income (expense)	6	(28)
Interest rate contracts	Interest expense excluding Financial Products	(1)	—
Interest rate contracts	Interest expense of Financial Products	1	1
Reclassifications before tax		11	(24)
Tax (provision) benefit		(2)	6
Reclassifications net of tax		$ 9	$ (18)
Available-for-sale securities:			
Realized gain (loss)	Other income (expense)	$ (1)	$ —
Reclassifications net of tax		$ (1)	$ —
Total reclassifications from Accumulated other comprehensive income (loss)		$ 15	$ (12)

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, the investigation, remediation, and operating and maintenance costs are accrued against our earnings. Costs are accrued 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. 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 requests 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 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 Caterpillar SARL, 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.

On March 20, 2014, Brazil's Administrative Council for Economic Defense (CADE) published a Technical Opinion which named 18 companies and over 100 individuals as defendants, including two subsidiaries of Caterpillar Inc., MGE - Equipamentos e Serviços Ferroviários Ltda. (MGE) and Caterpillar Brasil Ltda. The publication of the Technical Opinion opened CADE's official administrative investigation into allegations that the defendants participated in anticompetitive bid activity for the construction and maintenance of metro and train networks in Brazil. While companies cannot be held criminally liable for anticompetitive conduct in Brazil, criminal charges have been brought against two current employees of MGE and one former employee of MGE involving the same conduct alleged by CADE. The Company has responded to all requests for information from the authorities. The Company is unable to predict the outcome or reasonably estimate the 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 2019 reflected an estimated annual tax rate of 26 percent, compared to 24 percent for the first three months of 2018, excluding the discrete items discussed in the following paragraph. The increase was largely driven by the application of U.S. tax reform provisions to the earnings of certain non-U.S. subsidiaries, which do not have a calendar fiscal year-end. These provisions did not apply to these subsidiaries in 2018.

As a result of final regulations received in January 2019 providing additional guidance related to the calculation of the mandatory deemed repatriation of non-U.S. earnings due to U.S. tax reform, we recorded a discrete tax benefit of $178 million in the first quarter of 2019 to adjust unrecognized tax benefits. In addition, a discrete tax benefit of $23 million was recorded in the first three months of 2019, compared with $40 million in the first three months of 2018, for the settlement of stock-based compensation awards with associated tax deductions in excess of cumulative U.S. GAAP compensation expense.

On January 31, 2018, we received a Revenue Agent's Report from the Internal Revenue Service (IRS) indicating the end of the field examination of our U.S. income tax returns for 2010 to 2012. In the audits of 2007 to 2012 including the impact of a loss carryback to 2005, the IRS has proposed to tax in the United States profits earned from certain parts transactions by Caterpillar SARL (CSARL), based on the IRS 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 General Counsel & Corporate Secretary 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 General Counsel & Corporate Secretary 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.

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, forestry 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, forestry excavators, feller bunchers, harvesters, knuckleboom loaders, motor graders, pipelayers, road reclaimers, skidders, skid steer loaders, telehandlers, small and medium track-type tractors, track-type loaders, utility vehicles, 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, quarry and aggregates, waste and material handling applications. 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, hard rock continuous mining systems, 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 and autonomous machine capabilities. Resource Industries also manages areas that provide services to other parts of the company, including integrated manufacturing and research and development. 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 parts 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 and development, manufacturing, marketing and sales and product support of turbine machinery and integrated systems and solutions and turbine-related services, reciprocating engine-powered generator sets, integrated systems used in the electric power generation industry, reciprocating engines and integrated systems and solutions for the marine and oil and gas industries; reciprocating engines supplied to the industrial industry as well as Cat machinery; the remanufacturing of Caterpillar engines and components and remanufacturing services for other companies; the business strategy, product design, product management and development, manufacturing, remanufacturing, leasing and service of diesel-electric locomotives and components and other rail-related products and services 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, 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, 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 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 our equipment. The segment also earns revenues from Machinery, Energy & Transportation, but the related costs are not allocated to operating segments.

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; 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:

- Machinery, Energy & Transportation segment net assets generally include inventories, receivables, property, plant and equipment, goodwill, intangibles, accounts payable and customer advances. Beginning in 2019, operating lease right-of-use assets are included in segment assets. In 2018, the present value of future lease payments for certain Machinery, Energy and Transportation operating leases was included in segment assets while the estimated financing component of the lease payments was excluded. Liabilities other than accounts payable and customer advances are generally managed at the corporate level and are not included in segment operations. Financial Products Segment assets generally include all categories of assets.

- Segment inventories and cost of sales are valued using a current cost methodology.

- Goodwill allocated to segments is amortized using a fixed amount based on a 20 year useful life. This methodology difference only impacts segment assets; no goodwill amortization expense is included in segment profit. In addition, only a portion of goodwill for certain acquisitions made in 2011 or later has been allocated to segments.

- Currency exposures for Machinery, Energy & Transportation are generally managed at the corporate level and the effects of changes in exchange rates on results of operations within the year are not included in segment profit. 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 is reported as a methodology difference.

- Stock-based compensation expense is not included 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.

- Machinery, Energy & Transportation segment profit is determined on a pretax basis and excludes interest expense and most other income/expense items. Financial Products Segment profit is determined on a pretax basis and includes other income/expense items.

Reconciling items are created based on accounting differences between segment reporting and our consolidated external reporting. Please refer to pages 37 to 41 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. Beginning in 2019, only certain restructuring costs are excluded from segment profit. A table, Reconciliation of Restructuring costs on page 39, has been included to illustrate how segment profit would have been impacted by the restructuring costs. 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, certain costs are reported on the cash basis for segment reporting and the accrual basis for consolidated external reporting.

Reportable Segments
Three Months Ended March 31
(Millions of dollars)

2019

	External sales and revenues	Inter-segment sales and revenues	Total sales and revenues	Depreciation and amortization	Segment profit	Segment assets at March 31	Capital expenditures
Construction Industries	$ 5,852	$ 21	$ 5,873	$ 80	$ 1,085	$ 5,331	$ 28
Resource Industries	2,647	80	2,727	105	576	6,417	23
Energy & Transportation	4,233	977	5,210	152	838	8,565	98
Machinery, Energy & Transportation	12,732	1,078	13,810	337	2,499	20,313	149
Financial Products Segment	850 [1]	—	850	206	211	35,753	246
Total	$ 13,582	$ 1,078	$ 14,660	$ 543	$ 2,710	$ 56,066	$ 395

2018

	External sales and revenues	Inter-segment sales and revenues	Total sales and revenues	Depreciation and amortization	Segment profit	Segment assets at December 31	Capital expenditures
Construction Industries	$ 5,659	$ 18	$ 5,677	$ 89	$ 1,117	$ 4,902	$ 42
Resource Industries	2,208	101	2,309	116	378	6,442	23
Energy & Transportation	4,276	943	5,219	158	874	8,386	162
Machinery, Energy & Transportation	12,143	1,062	13,205	363	2,369	19,730	227
Financial Products Segment	793 [1]	—	793	203	141	36,002	361
Total	$ 12,936	$ 1,062	$ 13,998	$ 566	$ 2,510	$ 55,732	$ 588

[1] Includes revenues from Machinery, Energy & Transportation of $131 million and $105 million in the first quarter of 2019 and 2018, respectively.

For the three months ending March 31, 2019 and 2018, 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**
Three Months Ended March 31, 2019					
Construction Industries	$ 2,965	$ 319	$ 1,006	$ 1,562	$ 5,852
Resource Industries	951	423	468	805	2,647
Energy & Transportation	2,151	332	1,032	718	4,233
All Other operating segment	8	—	11	18	37
Corporate Items and Eliminations	(41)	1	(3)	(2)	(45)
Machinery, Energy & Transportation Sales	6,034	1,075	2,514	3,101	12,724
Financial Products Segment	558	70	102	120	850
Corporate Items and Eliminations	(69)	(11)	(9)	(19)	(108)
Financial Products Revenues	489	59	93	101	742
Consolidated Sales and Revenues	$ 6,523	$ 1,134	$ 2,607	$ 3,202	$ 13,466
Three Months Ended March 31, 2018					
Construction Industries	$ 2,620	$ 344	$ 1,067	$ 1,628	$ 5,659
Resource Industries	798	360	520	530	2,208
Energy & Transportation	2,225	280	1,092	679	4,276
All Other operating segment	15	—	4	18	37
Corporate Items and Eliminations	(28)	1	(3)	—	(30)
Machinery, Energy & Transportation Sales	5,630	985	2,680	2,855	12,150
Financial Products Segment	512	74	101	106	793
Corporate Items and Eliminations	(49)	(13)	(5)	(17)	(84)
Financial Products Revenues	463	61	96	89	709
Consolidated Sales and Revenues	$ 6,093	$ 1,046	$ 2,776	$ 2,944	$ 12,859

For the three months ending March 31, 2019 and 2018, Energy & Transportation segment sales by end user application were as follows:

Energy & Transportation External Sales	**Three Months Ended March 31**	
(Millions of dollars)	**2019**	**2018**
Oil and gas	$ 1,131	$ 1,215
Power generation	1,036	969
Industrial	904	906
Transportation	1,162	1,186
Energy & Transportation External Sales	$ 4,233	$ 4,276

Reconciliation of Consolidated profit before taxes:

(Millions of dollars)	Machinery, Energy & Transportation	Financial Products	Consolidated Total
Three Months Ended March 31, 2019			
Total profit from reportable segments	$ 2,499	$ 211	$ 2,710
All Other operating segment	25	—	25
Cost centers	24	—	24
Corporate costs	(171)	(5)	(176)
Timing	(66)	—	(66)
Restructuring costs	(39)	—	(39)
Methodology differences:			
Inventory/cost of sales	7	—	7
Postretirement benefit expense	(17)	—	(17)
Stock-based compensation expense	(43)	(2)	(45)
Financing costs	(64)	—	(64)
Currency	44	—	44
Other income/expense methodology differences	(129)	—	(129)
Other methodology differences	(12)	2	(10)
Total consolidated profit before taxes	$ 2,058	$ 206	$ 2,264
Three Months Ended March 31, 2018			
Total profit from reportable segments	$ 2,369	$ 141	$ 2,510
All Other operating segment	57	—	57
Cost centers	27	—	27
Corporate costs	(168)	—	(168)
Timing	(84)	—	(84)
Restructuring costs	(69)	—	(69)
Methodology differences:			
Inventory/cost of sales	(8)	—	(8)
Postretirement benefit expense	87	—	87
Stock-based compensation expense	(48)	(2)	(50)
Financing costs	(78)	—	(78)
Currency	3	—	3
Other income/expense methodology differences	(78)	—	(78)
Other methodology differences	(13)	(2)	(15)
Total consolidated profit before taxes	$ 1,997	$ 137	$ 2,134

Reconciliation of Restructuring costs:

As noted above, certain restructuring costs are a reconciling item between Segment profit and Consolidated profit before taxes. Had we included the amounts in the segments' results, the profit would have been as shown below:

Reconciliation of Restructuring costs:

(Millions of dollars)	Segment profit	Restructuring costs	Segment profit with restructuring costs
Three Months Ended March 31, 2019			
Construction Industries	$ 1,085	$ (9)	$ 1,076
Resource Industries	576	(14)	562
Energy & Transportation	838	(11)	827
Financial Products Segment	211	—	211
All Other operating segment	25	(5)	20
Total	$ 2,735	$ (39)	$ 2,696
Three Months Ended March 31, 2018			
Construction Industries	$ 1,117	$ (14)	$ 1,103
Resource Industries	378	(44)	334
Energy & Transportation	874	(5)	869
Financial Products Segment	141	—	141
All Other operating segment	57	(4)	53
Total	$ 2,567	$ (67)	$ 2,500

Reconciliation of Assets:

(Millions of dollars)	Machinery, Energy & Transportation	Financial Products	Consolidating Adjustments	Consolidated Total
March 31, 2019				
Total assets from reportable segments	$ 20,313	$ 35,753	$ —	$ 56,066
All Other operating segment	1,393	—	—	1,393
Items not included in segment assets:				
Cash and short-term investments	6,358	—	—	6,358
Intercompany receivables	1,579	—	(1,579)	—
Investment in Financial Products	3,843	—	(3,843)	—
Deferred income taxes	1,931	—	(674)	1,257
Goodwill and intangible assets	4,429	—	—	4,429
Property, plant and equipment – net and other assets	2,230	—	—	2,230
Inventory methodology differences	(2,364)	—	—	(2,364)
Liabilities included in segment assets	9,956	—	—	9,956
Other	(645)	69	(23)	(599)
Total assets	$ 49,023	$ 35,822	$ (6,119)	$ 78,726
December 31, 2018				
Total assets from reportable segments	$ 19,730	$ 36,002	$ —	$ 55,732
All Other operating segment	1,279	—	—	1,279
Items not included in segment assets:				
Cash and short-term investments	6,968	—	—	6,968
Intercompany receivables	1,633	—	(1,633)	—
Investment in Financial Products	3,672	—	(3,672)	—
Deferred income taxes	2,015	—	(692)	1,323
Goodwill and intangible assets	4,279	—	—	4,279
Property, plant and equipment – net and other assets	1,802	—	—	1,802
Inventory methodology differences	(2,503)	—	—	(2,503)
Liabilities included in segment assets	9,766	—	—	9,766
Other	(166)	66	(37)	(137)
Total assets	$ 48,475	$ 36,068	$ (6,034)	$ 78,509

Reconciliations of Depreciation and amortization:

(Millions of dollars)	Machinery, Energy & Transportation	Financial Products	Consolidated Total
Three Months Ended March 31, 2019			
Total depreciation and amortization from reportable segments	$ 337	$ 206	$ 543
Items not included in segment depreciation and amortization:			
All Other operating segment	52	—	52
Cost centers	32	—	32
Other	3	11	14
Total depreciation and amortization	$ 424	$ 217	$ 641
Three Months Ended March 31, 2018			
Total depreciation and amortization from reportable segments	$ 363	$ 203	$ 566
Items not included in segment depreciation and amortization:			
All Other operating segment	57	—	57
Cost centers	31	—	31
Other	17	10	27
Total depreciation and amortization	$ 468	$ 213	$ 681

Reconciliations of Capital expenditures:

(Millions of dollars)	Machinery, Energy & Transportation	Financial Products	Consolidating Adjustments	Consolidated Total
Three Months Ended March 31, 2019				
Total capital expenditures from reportable segments	$ 149	$ 246	$ —	$ 395
Items not included in segment capital expenditures:				
All Other operating segment	13	—	—	13
Cost centers	20	—	—	20
Timing	134	—	—	134
Other	(19)	5	(1)	(15)
Total capital expenditures	$ 297	$ 251	$ (1)	$ 547
Three Months Ended March 31, 2018				
Total capital expenditures from reportable segments	$ 227	$ 361	$ —	$ 588
Items not included in segment capital expenditures:				
All Other operating segment	11	—	—	11
Cost centers	14	—	—	14
Timing	175	—	—	175
Other	(104)	77	(4)	(31)
Total capital expenditures	$ 323	$ 438	$ (4)	$ 757

17. Cat Financial financing activities

Allowance for credit losses

The allowance for credit losses is an estimate of the losses inherent in Cat Financial's finance receivable portfolio and includes consideration of accounts that have been individually identified as impaired, as well as pools of finance receivables where it is probable that certain receivables in the pool are impaired but the individual accounts cannot yet be identified. In identifying and measuring impairment, management takes into consideration past loss experience, known and inherent risks in the portfolio, adverse situations that may affect the borrower's ability to repay, estimated value of underlying collateral and current economic conditions.

Accounts are identified for individual review based on past-due status and information available about the customer, such as financial statements, news reports and published credit ratings, as well as general information regarding industry trends and the economic environment in which Cat Financial's customers operate. The allowance for credit losses attributable to finance receivables that are individually evaluated and determined to be impaired is based 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 also considers credit enhancements such as additional collateral and contractual third-party guarantees. The allowance for credit losses attributable to the remaining accounts not yet individually identified as impaired is estimated based on loss forecast models utilizing probabilities of default, our estimate of the loss emergence period and the estimated loss given default. In addition, qualitative factors not able to be fully captured in the loss forecast models including industry trends, macroeconomic factors and model imprecision are considered in the evaluation of the adequacy of the allowance for credit losses. These qualitative factors are subjective and require a degree of management judgment.

Cat Financial's allowance for credit losses is segregated into two portfolio segments:

- Customer - Finance receivables with retail customers.
- Dealer - Finance receivables with Caterpillar dealers.

A portfolio segment is the level at which the company develops a systematic methodology for determining its allowance for credit losses.

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. Typically, Cat Financial's finance receivables within a geographic area have similar credit risk profiles and methods 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 or Canada.
- Europe - 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 and Southeast Asia.
- Mining - Finance receivables related to large mining customers worldwide and project financing in various countries.
- 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.

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

(Millions of dollars)	March 31, 2019		
Allowance for Credit Losses:	**Customer**	**Dealer**	**Total**
Balance at beginning of year	$ 486	$ 21	$ 507
Receivables written off	(38)	—	(38)
Recoveries on receivables previously written off	8	—	8
Provision for credit losses	39	13	52
Balance at end of period	$ 495	$ 34	$ 529
Individually evaluated for impairment	$ 302	$ 27	$ 329
Collectively evaluated for impairment	193	7	200
Ending Balance	$ 495	$ 34	$ 529
Recorded Investment in Finance Receivables:			
Individually evaluated for impairment	$ 813	$ 78	$ 891
Collectively evaluated for impairment	17,881	3,347	21,228
Ending Balance	$ 18,694	$ 3,425	$ 22,119

(Millions of dollars)	December 31, 2018		
Allowance for Credit Losses:	**Customer**	**Dealer**	**Total**
Balance at beginning of year	$ 353	$ 9	$ 362
Receivables written off	(235)	—	(235)
Recoveries on receivables previously written off	46	—	46
Provision for credit losses	337	12	349
Other	(15)	—	(15)
Balance at end of year	$ 486	$ 21	$ 507
Individually evaluated for impairment	$ 288	$ 14	$ 302
Collectively evaluated for impairment	198	7	205
Ending Balance	$ 486	$ 21	$ 507
Recorded Investment in Finance Receivables:			
Individually evaluated for impairment	$ 858	$ 78	$ 936
Collectively evaluated for impairment	18,152	3,338	21,490
Ending Balance	$ 19,010	$ 3,416	$ 22,426

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-rating agency ratings, loan-to-value ratios and other internal metrics. On an ongoing basis, Cat Financial monitors credit quality based on past-due status and collection experience 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 recorded investment in finance receivables past due when any installment is over 30 days past due. The tables below summarize the recorded investment in finance receivables by aging category.

(Millions of dollars)	March 31, 2019						
	31-60 Days Past Due	61-90 Days Past Due	91+ Days Past Due	Total Past Due	Current	Recorded Investment in Finance Receivables	91+ Still Accruing
Customer							
North America	$ 89	$ 18	$ 44	$ 151	$ 7,786	$ 7,937	$ 10
Europe	31	17	158	206	2,794	3,000	7
Asia Pacific	28	13	12	53	2,450	2,503	8
Mining	—	—	20	20	1,663	1,683	10
Latin America	48	42	73	163	1,385	1,548	—
Caterpillar Power Finance	14	8	365	387	1,636	2,023	2
Dealer							
North America	—	—	—	—	1,911	1,911	—
Europe	—	—	—	—	332	332	—
Asia Pacific	—	—	—	—	466	466	—
Mining	—	—	—	—	3	3	—
Latin America	1	1	78	80	631	711	—
Caterpillar Power Finance	—	—	—	—	2	2	—
Total	$ 211	$ 99	$ 750	$ 1,060	$ 21,059	$ 22,119	$ 37

(Millions of dollars)	December 31, 2018						
	31-60 Days Past Due	61-90 Days Past Due	91+ Days Past Due	Total Past Due	Current	Recorded Investment in Finance Receivables	91+ Still Accruing
Customer							
North America	$ 65	$ 18	$ 84	$ 167	$ 7,825	$ 7,992	$ 14
Europe	19	9	153	181	2,850	3,031	5
Asia Pacific	24	9	8	41	2,409	2,450	5
Mining	28	1	9	38	1,642	1,680	—
Latin America	38	29	71	138	1,421	1,559	—
Caterpillar Power Finance	10	1	384	395	1,903	2,298	—
Dealer							
North America	—	—	—	—	1,895	1,895	—
Europe	—	—	—	—	333	333	—
Asia Pacific	—	—	—	—	466	466	—
Mining	—	—	—	—	4	4	—
Latin America	—	—	78	78	638	716	—
Caterpillar Power Finance	—	—	—	—	2	2	—
Total	$ 184	$ 67	$ 787	$ 1,038	$ 21,388	$ 22,426	$ 24

Impaired finance receivables

For all classes, a finance receivable is considered impaired, based on current information and events, if it is probable that Cat Financial will be unable to collect all amounts due according to the contractual terms. Impaired finance receivables include finance receivables that have been restructured and are considered to be troubled debt restructurings.

There were $78 million of impaired finance receivables with a related allowance of $27 million and $14 million as of March 31, 2019 and December 31, 2018, respectively, for the Dealer portfolio segment, all of which was in Latin America. Cat Financial's recorded investment in impaired finance receivables and the related unpaid principal balances and allowance for the Customer portfolio segment were as follows:

(Millions of dollars)	March 31, 2019 Recorded Investment	March 31, 2019 Unpaid Principal Balance	March 31, 2019 Related Allowance	December 31, 2018 Recorded Investment	December 31, 2018 Unpaid Principal Balance	December 31, 2018 Related Allowance
Impaired Finance Receivables With No Allowance Recorded						
North America	$ 9	$ 9	$ —	$ 10	$ 10	$ —
Europe	1	1	—	1	1	—
Asia Pacific	—	—	—	—	—	—
Mining	29	29	—	33	33	—
Latin America	20	20	—	29	29	—
Caterpillar Power Finance	48	48	—	69	83	—
Total	$ 107	$ 107	$ —	$ 142	$ 156	$ —
Impaired Finance Receivables With An Allowance Recorded						
North America	$ 41	$ 38	$ 16	$ 40	$ 41	$ 14
Europe	93	93	57	92	92	57
Asia Pacific	9	9	3	4	4	2
Mining	32	31	14	56	55	26
Latin America	76	76	27	75	75	25
Caterpillar Power Finance	455	468	185	449	455	164
Total	$ 706	$ 715	$ 302	$ 716	$ 722	$ 288
Total Impaired Finance Receivables						
North America	$ 50	$ 47	$ 16	$ 50	$ 51	$ 14
Europe	94	94	57	93	93	57
Asia Pacific	9	9	3	4	4	2
Mining	61	60	14	89	88	26
Latin America	96	96	27	104	104	25
Caterpillar Power Finance	503	516	185	518	538	164
Total	$ 813	$ 822	$ 302	$ 858	$ 878	$ 288

(Millions of dollars)	Three Months Ended March 31, 2019 Average Recorded Investment	Three Months Ended March 31, 2019 Interest Income Recognized	Three Months Ended March 31, 2018 Average Recorded Investment	Three Months Ended March 31, 2018 Interest Income Recognized
Impaired Finance Receivables With No Allowance Recorded				
North America	$ 10	$ —	$ 17	$ —
Europe	1	—	36	—
Asia Pacific	—	—	31	1
Mining	31	—	103	1
Latin America	24	—	45	1
Caterpillar Power Finance	60	1	172	2
Total	$ 126	$ 1	$ 404	$ 5
Impaired Finance Receivables With An Allowance Recorded				
North America	$ 40	$ 1	$ 51	$ 1
Europe	94	1	19	—
Asia Pacific	7	—	6	—
Mining	43	1	17	—
Latin America	77	1	87	1
Caterpillar Power Finance	451	3	360	1
Total	$ 712	$ 7	$ 540	$ 3
Total Impaired Finance Receivables				
North America	$ 50	$ 1	$ 68	$ 1
Europe	95	1	55	—
Asia Pacific	7	—	37	1
Mining	74	1	120	1
Latin America	101	1	132	2
Caterpillar Power Finance	511	4	532	3
Total	$ 838	$ 8	$ 944	$ 8

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 (generally after 120 days past due). Recognition is resumed and previously suspended income is recognized when the finance receivable becomes current and collection of remaining amounts 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.

As of March 31, 2019 and December 31, 2018, there were $78 million of finance receivables on non-accrual status for the Dealer portfolio segment, respectively. The recorded investment in customer finance receivables on non-accrual status was as follows:

(Millions of dollars)	March 31, 2019	December 31, 2018
North America	$ 73	$ 77
Europe	171	154
Asia Pacific	6	4
Mining	18	50
Latin America	118	106
Caterpillar Power Finance	442	416
Total	$ 828	$ 807

Troubled Debt Restructurings

A restructuring of a finance receivable constitutes a troubled debt restructuring (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, extended skip payment periods and reduction of principal and/or accrued interest.

As of March 31, 2019 and December 31, 2018, there were no additional funds committed to lend to a borrower whose terms have been modified in a TDR.

There were no finance receivables modified as TDRs during the three months ended March 31, 2019 or 2018 for the Dealer portfolio segment. Cat Financial's investment in finance receivables in the Customer portfolio segment modified as TDRs during the three months ended March 31, 2019 and 2018, were as follows:

	Three Months Ended March 31, 2019			Three Months Ended March 31, 2018		
(Millions of dollars)	**Number of Contracts**	**Pre-TDR Recorded Investment**	**Post-TDR Recorded Investment**	**Number of Contracts**	**Pre-TDR Recorded Investment**	**Post-TDR Recorded Investment**
North America	—	$ —	$ —	13	$ 6	$ 6
Europe	19	11	7	—	—	—
Mining	—	—	—	1	29	29
Latin America	—	—	—	1	3	3
Caterpillar Power Finance	8	51	50	3	3	3
Total	27	$ 62	$ 57	18	$ 41	$ 41

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.

Fair value measurements are classified according to the lowest level input or value-driver that is significant to the valuation. A measurement may therefore be classified 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, primarily at Insurance Services, 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.

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 models that utilize 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 a valuation model that discounts cash flows resulting from the differential between the contract price and the market-based forward rate.

Assets and liabilities measured on a recurring basis at fair value, primarily related to Financial Products, included in our Consolidated Statement of Financial Position as of March 31, 2019 and December 31, 2018 are summarized below:

	March 31, 2019				
(Millions of dollars)	**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	—	50	—	—	50
Corporate bonds					
Corporate bonds	—	777	—	—	777
Asset-backed securities	—	61	—	—	61
Mortgage-backed debt securities					
U.S. governmental agency	—	304	—	—	304
Residential	—	7	—	—	7
Commercial	—	17	—	—	17
Total debt securities	9	1,216	—	—	1,225
Equity securities					
Large capitalization value	294	—	—	—	294
Smaller company growth	53	—	—	—	53
REIT	—	—	—	120	120
Total equity securities	347	—	—	120	467
Derivative financial instruments, net	—	25	—	—	25
Total assets	$ 356	$ 1,241	$ —	$ 120	$ 1,717

(Millions of dollars)	December 31, 2018 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	—	42	—	—	42
Corporate bonds					
Corporate bonds	—	720	—	—	720
Asset-backed securities	—	63	—	—	63
Mortgage-backed debt securities					
U.S. governmental agency	—	297	—	—	297
Residential	—	7	—	—	7
Commercial	—	13	—	—	13
Total debt securities	9	1,142	—	—	1,151
Equity securities					
Large capitalization value	260	—	—	—	260
Smaller company growth	46	—	—	—	46
REIT	—	—	—	119	119
Total equity securities	306	—	—	119	425
Total assets	$ 315	$ 1,142	$ —	$ 119	$ 1,576
Liabilities					
Derivative financial instruments, net	$ —	$ 19	$ —	$ —	$ 19
Total liabilities	$ —	$ 19	$ —	$ —	$ 19

In addition to the amounts above, Cat Financial impaired loans are subject to measurement at fair value on a nonrecurring basis and are classified as Level 3 measurements. A loan is considered impaired when management determines that collection of contractual amounts due is not probable. 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 impaired loans with a fair value of $426 million and $469 million as of March 31, 2019 and December 31, 2018, 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 used the following methods and assumptions to estimate the fair value of our financial instruments:

Cash and short-term investments
Carrying amount approximated fair value.

Restricted cash and short-term investments
Carrying amount approximated fair value. Restricted cash and short-term investments are included in Prepaid expenses and other current assets in the Consolidated Statement of Financial Position.

Finance receivables
Fair value was estimated by discounting the future cash flows using current rates, representative of receivables with similar remaining maturities.

Wholesale inventory receivables
Fair value was estimated by discounting the future cash flows using current rates, representative of receivables with similar remaining maturities.

Short-term borrowings
Carrying amount approximated fair value.

Long-term debt
Fair value for fixed and floating rate debt was estimated 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.

Please refer to the table below for the fair values of our financial instruments.

Fair Value of Financial Instruments

	March 31, 2019		December 31, 2018			
(Millions of dollars)	**Carrying Amount**	**Fair Value**	**Carrying Amount**	**Fair Value**	**Fair Value Levels**	**Reference**
Assets						
Cash and short-term investments	$ 7,128	$ 7,128	$ 7,857	$ 7,857	1	
Restricted cash and short-term investments	$ 30	$ 30	$ 33	$ 33	1	
Investments in debt and equity securities	$ 1,692	$ 1,692	$ 1,576	$ 1,576	1 & 2	Note 8
Finance receivables – net (excluding finance leases [1])	$ 14,340	$ 14,480	$ 14,714	$ 14,798	3	Note 17
Wholesale inventory receivables – net (excluding finance leases [1])	$ 1,132	$ 1,103	$ 1,050	$ 1,025	3	
Foreign currency contracts – net	$ 82	$ 82	$ 47	$ 47	2	Note 5
Liabilities						
Short-term borrowings	$ 5,590	$ 5,590	$ 5,723	$ 5,723	1	
Long-term debt (including amounts due within one year)						
Machinery, Energy & Transportation	$ 7,663	$ 9,155	$ 8,015	$ 9,046	2	
Financial Products	$ 22,529	$ 22,633	$ 22,815	$ 22,684	2	
Interest rate contracts – net	$ 55	$ 55	$ 36	$ 36	2	Note 5
Commodity contracts – net	$ 2	$ 2	$ 30	$ 30	2	Note 5
Guarantees	$ 10	$ 10	$ 8	$ 8	3	Note 11

[1] Represents finance leases and failed sales leasebacks of $7,495 million at March 31, 2019 and finance leases of $7,463 million at December 31, 2018, respectively.

19. Other income (expense)

(Millions of dollars)	Three Months Ended March 31 2019	2018
Investment and interest income	$ 52	$ 36
Foreign exchange gains (losses) [1]	18	(19)
License fee income	25	31
Net periodic pension and OPEB income (cost), excluding service cost	26	86
Gains (losses) on securities	39	(2)
Miscellaneous income (loss)	—	(5)
Total	$ 160	$ 127

[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, eligible separation costs are recognized at the time of employee acceptance unless the acceptance requires explicit approval by the company. For involuntary programs, eligible costs are recognized 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, 2019 and 2018 were as follows:

(Millions of dollars)	Three Months Ended March 31 2019	2018
Employee separations [1]	$ 15	$ 33
Long-lived asset impairments [1]	7	—
Other [2]	26	36
Total restructuring costs	$ 48	$ 69

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

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

For the three months ended March 31, 2019 and March 31, 2018, the restructuring costs were primarily related to ongoing facility closures across the company.

Certain restructuring costs are a reconciling item between Segment profit and Consolidated profit before taxes. See Note 16 for more information.

The following table summarizes the 2018 and 2019 employee separation activity:

(Millions of dollars)		
Liability balance at December 31, 2017	$	249
Increase in liability (separation charges)		112
Reduction in liability (payments)		(276)
Liability balance at December 31, 2018		85
Increase in liability (separation charges)		15
Reduction in liability (payments)		(41)
Liability balance at March 31, 2019	$	59

Most of the liability balance at March 31, 2019 is expected to be paid in 2019 and 2020.

In September 2015, we announced a large scale restructuring plan (the Plan) including a voluntary retirement enhancement program for qualifying U.S. employees, several voluntary separation programs outside of the U.S., additional involuntary programs throughout the company and manufacturing facility consolidations and closures that occurred through 2018. The largest action among those included in the Plan was related to our European manufacturing footprint, which led to the Gosselies, Belgium, facility closure. In the first three months of 2019, we incurred $4 million of restructuring costs related to the Plan. Total restructuring costs incurred since the inception of the Plan were $1,792 million. The remaining costs of approximately $40 million related to the Plan are expected to be recognized in 2019.

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

Overview

First-quarter 2019 sales and revenues were $13.466 billion, a 5 percent increase from first-quarter 2018 sales and revenues of $12.859 billion. The increase was primarily due to higher ***sales volume*** and favorable ***price realization***, partially offset by unfavorable ***currency*** impacts due to a stronger U.S. dollar. The sales volume increase was driven by improved demand for both equipment and ***services***, with the most significant increase in ***Resource Industries***. Sales grew in all regions except for ***EAME***, with the largest gains in North America and Asia/Pacific.

Profit per share for the first quarter of 2019 was $3.25, an increase of $0.51 from the first quarter of 2018. Profit per share in the first quarter of 2019 included a discrete tax benefit related to U.S. tax reform of $178 million, or $0.31 per share. Profit per share in the first quarter of 2018 included ***restructuring costs*** of $0.08 per share. Profit was $1.881 billion in the first quarter of 2019, an increase of $216 million from the first quarter of 2018. Profit increased primarily due to favorable price realization, higher sales volume and lower tax expense, partially offset by higher ***manufacturing costs*** and increased selling, general and administrative (SG&A) and research and development (R&D) expenses. The increase in manufacturing costs was primarily due to higher variable labor and burden, including freight costs, and material costs, including tariffs. SG&A/R&D expenses were higher excluding lower short-term incentive compensation expense, primarily due to increased targeted investments and timing of corporate-level expenses.

Highlights for the first quarter of 2019 include:

- First-quarter sales and revenues were $13.466 billion, compared with $12.859 billion in the first quarter of 2018. Sales increased in Resource Industries and ***Construction Industries***, while ***Energy & Transportation*** was about flat. Financial Products' revenues increased slightly.
- Operating profit as a percent of sales and revenues was 16.4 percent in the first quarter of 2019 and 2018.
- Profit per share was $3.25 in the first quarter of 2019, compared with $2.74 in the first quarter of 2018. Profit per share in the first quarter of 2019 included a discrete tax benefit related to U.S. tax reform of $178 million, or $0.31 per share. Profit per share in the first quarter of 2018 included restructuring costs of $0.08 per share.
- During the first quarter of 2019, ***Machinery, Energy & Transportation (ME&T)*** operating cash flow was $860 million. In the quarter, the company deployed significant capital through the repurchase of $751 million of Caterpillar common stock and a dividend payment of $494 million. The enterprise cash balance at the end of the first quarter of 2019 was $7.1 billion.

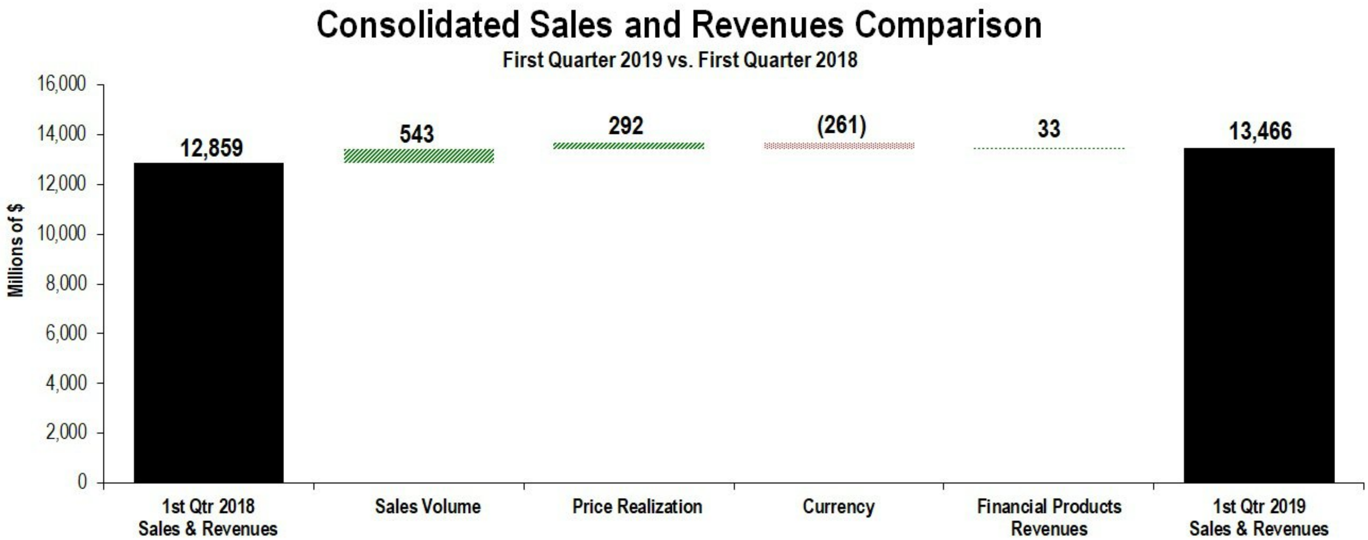
Notes:

- Glossary of terms is included on pages 60-62; first occurrence of terms shown in bold italics.
- Information on non-GAAP financial measures is included on page 67.

Consolidated Results of Operations

THREE MONTHS ENDED MARCH 31, 2019 COMPARED WITH THREE MONTHS ENDED MARCH 31, 2018

CONSOLIDATED SALES AND REVENUES



The chart above graphically illustrates reasons for the change in Consolidated Sales and Revenues between the first quarter of 2018 (at left) and the first quarter of 2019 (at right). Caterpillar management utilizes these charts internally to visually communicate with the company's Board of Directors and employees.

Total sales and revenues of $13.466 billion in the first quarter of 2019, increased $607 million, or 5 percent, compared with $12.859 billion in the first quarter of 2018. The increase was primarily due to higher sales volume driven by improved demand for both equipment and services, with the most significant increase in Resource Industries. Sales volume also increased in Construction Industries, while Energy & Transportation was about flat. Sales grew in all regions except for EAME, with the largest gains in North America and Asia/Pacific. Favorable price realization, primarily in Construction Industries and Resource Industries, also contributed to the sales improvement. The increase was partially offset by unfavorable currency impacts due to a stronger U.S. dollar.

The largest sales increase was in North America, which improved 7 percent as favorable economic conditions in key end markets drove higher demand, including favorable changes in dealer inventories, and favorable price realization. Dealer inventories increased more in the first quarter of 2019 than the first quarter of 2018.

Sales increased 9 percent in ***Latin America*** primarily due to stabilizing economic conditions in several countries in the region that resulted in improved demand from low levels, partially offset by a weaker Brazilian real.

EAME sales decreased 6 percent primarily due to economic uncertainty in a few countries in the region and a weaker euro, partially offset by favorable price realization.

Asia/Pacific sales increased 9 percent mostly due to higher demand for both equipment and services and favorable price realization. The sales increase was primarily in Australia, partially offset by a decrease in China. The increase in sales was partially offset by the unfavorable impact of a weaker Australian dollar and Chinese yuan.

Dealer machine and engine inventories increased about $1.3 billion during the first quarter of 2019, compared with an increase of about $1.2 billion during the first quarter of 2018. Dealers inventories generally increase during the first quarter in preparation for the spring selling season, and the company believes the increase in dealer inventories in the first quarter of 2019 is reflective of current end-user demand. However, 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. Caterpillar's current expectation remains that dealer inventories should be about flat for the full year.

Sales and Revenues by Segment

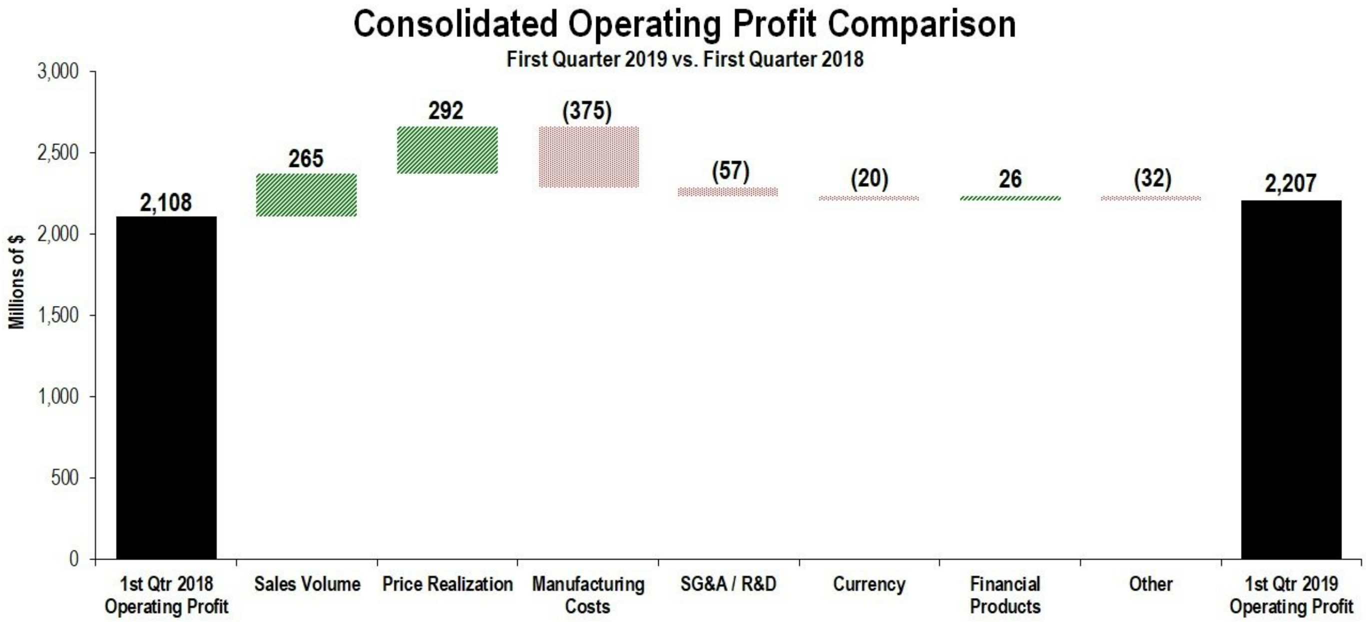
(Millions of dollars)	First Quarter 2018	Sales Volume	Price Realization	Currency	Inter-Segment / Other	First Quarter 2019	$ Change	% Change
Construction Industries	$ 5,677	$ 164	$ 156	$ (127)	$ 3	$ 5,873	$ 196	3%
Resource Industries	2,309	371	110	(42)	(21)	2,727	418	18%
Energy & Transportation	5,219	21	27	(91)	34	5,210	(9)	—%
All Other Segment	116	1	—	(1)	5	121	5	4%
Corporate Items and Eliminations	(1,171)	(14)	(1)	—	(21)	(1,207)	(36)	
Machinery, Energy & Transportation Sales	12,150	543	292	(261)	—	12,724	574	5%
Financial Products Segment	793	—	—	—	57	850	57	7%
Corporate Items and Eliminations	(84)	—	—	—	(24)	(108)	(24)	
Financial Products Revenues	709	—	—	—	33	742	33	5%
Consolidated Sales and Revenues	$ 12,859	$ 543	$ 292	$ (261)	$ 33	$ 13,466	$ 607	5%

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 2019														
Construction Industries	$ 2,965	13%	$ 319	(7%)	$ 1,006	(6%)	$ 1,562	(4%)	$ 5,852	3%	$ 21	17%	$ 5,873	3%
Resource Industries	951	19%	423	18%	468	(10%)	805	52%	2,647	20%	80	(21%)	2,727	18%
Energy & Transportation	2,151	(3%)	332	19%	1,032	(5%)	718	6%	4,233	(1%)	977	4%	5,210	—%
All Other Segment	8	(47%)	—	—%	11	175%	18	—%	37	—%	84	6%	121	4%
Corporate Items and Eliminations	(41)		1		(3)		(2)		(45)		(1,162)		(1,207)	
Machinery, Energy & Transportation Sales	6,034	7%	1,075	9%	2,514	(6%)	3,101	9%	12,724	5%	—	—	12,724	5%
Financial Products Segment	558	9%	70	(5%)	102	1%	120	13%	850 [1]	7%	—	—	850	7%
Corporate Items and Eliminations	(69)		(11)		(9)		(19)		(108)		—		(108)	
Financial Products Revenues	489	6%	59	(3%)	93	(3%)	101	13%	742	5%	—	—	742	5%
Consolidated Sales and Revenues	$ 6,523	7%	$ 1,134	8%	$ 2,607	(6%)	$ 3,202	9%	$ 13,466	5%	$ —	—	$ 13,466	5%
First Quarter 2018														
Construction Industries	$ 2,620		$ 344		$ 1,067		$ 1,628		$ 5,659		$ 18		$ 5,677	
Resource Industries	798		360		520		530		2,208		101		2,309	
Energy & Transportation	2,225		280		1,092		679		4,276		943		5,219	
All Other Segment	15		—		4		18		37		79		116	
Corporate Items and Eliminations	(28)		1		(3)		—		(30)		(1,141)		(1,171)	
Machinery, Energy & Transportation Sales	5,630		985		2,680		2,855		12,150		—		12,150	
Financial Products Segment	512		74		101		106		793 [1]		—		793	
Corporate Items and Eliminations	(49)		(13)		(5)		(17)		(84)		—		(84)	
Financial Products Revenues	463		61		96		89		709		—		709	
Consolidated Sales and Revenues	$ 6,093		$ 1,046		$ 2,776		$ 2,944		$ 12,859		$ —		$ 12,859	

[1] Includes revenues from Machinery, Energy & Transportation of $131 million and $105 million in the first quarter of 2019 and 2018, respectively.

CONSOLIDATED OPERATING PROFIT



The chart above graphically illustrates reasons for the change in Consolidated Operating Profit between the first quarter of 2018 (at left) and the first quarter of 2019 (at right). Caterpillar management utilizes these charts internally to visually communicate with the company's Board of Directors and employees. The bar entitled Other includes ***consolidating adjustments*** and ***Machinery, Energy & Transportation other operating (income) expenses***.

Operating profit for the first quarter of 2019 was $2.207 billion, compared with $2.108 billion in the first quarter of 2018. The increase of $99 million was mostly due to favorable price realization and higher sales volume, partially offset by higher manufacturing costs and increased SG&A/R&D expenses. The increase in manufacturing costs was primarily due to higher variable labor and burden, including freight costs, and material costs, including tariffs. SG&A/R&D expenses were higher excluding lower short-term incentive compensation expense, primarily due to increased targeted investments and timing of corporate-level expenses. We expect favorable price realization to offset higher manufacturing costs, excluding short-term incentive compensation expense.

Short-term incentive compensation expense was about $220 million in the first quarter of 2019, compared to about $360 million in the first quarter of 2018. For 2019, short-term incentive compensation expense is expected to be about $900 million, compared with $1.4 billion in 2018.

Operating profit margin was 16.4 percent for the first quarter of 2019 and 2018.

Other Profit/Loss and Tax Items

- Interest expense excluding Financial Products in the first quarter of 2019 was $103 million, compared with $101 million in the first quarter of 2018.
- Other income/expense in the first quarter of 2019 was income of $160 million, compared with income of $127 million in the first quarter of 2018. The favorable change was primarily a result of the impact of mark-to-market gains on equity securities, currency translation and hedging gains, partially offset by the impact from pension and other postretirement benefit plans.
- The provision for income taxes for the first quarter of 2019 reflected an estimated annual tax rate of 26 percent, compared with 24 percent for the first quarter of 2018, excluding the discrete items discussed in the following paragraph. The increase was largely driven by the application of U.S. tax reform provisions to the earnings of certain non-U.S. subsidiaries, which do not have a calendar fiscal year-end. These provisions did not apply to these subsidiaries in 2018.

  As a result of final regulations received in January 2019 providing additional guidance related to the calculation of the mandatory deemed repatriation of non-U.S. earnings due to U.S. tax reform, we recorded a discrete tax benefit of $178 million in the first quarter of 2019 to adjust unrecognized tax benefits. In addition, a discrete tax benefit of $23 million was recorded in the first quarter of 2019, compared with $40 million in the first quarter of 2018, for the settlement of stock-based compensation awards with associated tax deductions in excess of cumulative U.S. GAAP compensation expense.

Profit by Segment

(Millions of dollars)	First Quarter 2019	First Quarter 2018	$ Change	% Change
Construction Industries	$ 1,085	$ 1,117	$ (32)	(3%)
Resource Industries	576	378	198	52%
Energy & Transportation	838	874	(36)	(4%)
All Other Segment	25	57	(32)	(56%)
Corporate Items and Eliminations	(375)	(371)	(4)	
Machinery, Energy & Transportation	2,149	2,055	94	5%
Financial Products Segment	211	141	70	50%
Corporate Items and Eliminations	(46)	(2)	(44)	
Financial Products	165	139	26	19%
Consolidating Adjustments	(107)	(86)	(21)	
Consolidated Operating Profit	$ 2,207	$ 2,108	$ 99	5%

Construction Industries

Construction Industries' total sales were $5.873 billion in the first quarter of 2019, compared with $5.677 billion in the first quarter of 2018. The increase was mostly due to higher end-user demand for construction equipment, partially offset by a smaller increase in dealer inventories compared with the first quarter of 2018. Favorable price realization was partially offset by unfavorable currency impacts due to a stronger U.S. dollar.

- In North America, the sales increase was driven by higher demand for new equipment, primarily to support road construction activities. Favorable price realization also contributed to the sales improvement. We believe the strength of the U.S. economy and state and local funding for infrastructure development will be favorable to sales in 2019.
- Construction activities remained at low levels in Latin America.
- In EAME, the sales decrease was primarily due to a smaller increase in dealer inventories compared with the first quarter of 2018 and a weaker euro, partially offset by favorable price realization.
- Sales in Asia/Pacific declined due to unfavorable currency impacts, while China sales were about flat compared with the first quarter of 2018. We expect demand in China to be about flat for the full year 2019.

Construction Industries' profit was $1.085 billion in the first quarter of 2019, compared with $1.117 billion in the first quarter of 2018. The decrease in profit was a result of higher manufacturing costs, partially offset by favorable price realization. Manufacturing costs increased primarily due to higher material, labor and freight costs.

Construction Industries' profit as a percent of total sales was 18.5 percent in the first quarter of 2019, compared with 19.7 percent in the first quarter of 2018.

Resource Industries

Resource Industries' total sales were $2.727 billion in the first quarter of 2019, an increase of $418 million from the first quarter of 2018. The increase was primarily due to higher equipment demand, favorable price realization and services. Mining production levels and commodity market fundamentals remained positive, which supported higher sales. Higher demand levels for non-residential construction activities and quarry and aggregate operations also drove higher sales. In 2019, we believe commodity market fundamentals will remain supportive for investment and mining companies will increase their capital expenditures. We expect demand for heavy construction, quarry and aggregate equipment to remain strong in 2019.

Resource Industries' profit was $576 million in the first quarter of 2019, compared with $378 million in the first quarter of 2018. The improvement was mostly due to higher sales volume. Favorable price realization was partially offset by higher manufacturing costs, including increased material and freight costs and slightly higher warranty expense.

Resource Industries' profit as a percent of total sales was 21.1 percent in the first quarter of 2019, compared with 16.4 percent in the first quarter of 2018.

Energy & Transportation

Sales by Application (Millions of dollars)	First Quarter 2019	First Quarter 2018	$ Change	% Change
Oil and Gas	$ 1,131	$ 1,215	$ (84)	(7%)
Power Generation	1,036	969	67	7%
Industrial	904	906	(2)	—%
Transportation	1,162	1,186	(24)	(2%)
External Sales	4,233	4,276	(43)	(1%)
Inter-segment	977	943	34	4%
Total Sales	$ 5,210	$ 5,219	$ (9)	—%

Energy & Transportation's total sales were $5.210 billion in the first quarter of 2019, about flat compared with $5.219 billion in the first quarter of 2018. Decreases due to unfavorable currency impacts from a stronger U.S. dollar were nearly offset by favorable price realization and higher sales volumes.

- Oil and Gas – Sales were negatively impacted by the timing of turbine project deliveries in North America. The decrease was partially offset by higher demand for reciprocating engines for gas compression in North America. We anticipate an increase in demand for well servicing equipment as pipeline constraints in the Permian Basin are expected to improve in the second half of 2019.
- Power Generation – Sales increased primarily due to higher shipments for large diesel reciprocating engine applications in all regions except EAME.
- Industrial – Sales were about flat, with a decrease in EAME primarily due to unfavorable currency impacts nearly offset by higher sales in North America.
- Transportation – Sales were slightly lower primarily due to unfavorable currency impacts.

Energy & Transportation's profit was $838 million in the first quarter of 2019, compared with $874 million in the first quarter of 2018. The decrease was mostly due to higher manufacturing costs including increased freight costs, higher warranty expense and slightly higher labor costs. The decrease was partially offset by favorable price realization and higher sales volume.

Energy & Transportation's profit as a percent of total sales was 16.1 percent in the first quarter of 2019, compared with 16.7 percent in the first quarter of 2018.

Financial Products Segment

Financial Products' segment revenues were $850 million in the first quarter of 2019, an increase of $57 million, or 7 percent, from the first quarter of 2018. The increase was primarily due to higher average financing rates and higher average ***earning assets*** in North America and Asia/Pacific.

Financial Products' segment profit was $211 million in the first quarter of 2019, compared with $141 million in the first quarter of 2018. The increase was primarily due to a $42 million favorable impact from mark-to-market on equity securities in Insurance Services, an increase in net yield on average earning assets and a decrease in the provision for credit losses at Cat Financial.

At the end of the first quarter of 2019, past dues at Cat Financial were 3.61 percent, compared with 3.17 percent at the end of the first quarter of 2018. The increase in past dues was primarily driven by Cat Power Finance, concentrated in the marine portfolio. Write-offs, net of recoveries, were $30 million for the first quarter of both 2019 and 2018. As of March 31, 2019, Cat Financial's allowance for credit losses totaled $534 million, or 1.89 percent of finance receivables, compared with $511 million, or 1.80 percent of finance receivables, at December 31, 2018.

Corporate Items and Eliminations

Expense for corporate items and eliminations was $421 million in the first quarter of 2019, an increase of $48 million from the first quarter of 2018, primarily due to timing of corporate-level expenses.

RESTRUCTURING COSTS

Restructuring costs for the three months ended March 31, 2019 and 2018 were as follows:

(Millions of dollars)	Three Months Ended March 31	
	2019	2018
Employee separations [1]	$ 15	$ 33
Long-lived asset impairments [1]	7	—
Other [2]	26	36
Total restructuring costs	$ 48	$ 69

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

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

For the three months ended March 31, 2019 and March 31, 2018, the restructuring costs were primarily related to ongoing facility closures across the company.

Certain restructuring costs are a reconciling item between Segment profit and Consolidated profit before taxes.

The following table summarizes the 2018 and 2019 employee separation activity:

(Millions of dollars)	
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Liability balance at March 31, 2019	$ 59

Most of the liability balance at March 31, 2019 is expected to be paid in 2019 and 2020.

In September 2015, we announced a large scale restructuring plan (the Plan) including a voluntary retirement enhancement program for qualifying U.S. employees, several voluntary separation programs outside of the U.S., additional involuntary programs throughout the company and manufacturing facility consolidations and closures that occurred through 2018. The largest action among those included in the Plan was related to our European manufacturing footprint, which led to the Gosselies, Belgium, facility closure. In the first three months of 2019, we incurred $4 million of restructuring costs related to the Plan. Total restructuring costs incurred since the inception of the Plan were $1,792 million. The remaining costs of approximately $40 million related to the Plan are expected to be recognized in 2019.

We expect that restructuring actions will result in an incremental benefit to operating costs, primarily Cost of goods sold and SG&A expenses of about $300 million in 2019 compared with 2018.

GLOSSARY OF TERMS

1. **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; digital investments for new customer and dealer solutions that integrate data analytics with state-of-the-art digital technologies while transforming the buying experience.

2. **Consolidating Adjustments** – Elimination of transactions between Machinery, Energy & Transportation and Financial Products.

3. **Construction Industries** – A segment primarily responsible for supporting customers using machinery in infrastructure, forestry 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, forestry excavators, feller bunchers, harvesters, knuckleboom loaders, motor graders, pipelayers, road reclaimers, skidders, skid steer loaders, telehandlers, small and medium track-type tractors, track-type loaders, utility vehicles, wheel excavators, compact, small and medium wheel loaders and related parts and work tools.

4. **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; restructuring costs; and inter-segment eliminations.

5. **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 lines 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).

6. **EAME** – A geographic region including Europe, Africa, the Middle East and the Commonwealth of Independent States (CIS).

7. **Earning Assets** – Assets consisting primarily of total finance receivables net of unearned income, plus equipment on operating leases, less accumulated depreciation at Cat Financial.

8. **Energy & Transportation** – A segment primarily responsible for supporting customers using reciprocating engines, turbines, diesel-electric locomotives and related parts 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 and development, manufacturing, marketing and sales and product support of turbine machinery and integrated systems and solutions and turbine-related services, reciprocating engine-powered generator sets, integrated systems used in the electric power generation industry, reciprocating engines and integrated systems and solutions for the marine and oil and gas industries; reciprocating engines supplied to the industrial industry as well as Cat machinery; the remanufacturing of Caterpillar engines and components and remanufacturing services for other companies; the business strategy, product design, product management and development, manufacturing, remanufacturing, leasing and service of diesel-electric locomotives and components and other rail-related products and services and product support of on-highway vocational trucks for North America.

9. **Financial Products Segment** – Provides financing alternatives to customers and dealers around the world for Caterpillar products, 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, 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 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 our 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.

10. **Latin America** – A geographic region including Central and South American countries and Mexico.

11. **Machinery, Energy & Transportation (ME&T)** – Represents the aggregate total of Construction Industries, Resource Industries, Energy & Transportation, All Other Segment and related corporate items and eliminations.

12. **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.

13. **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.
14. **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.
15. **Resource Industries** – A segment primarily responsible for supporting customers using machinery in mining, quarry and aggregates, waste and material handling applications. 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, hard rock continuous mining systems, 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 and autonomous machine capabilities. Resource Industries also manages areas that provide services to other parts of the company, including integrated manufacturing and research and development.
16. **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.
17. **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.
18. **Services** – Enterprise services include, but are not limited to, aftermarket parts, Financial Products' revenues and other service-related revenues. Machinery, Energy & Transportation segments exclude 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. During the first three months of 2019, we experienced favorable global liquidity conditions in both our ME&T and Financial Products' operations. On a consolidated basis, we ended the first three months of 2019 with $7.13 billion of cash, a decrease of $729 million from year-end 2018. We intend to maintain a strong cash and liquidity position.

Our cash balances are held in numerous locations throughout the world. As a result of U.S. tax reform legislation enacted in 2017, we expect to be able to use cash held by non-U.S. subsidiaries in the United States in the future with minimal tax consequences.

Consolidated operating cash flow for the first three months of 2019 was $1.12 billion, up from $935 million for the same period last year. The increase was primarily due to favorable working capital, which was partially offset by lower profit excluding a non-cash discrete tax benefit related to U.S. tax reform as well as lower accruals for short-term incentive compensation payments in 2019. Within working capital, changes to accounts receivable, customer advances and accrued expenses favorably impacted cash flow, but were partially offset by changes in accounts payables and inventories. See further discussion of operating cash flow under ME&T and Financial Products.

Total debt as of March 31, 2019 was $35.78 billion, a decrease of $771 million from year-end 2018. Debt related to Financial Products decreased $423 million, primarily due to lower portfolio funding requirements. Debt related to ME&T decreased $348 million in the first three months of 2019, primarily due to the impact of new accounting guidance on a previously failed sale-leaseback transaction in Japan. In the first three months of 2019, we repurchased $751 million of Caterpillar common stock.

We have 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, 2019 was $2.75 billion. Information on our Credit Facility is as follows:

- The 364-day facility of $3.15 billion (of which $0.82 billion is available to ME&T) expires in September 2019.
- The three-year facility, as amended in September 2018, of $2.73 billion (of which $0.72 billion is available to ME&T) now expires in September 2021.
- The five-year facility, as amended in September 2018, of $4.62 billion (of which $1.21 billion is available to ME&T) now expires in September 2023.

At March 31, 2019, Caterpillar's consolidated net worth was $15.45 billion, which was above the $9.00 billion required under the Credit Facility. The consolidated net worth is defined 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, 2019, Cat Financial's covenant interest coverage ratio was 1.55 to 1. This is 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, 2019, Cat Financial's six-month covenant leverage ratio was 8.10 to 1. This is 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, 2019, there were no borrowings under the Credit Facility.

Our total credit commitments and available credit as of March 31, 2019 were:

(Millions of dollars)	March 31, 2019		
	Consolidated	**Machinery, Energy & Transportation**	**Financial Products**
Credit lines available:			
Global credit facilities	$ 10,500	$ 2,750	$ 7,750
Other external	4,747	4	4,743
Total credit lines available	15,247	2,754	12,493
Less: Commercial paper outstanding	(4,765)	—	(4,765)
Less: Utilized credit	(1,039)	(4)	(1,035)
Available credit	$ 9,443	$ 2,750	$ 6,693

The other external consolidated credit lines with banks as of March 31, 2019 totaled $4.75 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 currently rates our debt as “low-A”, while Fitch and S&P maintain a “mid-A” debt rating. To date, this split rating has not had a material impact on our borrowing costs or our overall financial health. However, 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 Credit Facility. Our Financial Products' operations would rely on cash flow from its existing portfolio, existing cash balances, access to our Credit Facility 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.

Machinery, Energy & Transportation
Net cash provided by operating activities was $860 million in the first three months of 2019, compared with $948 million for the same period in 2018. The decrease was primarily due to lower profit excluding a non-cash discrete tax benefit related to U.S. tax reform as well as lower accruals for short-term incentive compensation payments in 2019.

Net cash used for investing activities in the first three months of 2019 was $226 million, compared with net cash used of $484 million in the first three months of 2018. The change was primarily due to the acquisition of ECM S.p.A. and Downer Freight Rail in the first three months of 2018.

Net cash used for financing activities during the first three months of 2019 was $1.25 billion, compared with net cash used of $816 million in the same period of 2018. In the first three months of 2019, we repurchased $751 million of Caterpillar common stock, an increase of $251 million compared to the same period a year ago. Additionally, proceeds from common stock issued from stock options exercised decreased $152 million in the first three months of 2019 compared to the prior period.

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 $297 million during the first three months of 2019, compared to $323 million for the same period in 2018. We expect ME&T's capital expenditures in 2019 to be about $1.4 billion. We made $119 million of contributions to our pension and other postretirement benefit plans during the first three months of 2019. We currently anticipate full-year 2019 contributions of approximately $315 million. In comparison, we made $152 million of contributions to our pension and other postretirement benefit plans during the first three months of 2018.

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 new capital allocation strategy, ME&T free cash flow is a liquidity measure we will use going forward 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 new capital allocation strategy is to return substantially all ME&T free cash flow to shareholders 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 2019, we repurchased $751 million of Caterpillar common stock, with $9.25 billion remaining under the 2018 Authorization as of March 31, 2019. Caterpillar's basic shares outstanding as of March 31, 2019 were approximately 572 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. Dividends totaled $494 million in the first three months of 2019, representing 86 cents per share paid in the first quarter. Beginning with the dividend to be paid to shareholders in the third quarter of 2019, the Board approved a 20 percent increase in the quarterly dividend rate to $1.03 per share.

Financial Products

Financial Products operating cash flow was $350 million in the first three months of 2019, compared with $311 million for the same period a year ago. Net cash provided by investing activities was $19 million for the first three months of 2019, compared with cash used of $533 million for the same period in 2018. The change was primarily due to the impact of net intercompany purchased receivables. Net cash used for financing activities was $489 million for the first three months of 2019, compared with cash provided by financing activities of $171 million for the same period in 2018. The change was primarily due to lower portfolio funding requirements.

CRITICAL ACCOUNTING POLICIES

For a discussion of the company's critical accounting policies, see Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations in our 2018 Annual Report on Form 10-K. There have been no significant changes to our critical accounting policies since our 2018 Annual Report on Form 10-K.

OTHER MATTERS

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, the investigation, remediation, and operating and maintenance costs are accrued against our earnings. Costs are accrued 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. 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 requests 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 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 Caterpillar SARL, 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.

On March 20, 2014, Brazil's Administrative Council for Economic Defense (CADE) published a Technical Opinion which named 18 companies and over 100 individuals as defendants, including two subsidiaries of Caterpillar Inc., MGE - Equipamentos e Serviços Ferroviários Ltda. (MGE) and Caterpillar Brasil Ltda. The publication of the Technical Opinion opened CADE's official administrative investigation into allegations that the defendants participated in anticompetitive bid activity for the construction and maintenance of metro and train networks in Brazil. While companies cannot be held criminally liable for anticompetitive conduct in Brazil, criminal charges have been brought against two current employees of MGE and one former employee of MGE involving the same conduct alleged by CADE. The Company has responded to all requests for information from the authorities. The Company is unable to predict the outcome or reasonably estimate the 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.

Order Backlog

At the end of the first quarter of 2019, the dollar amount of backlog believed to be firm was approximately $16.9 billion, about $300 million higher than the fourth quarter of 2018. The increase was in Construction Industries and Energy & Transportation, partially offset by a decrease in Resource Industries due to higher dealer inventories. Of the total backlog at March 31, 2019, approximately $3.4 billion was not expected to be filled in the following twelve months.

NON-GAAP FINANCIAL MEASURES

The following definitions are provided 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 for 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 several significant items in order for our results to be meaningful to our readers. These items consist of a discrete tax benefit related to U.S. tax reform in the first quarter of 2019 and 2018 restructuring costs, which were incurred to generate longer-term benefits. We do not consider these items indicative of earnings from ongoing business activities and believe the non-GAAP measures will provide 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.

Reconciliation of adjusted operating profit margin to the most directly comparable GAAP measure, operating profit as a percent of sales and revenues are as follows:

	Three Months Ended March 31	
	2019	**2018**
Operating profit as a percent of total sales and revenues	16.4%	16.4%
Restructuring costs [1]	—	0.5%
Adjusted operating profit margin	16.4%	16.9%

[1] 2019 restructuring costs are not material.

Reconciliations of adjusted profit per share to the most directly comparable GAAP measure, profit per share - diluted are as follows:

	Three Months Ended March 31	
	2019	**2018**
Profit per share - diluted	$ 3.25	$ 2.74
Per share U.S. tax reform impact	$ (0.31)	$ —
Per share restructuring costs[1]	$ —	$ 0.08
Adjusted profit per share	$ 2.94	$ 2.82

[1] At estimated annual tax rate of 24 percent. 2019 restructuring costs are not material.

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	
	2019	**2018**
ME&T net cash provided by operating activities [1]	$ 860	$ 948
ME&T capital expenditures	$ (297)	$ (323)
ME&T free cash flow	$ 563	$ 625

[1] See reconciliation of ME&T net cash provided by operating activities to consolidated net cash provided by operating activities on pages 73-74.

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 – Caterpillar defines Machinery, Energy & Transportation as it is presented in the supplemental data as Caterpillar Inc. and its subsidiaries with Financial Products accounted for on the equity basis. Machinery, Energy & Transportation information relates to the design, manufacturing and marketing of our products. Financial Products' information relates to the financing to customers and dealers for the purchase and lease of Caterpillar and other equipment. The nature of these 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 also believe this presentation will assist readers in understanding our business.

Financial Products – Our finance and insurance subsidiaries, primarily Cat Financial and Insurance Services.

Consolidating Adjustments – Eliminations of transactions between Machinery, Energy & Transportation and Financial Products.

Pages 69 to 74 reconcile Machinery, Energy & Transportation with Financial Products on the equity basis to Caterpillar Inc. consolidated financial information.

Caterpillar Inc.
Supplemental Data for Results of Operations
For the Three Months Ended March 31, 2019
(Unaudited)
(Millions of dollars)

	Consolidated	Supplemental Consolidating Data: Machinery, Energy & Transportation [1]	Financial Products	Consolidating Adjustments
Sales and revenues:				
Sales of Machinery, Energy & Transportation	$ 12,724	$ 12,724	$ —	$ —
Revenues of Financial Products	742	—	870	(128) [2]
Total sales and revenues	13,466	12,724	870	(128)
Operating costs:				
Cost of goods sold	9,003	9,003	—	—
Selling, general and administrative expenses	1,319	1,127	192	—
Research and development expenses	435	435	—	—
Interest expense of Financial Products	190	—	200	(10) [4]
Other operating (income) expenses	312	10	313	(11) [3]
Total operating costs	11,259	10,575	705	(21)
Operating profit	2,207	2,149	165	(107)
Interest expense excluding Financial Products	103	110	—	(7) [4]
Other income (expense)	160	19	41	100 [5]
Consolidated profit before taxes	2,264	2,058	206	—
Provision (benefit) for income taxes	387	335	52	—
Profit of consolidated companies	1,877	1,723	154	—
Equity in profit (loss) of unconsolidated affiliated companies	7	7	—	—
Equity in profit of Financial Products' subsidiaries	—	148	—	(148) [6]
Profit of consolidated and affiliated companies	1,884	1,878	154	(148)
Less: Profit (loss) attributable to noncontrolling interests	3	(3)	6	—
Profit [7]	$ 1,881	$ 1,881	$ 148	$ (148)

[1] Represents Caterpillar Inc. and its subsidiaries with Financial Products accounted for on the equity basis.
[2] Elimination of Financial Products' revenues earned from Machinery, Energy & Transportation.
[3] Elimination of net expenses recorded by Machinery, Energy & Transportation paid to Financial Products.
[4] Elimination of interest expense recorded between Financial Products and Machinery, Energy & Transportation.
[5] Elimination of discount recorded by Machinery, Energy & Transportation on receivables sold to Financial Products and of interest earned between Machinery, Energy & Transportation and Financial Products.
[6] Elimination of Financial Products' profit due to equity method of accounting.
[7] Profit attributable to common shareholders.

Caterpillar Inc.
Supplemental Data for Results of Operations
For the Three Months Ended March 31, 2018
(Unaudited)
(Millions of dollars)

		Supplemental Consolidating Data		
	Consolidated	Machinery, Energy & Transportation [1]	Financial Products	Consolidating Adjustments
Sales and revenues:				
Sales of Machinery, Energy & Transportation	$ 12,150	$ 12,150	$ —	$ —
Revenues of Financial Products	709	—	811	(102) [2]
Total sales and revenues	12,859	12,150	811	(102)
Operating costs:				
Cost of goods sold	8,566	8,566	—	—
Selling, general and administrative expenses	1,276	1,087	189	—
Research and development expenses	443	443	—	—
Interest expense of Financial Products	166	—	173	(7) [4]
Other operating (income) expenses	300	(1)	310	(9) [3]
Total operating costs	10,751	10,095	672	(16)
Operating profit	2,108	2,055	139	(86)
Interest expense excluding Financial Products	101	112	—	(11) [4]
Other income (expense)	127	54	(2)	75 [5]
Consolidated profit before taxes	2,134	1,997	137	—
Provision (benefit) for income taxes	472	441	31	—
Profit of consolidated companies	1,662	1,556	106	—
Equity in profit (loss) of unconsolidated affiliated companies	5	5	—	—
Equity in profit of Financial Products' subsidiaries	—	102	—	(102) [6]
Profit of consolidated and affiliated companies	1,667	1,663	106	(102)
Less: Profit (loss) attributable to noncontrolling interests	2	(2)	4	—
Profit [7]	$ 1,665	$ 1,665	$ 102	$ (102)

1 Represents Caterpillar Inc. and its subsidiaries with Financial Products accounted for on the equity basis.
2 Elimination of Financial Products' revenues earned from Machinery, Energy & Transportation.
3 Elimination of net expenses recorded by Machinery, Energy & Transportation paid to Financial Products.
4 Elimination of interest expense recorded between Financial Products and Machinery, Energy & Transportation.
5 Elimination of discount recorded by Machinery, Energy & Transportation on receivables sold to Financial Products and of interest earned between Machinery, Energy & Transportation and Financial Products.
6 Elimination of Financial Products' profit due to equity method of accounting.
7 Profit attributable to common shareholders.

Caterpillar Inc.
Supplemental Data for Financial Position
At March 31, 2019
(Unaudited)
(Millions of dollars)

	Consolidated	Supplemental Consolidating Data: Machinery, Energy & Transportation [1]	Supplemental Consolidating Data: Financial Products	Supplemental Consolidating Data: Consolidating Adjustments	
Assets					
Current assets:					
Cash and short-term investments	$ 7,128	$ 6,358	$ 770	$ —	
Receivables – trade and other	8,961	4,530	412	4,019	2,3
Receivables – finance	8,932	—	14,496	(5,564)	3
Prepaid expenses and other current assets	1,765	1,241	531	(7)	4
Inventories	12,340	12,340	—	—	
Total current assets	39,126	24,469	16,209	(1,552)	
Property, plant and equipment – net	13,259	8,872	4,387	—	
Long-term receivables – trade and other	1,149	318	209	622	2,3
Long-term receivables – finance	12,674	—	13,305	(631)	3
Investments in Financial Products subsidiaries	—	3,843	—	(3,843)	5
Noncurrent deferred and refundable income taxes	1,378	1,931	121	(674)	6
Intangible assets	1,807	1,807	—	—	
Goodwill	6,191	6,191	—	—	
Other assets	3,142	1,592	1,591	(41)	7
Total assets	$ 78,726	$ 49,023	$ 35,822	$ (6,119)	
Liabilities					
Current liabilities:					
Short-term borrowings	$ 5,590	$ 4	$ 5,586	$ —	
Short-term borrowings with consolidated companies	—	—	1,437	(1,437)	8
Accounts payable	7,198	7,108	198	(108)	9
Accrued expenses	3,746	3,360	386	—	
Accrued wages, salaries and employee benefits	1,200	1,174	26	—	
Customer advances	1,354	1,354	—	—	
Dividends payable	—	—	—	—	
Other current liabilities	2,348	1,901	463	(16)	6,10
Long-term debt due within one year	5,952	13	5,939	—	
Total current liabilities	27,388	14,914	14,035	(1,561)	
Long-term debt due after one year	24,240	7,659	16,590	(9)	8
Liability for postemployment benefits	7,441	7,441	—	—	
Other liabilities	4,179	3,531	1,354	(706)	6
Total liabilities	63,248	33,545	31,979	(2,276)	
Commitments and contingencies					
Shareholders' equity					
Common stock	5,804	5,804	919	(919)	5
Treasury stock	(21,214)	(21,214)	—	—	
Profit employed in the business	32,435	32,435	3,595	(3,595)	5
Accumulated other comprehensive income (loss)	(1,588)	(1,588)	(832)	832	5
Noncontrolling interests	41	41	161	(161)	5
Total shareholders' equity	15,478	15,478	3,843	(3,843)	
Total liabilities and shareholders' equity	$ 78,726	$ 49,023	$ 35,822	$ (6,119)	

[1] Represents Caterpillar Inc. and its subsidiaries with Financial Products accounted for on the equity basis.
[2] Elimination of receivables between Machinery, Energy & Transportation and Financial Products.
[3] Reclassification of Machinery, Energy & Transportation's trade receivables purchased by Financial Products and Financial Products' wholesale inventory receivables.
[4] Elimination of Machinery, Energy & Transportation's insurance premiums that are prepaid to Financial Products.
[5] Elimination of Financial Products' equity which is accounted for by Machinery, Energy & Transportation on the equity basis.
[6] Reclassification reflecting required netting of deferred tax assets / liabilities by taxing jurisdiction.
[7] Elimination of other intercompany assets between Machinery, Energy & Transportation and Financial Products.
[8] Elimination of debt between Machinery, Energy & Transportation and Financial Products.
[9] Elimination of payables between Machinery, Energy & Transportation and Financial Products.
[10] Elimination of prepaid insurance in Financial Products' other liabilities.

Caterpillar Inc.
Supplemental Data for Financial Position
At December 31, 2018
(Unaudited)
(Millions of dollars)

		Supplemental Consolidating Data		
	Consolidated	Machinery, Energy & Transportation [1]	Financial Products	Consolidating Adjustments
Assets				
Current assets:				
Cash and short-term investments	$ 7,857	$ 6,968	$ 889	$ —
Receivables – trade and other	8,802	4,677	401	3,724 [2,3]
Receivables – finance	8,650	—	13,989	(5,339) [3]
Prepaid expenses and other current assets	1,765	1,227	583	(45) [4]
Inventories	11,529	11,529	—	—
Total current assets	38,603	24,401	15,862	(1,660)
Property, plant and equipment – net	13,574	9,085	4,489	—
Long-term receivables – trade and other	1,161	302	204	655 [2,3]
Long-term receivables – finance	13,286	—	13,951	(665) [3]
Investments in Financial Products subsidiaries	—	3,672	—	(3,672) [5]
Noncurrent deferred and refundable income taxes	1,439	2,015	116	(692) [6]
Intangible assets	1,897	1,897	—	—
Goodwill	6,217	6,217	—	—
Other assets	2,332	886	1,446	—
Total assets	$ 78,509	$ 48,475	$ 36,068	$ (6,034)
Liabilities				
Current liabilities:				
Short-term borrowings	$ 5,723	$ —	$ 5,723	$ —
Short-term borrowings with consolidated companies	—	—	1,500	(1,500) [7]
Accounts payable	7,051	6,972	194	(115) [8]
Accrued expenses	3,573	3,212	361	—
Accrued wages, salaries and employee benefits	2,384	2,350	34	—
Customer advances	1,243	1,243	—	—
Dividends payable	495	495	—	—
Other current liabilities	1,919	1,532	433	(46) [6,9]
Long-term debt due within one year	5,830	10	5,820	—
Total current liabilities	28,218	15,814	14,065	(1,661)
Long-term debt due after one year	25,000	8,015	16,995	(10) [7]
Liability for postemployment benefits	7,455	7,455	—	—
Other liabilities	3,756	3,111	1,336	(691) [6]
Total liabilities	64,429	34,395	32,396	(2,362)
Commitments and contingencies				
Shareholders' equity				
Common stock	5,827	5,827	919	(919) [5]
Treasury stock	(20,531)	(20,531)	—	—
Profit employed in the business	30,427	30,427	3,543	(3,543) [5]
Accumulated other comprehensive income (loss)	(1,684)	(1,684)	(943)	943 [5]
Noncontrolling interests	41	41	153	(153) [5]
Total shareholders' equity	14,080	14,080	3,672	(3,672)
Total liabilities and shareholders' equity	$ 78,509	$ 48,475	$ 36,068	$ (6,034)

[1] Represents Caterpillar Inc. and its subsidiaries with Financial Products accounted for on the equity basis.
[2] Elimination of receivables between Machinery, Energy & Transportation and Financial Products.
[3] Reclassification of Machinery, Energy & Transportation's trade receivables purchased by Financial Products and Financial Products' wholesale inventory receivables.
[4] Elimination of Machinery, Energy & Transportation's insurance premiums that are prepaid to Financial Products.
[5] Elimination of Financial Products' equity which is accounted for by Machinery, Energy & Transportation on the equity basis.
[6] Reclassification reflecting required netting of deferred tax assets / liabilities by taxing jurisdiction.
[7] Elimination of debt between Machinery, Energy & Transportation and Financial Products.
[8] Elimination of payables between Machinery, Energy & Transportation and Financial Products.
[9] Elimination of prepaid insurance in Financial Products' other liabilities.

Caterpillar Inc.
Supplemental Data for Cash Flow
For the Three Months Ended March 31, 2019
(Unaudited)
(Millions of dollars)

	Consolidated	Supplemental Consolidating Data: Machinery, Energy & Transportation [1]	Supplemental Consolidating Data: Financial Products	Supplemental Consolidating Data: Consolidating Adjustments
Cash flow from operating activities:				
Profit of consolidated and affiliated companies	$ 1,884	$ 1,878	$ 154	$ (148) [2]
Adjustments for non-cash items:				
Depreciation and amortization	641	424	217	—
Undistributed profit of Financial Products	—	(148)	—	148 [3]
Other	88	49	(59)	98 [4]
Changes in assets and liabilities, net of acquisitions and divestitures:				
Receivables – trade and other	(150)	75	(24)	(201) [4, 5]
Inventories	(813)	(818)	—	5 [4]
Accounts payable	355	336	12	7 [4]
Accrued expenses	135	124	11	—
Accrued wages, salaries and employee benefits	(1,185)	(1,177)	(8)	—
Customer advances	105	105	—	—
Other assets – net	(44)	(16)	28	(56) [4]
Other liabilities – net	105	28	19	58 [4]
Net cash provided by (used for) operating activities	1,121	860	350	(89)
Cash flow from investing activities:				
Capital expenditures – excluding equipment leased to others	(278)	(274)	(4)	—
Expenditures for equipment leased to others	(269)	(23)	(247)	1 [4]
Proceeds from disposals of leased assets and property, plant and equipment	209	26	189	(6) [4]
Additions to finance receivables	(2,615)	—	(2,971)	356 [5]
Collections of finance receivables	2,818	—	3,096	(278) [5]
Net intercompany purchased receivables	—	—	(16)	16 [5]
Proceeds from sale of finance receivables	44	—	44	—
Net intercompany borrowings	—	63	—	(63) [6]
Investments and acquisitions (net of cash acquired)	(2)	(2)	—	—
Proceeds from sale of securities	57	4	53	—
Investments in securities	(107)	(7)	(100)	—
Other – net	(38)	(13)	(25)	—
Net cash provided by (used for) investing activities	(181)	(226)	19	26
Cash flow from financing activities:				
Dividends paid	(494)	(494)	—	—
Common stock issued, including treasury shares reissued	(5)	(5)	—	—
Common shares repurchased	(751)	(751)	—	—
Net intercompany borrowings	—	—	(63)	63 [6]
Proceeds from debt issued (original maturities greater than three months)	2,665	—	2,665	—
Payments on debt (original maturities greater than three months)	(2,567)	(2)	(2,565)	—
Short-term borrowings – net (original maturities three months or less)	(522)	4	(526)	—
Other – net	(1)	(1)	—	—
Net cash provided by (used for) financing activities	(1,675)	(1,249)	(489)	63
Effect of exchange rate changes on cash	3	5	(2)	—
Increase (decrease) in cash and short-term investments and restricted cash	(732)	(610)	(122)	—
Cash and short-term investments and restricted cash at beginning of period	7,890	6,994	896	—
Cash and short-term investments and restricted cash at end of period	$ 7,158	$ 6,384	$ 774	$ —

[1] Represents Caterpillar Inc. and its subsidiaries with Financial Products accounted for on the equity basis.
[2] Elimination of Financial Products' profit after tax due to equity method of accounting.
[3] Elimination of non-cash adjustment for the undistributed earnings from Financial Products.
[4] Elimination of non-cash adjustments and changes in assets and liabilities related to consolidated reporting.
[5] Reclassification of Financial Products' cash flow activity from investing to operating for receivables that arose from the sale of inventory.
[6] Elimination of net proceeds and payments to/from Machinery, Energy & Transportation and Financial Products.

Caterpillar Inc.
Supplemental Data for Cash Flow
For the Three Months Ended March 31, 2018
(Unaudited)
(Millions of dollars)

	Consolidated	Supplemental Consolidating Data: Machinery, Energy & Transportation [1]	Financial Products	Consolidating Adjustments	
Cash flow from operating activities:					
Profit of consolidated and affiliated companies	$ 1,667	$ 1,663	$ 106	$ (102)	[2]
Adjustments for non-cash items:					
Depreciation and amortization	681	468	213	—	
Undistributed profit of Financial Products	—	(102)	—	102	[3]
Other	148	62	(6)	92	[4]
Changes in assets and liabilities, net of acquisitions and divestitures:					
Receivables – trade and other	(326)	90	—	(416)	[4, 5]
Inventories	(803)	(803)	—	—	
Accounts payable	486	505	(19)	—	
Accrued expenses	66	43	23	—	
Accrued wages, salaries and employee benefits	(1,110)	(1,083)	(27)	—	
Customer advances	(46)	(46)	—	—	
Other assets – net	165	173	28	(36)	[4]
Other liabilities – net	7	(22)	(7)	36	[4]
Net cash provided by (used for) operating activities	935	948	311	(324)	
Cash flow from investing activities:					
Capital expenditures – excluding equipment leased to others	(412)	(321)	(92)	1	[4]
Expenditures for equipment leased to others	(345)	(2)	(346)	3	[4]
Proceeds from disposals of leased assets and property, plant and equipment	258	54	207	(3)	[4]
Additions to finance receivables	(2,621)	—	(2,955)	334	[5]
Collections of finance receivables	2,671	—	3,171	(500)	[5]
Net intercompany purchased receivables	—	—	(489)	489	[5]
Proceeds from sale of finance receivables	69	—	69	—	
Net intercompany borrowings	—	107	—	(107)	[6]
Investments and acquisitions (net of cash acquired)	(340)	(340)	—	—	
Proceeds from sale of businesses and investments (net of cash sold)	12	12	—	—	
Proceeds from sale of securities	89	5	84	—	
Investments in securities	(197)	(18)	(179)	—	
Other – net	16	19	(3)	—	
Net cash provided by (used for) investing activities	(800)	(484)	(533)	217	
Cash flow from financing activities:					
Dividends paid	(467)	(467)	—	—	
Common stock issued, including treasury shares reissued	149	149	—	—	
Common shares repurchased	(500)	(500)	—	—	
Net intercompany borrowings	—	—	(107)	107	[6]
Proceeds from debt issued (original maturities greater than three months)	1,541	—	1,541	—	
Payments on debt (original maturities greater than three months)	(2,409)	(1)	(2,408)	—	
Short-term borrowings – net (original maturities three months or less)	1,151	6	1,145	—	
Other – net	(3)	(3)	—	—	
Net cash provided by (used for) financing activities	(538)	(816)	171	107	
Effect of exchange rate changes on cash	10	6	4	—	
Increase (decrease) in cash and short-term investments and restricted cash	(393)	(346)	(47)	—	
Cash and short-term investments and restricted cash at beginning of period	8,320	7,416	904	—	
Cash and short-term investments and restricted cash at end of period	$ 7,927	$ 7,070	$ 857	$ —	

[1] Represents Caterpillar Inc. and its subsidiaries with Financial Products accounted for on the equity basis.
[2] Elimination of Financial Products' profit after tax due to equity method of accounting.
[3] Elimination of non-cash adjustment for the undistributed earnings from Financial Products.
[4] Elimination of non-cash adjustments and changes in assets and liabilities related to consolidated reporting.
[5] Reclassification of Financial Products' cash flow activity from investing to operating for receivables that arose from the sale of inventory.
[6] Elimination of net proceeds and payments to/from Machinery, Energy & Transportation and Financial Products.

Certain statements in this press release 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 including natural disasters; (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; and (xxvi) other factors described in more detail in Caterpillar’s Forms 10-Q, 10-K and other 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 2019, 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 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, 2019	4,744,611	$ 131.54	4,744,611	$ 9.376
February 1-28, 2019	632,189	$ 132.91	632,189	$ 9.292
March 1-31, 2019	322,725	$ 133.38	322,725	$ 9.249
Total	5,699,525	$ 131.80	5,699,525	

[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, 2019, approximately $9.2 billion remained available under the 2018 Authorization.

[2] During the first quarter of 2019, we entered into an accelerated stock repurchase (ASR) with a third-party financial institution to purchase $500 million of our common stock. In January 2019, upon payment of the $500 million to the financial institution, we received 3.6 million shares. In March 2019, upon final settlement of the January 2019 ASR, we received an additional 0.2 million shares. In total, we repurchased 3.8 million shares under this ASR at an average price per share of $132.30.

[3] In January, February and March of 2019, we repurchased 1.2 million, 0.6 million and 0.1 million shares respectively, for an aggregate of $251 million in open market transactions at an average price per share of $129.33, $132.91 and $137.25, respectively.

Non-U.S. Employee Stock Purchase Plans

As of March 31, 2019, we had 23 employee stock purchase plans (the "EIP Plans") that are administered outside the United States for our non-U.S. employees, which had approximately 12,000 active participants in the aggregate. During the first quarter of 2019, approximately 96,000 shares of Caterpillar common stock were purchased by the EIP Plans pursuant to the terms of such plans.

Item 6. Exhibits

10.1	First Amendment to the Caterpillar Inc. Directors' Deferred Compensation Plan dated January 22, 2019.
10.2	Third Amendment to the Caterpillar Inc. 2006 Long-Term Incentive Plan effective as of April 1, 2019.
10.3	Form of Nonqualified Stock Option Award pursuant to the 2014 Long-Term Incentive Plan for awards granted after 2018.
10.4	Addendum to Form of Nonqualified Stock Option Award pursuant to the 2006 and 2014 Long-Term Incentive Plans for awards granted prior to March 4, 2019.
10.5	Form of Performance-Based Restricted Stock Unit Award pursuant to the 2014 Long-Term Incentive Plan for awards granted after 2018.
31.1	Certification of D. James Umpleby III, Chief Executive Officer of Caterpillar Inc., as required pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of Andrew R.J. Bonfield, Chief Financial Officer of Caterpillar Inc., as required pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32	Certification of D. James Umpleby III, Chief Executive Officer of Caterpillar Inc. and Andrew R.J. Bonfield, Chief Financial Officer of Caterpillar Inc., as required pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

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 6, 2019	*/s/ D. James Umpleby III* D. James Umpleby III	Chairman & Chief Executive Officer
May 6, 2019	*/s/ Andrew R.J. Bonfield* Andrew R.J. Bonfield	Chief Financial Officer
May 6, 2019	*/s/ Suzette M. Long* Suzette M. Long	General Counsel & Corporate Secretary
May 6, 2019	*/s/ G. Michael Marvel* G. Michael Marvel	Chief Accounting Officer

**FIRST AMENDMENT
TO THE
CATERPILLAR INC.
DIRECTORS' DEFERRED COMPENSATION PLAN**

Caterpillar Inc. (the "Company") established the Caterpillar Inc. Directors' Deferred Compensation Plan (the "Plan") to provide members of the Board of Directors with an opportunity to defer the payment of compensation. The Plan was most recently amended and restated effective July 1, 2018 by a document dated June 14, 2018. Pursuant to Section 8.1 of the Plan, the Company has reserved the right to amend the Plan. By this instrument, the Company now amends the Plan to: (1) permit participants to make changes to their payment elections and (2) update the definition of C+B Officer.

1. This First Amendment shall be effective as of the date of its execution.

2. Section 1.1(b) of the Plan is hereby amended and restated in its entirety to provide as follows:

> "**(b)** **"C+B Officer"** means the Company's Director of Total Rewards."

3. Section 6.3 of the Plan is hereby amended and restated in its entirety to provide as follows:

> "**6.3** **<u>Form of Distribution</u>**.
>
> **(a)** **<u>General</u>**. Accounts shall be distributed in a single lump sum payment or in up to ten annual installments. Amounts attributable to the deferral of Equity Compensation shall be distributed in Company Stock (with any fractional shares attributable to the receipt of dividends rounded to the nearest whole share) and amounts attributable to the deferral of Cash Compensation shall be distributed in cash. Distributions shall be subject to such uniform rules and procedures as may be adopted by the Plan Administrator from time to time, consistent with Section 409A of the Code. The form of payment (i.e., lump sum or installments) shall be selected by the Participant in the initial Distribution Election Form (which may be contained in and be a part of a Deferral Agreement) submitted by the Participant to the Plan Administrator on entry into the Plan. A Participant may change the election by filing a new Distribution

Election Form with the Plan Administrator in accordance with paragraph (b) of this Section 6.3. If a revised Distribution Election Form is not honored because it was not timely filed, distributions shall be made in the form specified in the most recent valid Distribution Election Form filed by the Participant. If no valid Distribution Election Form exists, the Participant's accounts will be distributed in a single lump-sum.

(b) **Changes to Form of Payment**. A new Distribution Election Form that changes the form of payment selected by a Participant may be filed with the Plan Administrator at any time, will be subject to such uniform rules and procedures as may be adopted by the Plan Administrator from time to time, and only will be honored in accordance with the following:

(i) The new form will not take effect until at least 12 months after the date on which the new form is filed with the Plan Administrator; and

(ii) The election may not be made less than 12 months prior to the date the payment is scheduled to be made, is commenced or otherwise would be made; and

(iii) The first payment with respect to which the election is made must be deferred for a period of not less than five years from the date such payment would otherwise be made.

The provisions of this Section 6.3(b) are intended to comply with Section 409A(a)(4)(C) of the Code and shall be interpreted in a manner consistent with the requirements of such section and any regulations, rulings or other guidance issued pursuant thereto."

4. Section 6.5 of the Plan is hereby amended and restated in its entirety to provide as follows:

"**6.5** **Timing of Distribution**. Unless payment is deferred pursuant to Section 6.3(b)(iii) (Form of Distribution – Changes to Form of Payment) and subject to Section 6.6 (Payment Upon Death), amounts will be distributed (or in the case of installment distributions, such installments shall commence) as soon as practicable after the January 1 coincident with or next following the Participant's Separation from Service (but not sooner than the six-month anniversary of such Separation in the case of a Key Employee)."

5. Section 6.6(b)(ii) of the Plan is hereby amended and restated in its entirety to provide as follows:

> "(ii) **<u>Payments Not Commenced at Time of Death</u>**. If, at the time of the Participant's death, payment of the Participant's accounts has not commenced pursuant to this Article VI, the distributions made pursuant to this Section 6.6 shall be made to the Participant's beneficiary in accordance with the then current and valid distribution election made by the Participant (or, in the absence of such a distribution election, in accordance with the "default" provisions of Section 6.3(a) (Form of Distribution – General). Further, any five-year re-deferral requirement in effect under Section 6.3(b)(iii) (Form of Distribution – Changes to Form of Payment) shall not apply in the event of death (whether the death causes the Participant's Separation from Service or occurs after the Participant's Separation from Service) in accordance with Treasury Regulation Section 1.409A-2(b)(1)(ii), and amounts may be distributed as soon as practicable following the date of the Participant's death."

6. This First Amendment amends only the provisions of the Plan as set forth herein, and those provisions not expressly amended shall be considered in full force and effect. Notwithstanding the foregoing, this First Amendment shall supersede the provisions of the Plan to the extent those provisions are inconsistent with the provisions and the intent of this Second Amendment.

* * * * *

IN WITNESS WHEREOF, the Company has caused this First Amendment to be executed by its duly authorized representative as of this 22 day of January, 2019.

CATERPILLAR INC.

/s/ Cheryl H. Johnson
Cheryl H. Johnson
Chief Human Resources Officer

THIRD AMENDMENT
TO THE
CATERPILLAR INC.
2006 LONG-TERM INCENTIVE PLAN

Caterpillar Inc. (the “Company”) maintains the Caterpillar Inc. 2006 Long-Term Incentive (the “Plan”). The Plan was originally approved by stockholders effective on June 14, 2006. On June 9, 2010, stockholders approved an amendment and restatement of the Plan that became effective on such date. Pursuant to Section 16.1 of the Plan, the Company has reserved the right to amend the Plan, in whole or in part, at any time. By documents dated December 6, 2010 and August 22, 2013, the Company amended the amended and restated Plan. By this instrument, the Company hereby further amends the Plan to permit “net exercise” of stock options.

1. This Third Amendment shall be effective as of April 1, 2019.

2. Section 6.5 of the Plan is hereby amended and restated in its entirety to provide as follows:

> “**6.5 Payment**. Options granted under this Section 6 shall be exercised by the delivery of a notice of exercise to the Company (or its designated agent(s)), setting forth the number of Shares with respect to which the Option is to be exercised, accompanied by full payment for the Shares. The Option Price upon exercise of any Option shall be payable to the Company in full either:
>
> (a) in cash or its equivalent, or
>
> (b) by tendering previously acquired Shares having an aggregate Fair Market Value at the time of exercise equal to the total Option Price, or
>
> (c) by cashless exercise through delivery of irrevocable instructions to a broker to promptly deliver to the Company the amount of proceeds from a sale of shares having a Fair Market Value equal to the purchase price, or

(d) by cashless exercise through authorizing the Company to withhold whole shares of Common Stock which would otherwise be delivered having an aggregate Fair Market Value, determined as of the date of exercise, equal to the amount necessary to satisfy such obligation."

3. This Third Amendment amends only the provisions of the Plan as set forth herein, and those provisions not expressly amended shall be considered in full force and effect. Notwithstanding the foregoing, this Third Amendment shall supersede the provisions of the Plan to the extent those provisions are inconsistent with the provisions and the intent of this Third Amendment.

* * * * *

IN WITNESS WHEREOF, the Company has caused this Third Amendment to be executed by its duly authorized representative as of this 4 day of February, 2019.

CATERPILLAR INC.

/s/ Cheryl H. Johnson
Cheryl H. Johnson
Chief Human Resources Officer

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

[GRANT DATE]

The Board of Directors of Caterpillar Inc. (the "Company") has granted you, [NAME], [NUMBER] nonqualified stock options ("NQSOs") on [GRANT DATE] (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 a price of [OPTION PRICE] 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

The Option Award is subject to a three-year vesting schedule. Except to the extent the NQSOs are forfeited upon your termination of employment, as provided below, one-third of the NQSOs will become vested on the first anniversary of the Grant Date, one-third of the NQSOs will become vested on the second anniversary of the Grant Date, and the final one-third of the NQSOs will become vested on the third anniversary of the Grant Date (each such date, a "Vesting Date").

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. For example, if you quit (but do not meet the requirements for Long-Service Separation at the time you quit) after the first anniversary of the Grant Date but prior to the second anniversary of the Grant Date, you will forfeit two-thirds of the NQSOs. 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 [EXPIRATION DATE] (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 beneficiary or your estate (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 beneficiary or your estate (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
If you have not done so already, you are encouraged to designate a beneficiary (or beneficiaries) to whom your vested NQSOs under the Plan will be transferred upon your death. If you do not designate a beneficiary, your vested NQSOs will be transferred to your estate.

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.

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, the Company will withhold that number of shares that would satisfy the withholding obligation from the shares otherwise to be issued or delivered to you, unless another method of withholding is approved by the Committee. 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.

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
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.

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. 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.

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 mails 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
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 in the preceding paragraph 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 the prospectus and the Plan can be obtained from the Executive Compensation intranet website at Cat @work under the Compensation + Benefits tab. If you have any questions regarding your equity compensation under the Plan, please contact executivecompensation@cat.com.

Addendum to Form of Nonqualified Stock Option Award
Pursuant to the 2006 and 2014 Long-Term Incentive Plan
For Awards Granted Prior to March 4, 2019

March 29, 2019

The Company has modified the terms of the unexercised and outstanding nonqualified stock options granted to you prior to March 4, 2019 to permit net settlement beginning April 1, 2019. Under the net settlement exercise method, shares of stock which would otherwise be delivered upon exercise are withheld to pay the exercise price of the option. Exercising using the net settlement method allows for fewer shares to be sold, as compared to the exercise and sell to cover method, typically resulting in lower sales commission fees. You are not required to use the net exercise method—the existing exercise methods under the applicable award documents remain available to you.

This notification is an addendum to your award documents for any such unexercised and outstanding options, and you should retain a copy of it for your records. Note, if you were granted nonqualified stock options on March 4, 2019, your award documents for that grant include net settlement provisions.

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

[GRANT DATE]

The Board of Directors of Caterpillar Inc. (the "Company") has granted you, [NAME], [NUMBER] restricted stock units ("RSUs") on [GRANT DATE] (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 on [VEST DATE] (the "Vesting Date") if the Company achieves the performance goal(s) established by the Committee (the "Performance Goals") for the period beginning on [DATE] and ending on [DATE] (the "Performance Period"), as set forth in Appendix A hereto.

As soon as administratively practicable, but not later than two and one-half months after the Vesting Date, 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

If you have not done so already, you are encouraged to designate a beneficiary (or beneficiaries) to whom your vested benefits under the Plan will be paid upon your death. If you do not designate a beneficiary, vested benefits payable pursuant to the Plan upon your death will be paid to your estate.

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.

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 following 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, the Company will withhold that number of shares that would satisfy the withholding obligation from the shares otherwise to be issued or delivered to you, unless otherwise approved by the Committee. 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.

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

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.

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. 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.

Post-Employment Restrictions

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 the prospectus and the Plan can be obtained from the Executive Compensation intranet website at Cat @work under the Compensation + Benefits tab. If you have any questions regarding your equity compensation under the Plan, please contact executivecompensation@cat.com.

Appendix A
Performance-Based Restricted Stock Unit Award
[YEAR] – [YEAR] Performance Period

[GRANT DATE]

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 6, 2019	*/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 6, 2019	*/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, 2019 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 6, 2019	*/s/ D. James Umpleby III*	Chief Executive Officer
	D. James Umpleby III	
May 6, 2019	*/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.