UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

CATERPILLAR®

FORM 10-K

(Mark One)

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

For the fiscal year ended December 31, 2010

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 No. 1-768

CATERPILLAR INC.

(Exact name of Registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation)

37-0602744 (IRS Employer I.D. No.)

100 NE Adams Street, Peoria, Illinois (Address of principal executive offices)

61629 (Zip Code)

Name of each exchange

on which registered

Registrant's telephone number, including area code: (309) 675-1000

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

Title of each class
Common Stock (\$1.00 par value)(1)
9 3/8% Debentures due August 15, 2011
9 3/8% Debentures due March 15, 2021
8% Debentures due February 15, 2023

New York Stock Exchange New York Stock Exchange New York Stock Exchange

8% Debentures due February 15, 2023 New York Stock Exchange 5.3% Debentures due September 15, 2035 New York Stock Exchange

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

Indicate by check mark whether the Registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ⊠ No □

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

Indicate by check mark 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 \boxtimes No \square

Indicate by a check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (\S 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes \boxtimes No \square

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of Registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the Registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

⁽¹⁾ In addition to the New York Stock Exchange, Caterpillar common stock is also listed on stock exchanges in Belgium, France, Germany, Great Britain and Switzerland. Caterpillar voluntarily delisted from The Chicago Stock Exchange in November 2010.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of Caterpillar Inc.:

In our opinion, the accompanying consolidated statement of financial position and the related consolidated statements of results of operations, changes in stockholders' equity, and of cash flow, including pages A-5 through A-78, present fairly, in all material respects, the financial position of Caterpillar Inc. and its subsidiaries at December 31, 2010, 2009 and 2008, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2010 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2010, based on criteria established in Internal Control - Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Company's management is responsible for these financial statements, for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in Management's Report on Internal Control Over Financial Reporting appearing on page A-3. Our responsibility is to express opinions on these financial statements and on the Company's internal control over financial reporting based on our integrated audits. We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

As described in Management's Report on Internal Control Over Financial Reporting, management has excluded Electro-Motive Diesel, Inc. (EMD) from its assessment of internal control over financial reporting as of December 31, 2010 because EMD was acquired by the Company in August 2010. We have also excluded EMD from our audit of internal control over financial reporting. EMD is a wholly-owned subsidiary of the Company whose total assets and total revenues represent approximately 2% and 1%, respectively, of the related consolidated financial statement amounts as of and for the year ended December 31, 2010.

/s/ PricewaterhouseCoopers LLP

Peoria, Illinois February 22, 2011

2. Stock-based compensation

Our stock-based compensation plans primarily provide for the granting of stock options, stock-settled stock appreciation rights (SARs) and restricted stock units (RSUs) to Officers and other key employees, as well as non-employee Directors. Stock options permit a holder to buy Caterpillar stock at the stock's price when the option was granted. SARs permit a holder the right to receive the value in shares of the appreciation in Caterpillar stock that occurred from the date the right was granted up to the date of exercise. A restricted stock unit (RSU) is an agreement to issue shares of Caterpillar stock at the time of vesting.

Our long-standing practices and policies specify all stock-based compensation awards are approved by the Compensation Committee (the Committee) of the Board of Directors on the date of grant. The stock-based award approval process specifies the number of awards granted, the terms of the award and the grant date. The same terms and conditions are consistently applied to all employee grants, including Officers. The Committee approves all individual Officer grants. The number of stock-based compensation awards included in an individual's award is determined based on the methodology approved by the Committee. In 2007, under the terms of the Caterpillar Inc. 2006 Long-Term Incentive Plan (approved by stockholders in June of 2006), the Compensation Committee approved the exercise price methodology to be the closing price of the Company stock on the date of the grant.

Common stock issued from Treasury stock under the plans totaled 12,612,514 for 2010, 3,571,268 for 2009 and 4,807,533 for 2008.

The 2010, 2009 and 2008 awards generally vest three years after the date of grant. At grant, SARs and option awards have a term life of ten years. Upon separation from service, if the participant is 55 years of age or older with more than ten years of service, the participant meets the criteria for a "Long Service Separation." If the "Long Service Separation" criteria are met, the vested options/SARs will have a life that is the lesser of 10 years from the original grant date or five years from the separation date.

Our stock-based compensation plans allow for the immediate vesting upon separation for employees who meet the criteria for a "Long Service Separation" and who have fulfilled the requisite service period of six months. Compensation expense is recognized over the period from the grant date to the end date of the requisite service period for employees who meet the immediate vesting upon retirement requirements. For those employees who become eligible for immediate vesting upon retirement subsequent to the requisite service period and prior to the completion of the vesting period, compensation expense is recognized over the period from grant date to the date eligibility is achieved.

Accounting guidance on share-based payments requires companies to estimate the fair value of options/SARs on the date of grant using an option-pricing model. The fair value of the option/SAR grant was estimated using a lattice-based option-pricing model. The lattice-based option-pricing model considers a range of assumptions related to volatility, risk-free interest rate and historical employee behavior. Expected volatility was based on historical and current implied volatilities from traded options on our stock. The risk-free rate was based on U.S. Treasury security yields at the time of grant. The weighted-average dividend yield was based on historical information. The expected life was determined from the lattice-based model. The lattice-based model incorporated exercise and post vesting forfeiture assumptions based on analysis of historical data. The following table provides the assumptions used in determining the fair value of the stock-based awards for the years ended December 31, 2010, 2009 and 2008, respectively.

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		Grant Year					
	2010	2010 2009					
Weighted-average dividend yield	2.3%	3.1%	1.9%				
Weighted-average volatility	36.4%	36.0%	27.1%				
Range of volatilities	35.2-51.8%	35.8-61.0%	27.1-29.0%				
Range of risk-free interest rates	0.32-3.61%	0.17-2.99%	1.60-3.64%				
Weighted-average expected lives	7 years	8 years	8 years				

The fair value of the RSU grant was determined by reducing the stock price on the day of grant by the present value of the estimated dividends to be paid during the vesting period. The estimated dividends are based on Caterpillar's weighted-average dividend yield.

The amount of stock-based compensation expense capitalized for the years ended December 31, 2010, 2009 and 2008 did not have a significant impact on our financial statements.

At December 31, 2010, there was \$134 million of total unrecognized compensation cost from stock-based compensation arrangements granted under the plans, which is related to non-vested stock-based awards. The compensation expense is expected to be recognized over a weighted-average period of approximately 1.9 years.

Please refer to Tables I and II below for additional information on our stock-based awards.

TABLE I—Financial Information Related to Stock-based Compensation

	2010			200		2008				
	Shares	Weighted- Average Exercise Price		Shares	Weighted- Average Exercise Price		Shares	Weighted- Average Exercise Price		
Stock options/SARs activity:										
Outstanding at beginning of year	63,082,787	\$	44.24	60,398,074	\$	45.68	60,855,854	\$	42.18	
Granted to officers and key employees ¹	7,556,481	\$	57.85	6 922 227	\$	22.17	1 996 601	\$	73.20	
Exercised	(12,568,232)	\$ \$	32.83	6,823,227 (3,906,785)	\$	28.13	4,886,601 (5,006,435)	\$ \$	30.04	
Forfeited / expired	(188,038)	\$	43.64	(231,729)	\$	38.05	(337,946)	\$	46.45	
Outstanding at end of year	57,882,998	\$	48.50	63,082,787	\$	44.24	60,398,074	\$	45.68	
Exercisable at year-end	41,658,033	\$	48.23	48,256,847	\$	43.14	43,083,319	\$	35.81	
RSUs activity:										
Outstanding at beginning of year	4,531,545			2,673,474			1,253,326			
Granted to officers and key	4,331,343			2,073,474			1,233,320			
employees	1,711,771			2,185,674			1,490,645			
Granted to outside directors	_						20,878			
Vested	(1,538,047)			(286,413)			(61,158)			
Forfeited	(55,028)			(41,190)			(30,217)			
Outstanding at end of year	4,650,241			4,531,545			2,673,474			

Stock options/SARs outstanding and exercisable:

	Outstanding						Exercisable					
Exercise Prices	# Outstanding at 12/31/10	Weighted- Average Remaining Contractual Life (Years)	Weighted- Average Weighted- Remaining Average A Contractual Exercise		Aggregate Intrinsic Value ²		# Outstanding at 12/31/10	Weighted- Average Remaining Contractual Life (Years)	Weighted- Average Exercise Price		Aggregate Intrinsic Value ²	
\$22.17 - 25.36	8,716,831	6.49	\$	22.96	\$	616	3,189,844	3.58	\$	24.32	\$	221
\$26.03 - 29.43	5,614,162	2.23	\$	27.11		373	5,614,162	2.23	\$	27.11		373
\$38.63 - 40.64	9,355,978	3.44	\$	38.65		514	9,355,978	3.44	\$	38.65		514
\$44.90 - 57.85	16,257,410	6.47	\$	51.28		688	9,244,580	4.42	\$	46.30		437
\$63.04 - 73.20	17,938,617	5.92	\$	70.22		420	14,253,469	5.60	\$	69.45		344
	57,882,998		\$	48.50	\$	2,611	41,658,033		\$	48.23	\$	1,889

Of the 7,556,481 awards granted during the year ended December 31, 2010, 7,125,210 were SARs. Of the 6,823,227 awards granted during the year ended December 31, 2009, 6,260,647 were SARs. Of the 4,886,601 awards granted during the year ended December 31, 2008, 4,476,095 were SARs.

The difference between a stock award's exercise price and the underlying stock's market price at December 31, 2010, for awards with market price greater than the exercise price. Amounts are in millions of dollars.

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The computations of weighted-average exercise prices and aggregate intrinsic values are not applicable to RSUs since an RSU represents an agreement to issue shares of stock at the time of vesting. At December 31, 2010, there were 4,650,241 outstanding RSUs with a weighted average remaining contractual life of 1.2 years.

TABLE II— Additional Stock-based Award Information

(Dollars in millions except per share data)		2010	 2009	2008		
Stock Options/SARs activity:						
Weighted-average fair value per share of stock awards granted	\$	22.31	\$ 7.10	\$	22.32	
Intrinsic value of stock awards exercised	\$	518	\$ 77	\$	232	
Fair value of stock awards vested	\$	119	\$ 213	\$	18	
Cash received from stock awards exercised	\$	325	\$ 89	\$	130	
RSUs activity:						
Weighted-average fair value per share of stock awards granted	\$	53.35	\$ 20.22	\$	69.17	
Fair value of stock awards vested	\$	99	\$ 10	\$	4	

Before tax, stock-based compensation expense for 2010, 2009 and 2008 was \$226 million, \$132 million and \$194 million, respectively, with a corresponding income tax benefit of \$73 million, \$42 million and \$62 million, respectively. Included in the 2010 pre-tax stock-based compensation expense was \$19 million relating to the modification of awards resulting from separations due to the streamlining of our corporate structure as announced in the second quarter.

In accordance with guidance on share-based payments, we classify stock-based compensation within cost of goods sold, selling, general and administrative expenses and research and development expenses corresponding to the same line item as the cash compensation paid to respective employees, officers and non-employee directors.

We currently use shares in treasury stock to satisfy share award exercises.

The cash tax benefits realized from stock awards exercised for December 31, 2010, 2009 and 2008 were \$188 million, \$26 million and \$60 million, respectively. We use the direct only method and tax law ordering approach to calculate the tax effects of stock-based compensation. In certain jurisdictions, tax deductions for exercises of stock-based awards did not generate a cash benefit. A tax benefit of approximately \$30 million will be recorded in APIC when these deductions reduce our future income taxes payable