

**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549**

**FORM 10-Q**

(Mark One)

**QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**  
For the quarterly period ended September 30, 2017

- 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 001-31553

**CME GROUP INC.**

(Exact name of registrant as specified in its charter)

**Delaware**

(State or other jurisdiction of  
incorporation or organization)

**36-4459170**

(I.R.S. Employer  
Identification No.)

**20 South Wacker Drive, Chicago, Illinois**

(Address of principal executive offices)

**60606**

(Zip Code)

**(312) 930-1000**

(Registrant's telephone number, including area code)

**Not Applicable**

(Former name, former address and former fiscal year, if changed since last report)

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 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 (§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  No

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," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer

Accelerated filer

Non-accelerated filer  (Do not check if a smaller reporting company)

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

The number of shares outstanding of each of the registrant's classes of common stock as of October 11, 2017 was as follows: 340,291,358 shares of Class A common stock, \$0.01 par value; 625 shares of Class B-1 common stock, \$0.01 par value; 813 shares of Class B-2 common stock, \$0.01 par value; 1,287 shares of Class B-3 common stock, \$0.01 par value; and 413 shares of Class B-4 common stock, \$0.01 par value.

**CME GROUP INC.**  
**FORM 10-Q**  
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## **PART I. FINANCIAL INFORMATION**

### **Certain Terms**

Unless otherwise indicated, references to CME Group Inc. (CME Group or the company) products include references to products listed on one of its regulated U.S. exchanges: Chicago Mercantile Exchange Inc. (CME), Board of Trade of the City of Chicago, Inc. (CBOT), New York Mercantile Exchange, Inc. (NYMEX) and Commodity Exchange, Inc. (COMEX). Products listed on these exchanges are subject to the rules and regulations of the particular exchange and the applicable rulebook should be consulted. Unless otherwise indicated, references to NYMEX include its subsidiary, COMEX.

All references to “options” or “options contracts” in the text of this document refer to options on futures contracts.

Further information about CME Group and its products can be found at <http://www.cmegroup.com>. Information made available on our website does not constitute a part of this Quarterly Report on Form 10-Q.

### **Information about Contract Volume and Average Rate per Contract**

All amounts regarding contract volume and average rate per contract exclude our interest rate swaps and credit default swaps contracts.

### **Trademark Information**

CME Group, the Globe logo, CME, Chicago Mercantile Exchange, Globex and E-mini are trademarks of Chicago Mercantile Exchange Inc. CBOT, Chicago Board of Trade, KCBT and Kansas City Board of Trade are trademarks of Board of Trade of the City of Chicago, Inc. NYMEX, New York Mercantile Exchange and ClearPort are trademarks of New York Mercantile Exchange, Inc. COMEX is a trademark of Commodity Exchange, Inc. Dow Jones, Dow Jones Industrial Average, S&P 500 and S&P are service and/or trademarks of Dow Jones Trademark Holdings LLC, Standard & Poor's Financial Services LLC and S&P/Dow Jones Indices LLC, as the case may be, and have been licensed for use by Chicago Mercantile Exchange Inc. All other trademarks are the property of their respective owners.

### **Forward-Looking Statements**

From time to time, in this Quarterly Report on Form 10-Q as well as in other written reports and verbal statements, we discuss our expectations regarding future performance. These forward-looking statements are identified by their use of terms and phrases such as “believe,” “anticipate,” “could,” “estimate,” “intend,” “may,” “plan,” “expect” and similar expressions, including references to assumptions. These forward-looking statements are based on currently available competitive, financial and economic data, current expectations, estimates, forecasts and projections about the industries in which we operate and management's beliefs and assumptions. These statements are not guarantees of future performance and involve risks, uncertainties and assumptions that are difficult to predict. Therefore, actual outcomes and results may differ materially from what is expressed or implied in any forward-looking statements. We want to caution you not to place undue reliance on any forward-looking statements. We undertake no obligation to publicly update any forward-looking statements, whether as a result of new information, future events or otherwise. Among the factors that might affect our performance are:

- increasing competition by foreign and domestic entities, including increased competition from new entrants into our markets and consolidation of existing entities;
- our ability to keep pace with rapid technological developments, including our ability to complete the development, implementation and maintenance of the enhanced functionality required by our customers while maintaining reliability and ensuring that such technology is not vulnerable to security risks;
- our ability to continue introducing competitive new products and services on a timely, cost-effective basis, including through our electronic trading capabilities, and our ability to maintain the competitiveness of our existing products and services, including our ability to provide effective services to the swaps market;
- our ability to adjust our fixed costs and expenses if our revenues decline;
- our ability to maintain existing customers, develop strategic relationships and attract new customers;
- our ability to retain key employees;
- our ability to expand and offer our products outside the United States;
- changes in regulations, including the impact of any changes in laws or government policy with respect to our industry, such as any changes to regulations and policies that require increased financial and operational resources from us or our customers;
- the costs associated with protecting our intellectual property rights and our ability to operate our business without violating the intellectual property rights of others;

- decreases in revenue from our market data as a result of decreased demand;
- changes in our rate per contract due to shifts in the mix of the products traded, the trading venue and the mix of customers (whether the customer receives member or non-member fees or participates in one of our various incentive programs) and the impact of our tiered pricing structure;
- the ability of our financial safeguards package to adequately protect us from the credit risks of clearing members;
- the ability of our compliance and risk management methods to effectively monitor and manage our risks, including our ability to prevent errors and misconduct and protect our infrastructure against security breaches and misappropriation of our intellectual property assets;
- changes in price levels and volatility in the derivatives markets and in underlying equity, foreign exchange, interest rate and commodities markets;
- economic, political and market conditions, including the volatility of the capital and credit markets and the impact of economic conditions on the trading activity of our current and potential customers;
- our ability to accommodate increases in contract volume and order transaction traffic and to implement enhancements without failure or degradation of the performance of our trading and clearing systems;
- our ability to execute our growth strategy and maintain our growth effectively;
- our ability to manage the risks and control the costs associated with our strategy for acquisitions, investments and alliances;
- our ability to continue to generate funds and/or manage our indebtedness to allow us to continue to invest in our business;
- industry and customer consolidation;
- decreases in trading and clearing activity;
- the imposition of a transaction tax or user fee on futures and options on futures transactions and/or repeal of the 60/40 tax treatment of such transactions; and
- the unfavorable resolution of material legal proceedings.

For a detailed discussion of these and other factors that might affect our performance, see Item 1A. of our Annual Report on Form 10-K, filed with the Securities and Exchange Commission on February 27, 2017 and Item 1A. of this Quarterly Report on Form 10-Q.

**ITEM 1. FINANCIAL STATEMENTS**

**CME GROUP INC. AND SUBSIDIARIES**  
**CONSOLIDATED BALANCE SHEETS**  
(dollars in millions, except par value data; shares in thousands)  
(unaudited)

	September 30, 2017	December 31, 2016
<b>Assets</b>		
Current Assets:		
Cash and cash equivalents	\$ 1,631.1	\$ 1,868.6
Marketable securities	88.0	83.3
Accounts receivable, net of allowance of \$1.4 and \$3.5	390.3	364.4
Other current assets (includes \$50.0 and \$30.0 in restricted cash)	340.8	171.7
Performance bonds and guaranty fund contributions	46,942.3	37,543.5
<b>Total current assets</b>	<b>49,392.5</b>	<b>40,031.5</b>
Property, net of accumulated depreciation and amortization of \$649.9 and \$597.2	388.9	425.2
Intangible assets—trading products	17,175.3	17,175.3
Intangible assets—other, net	2,370.0	2,441.8
Goodwill	7,569.0	7,569.0
Other assets (includes \$2.2 and \$61.7 in restricted cash)	1,427.3	1,726.6
<b>Total Assets</b>	<b>\$ 78,323.0</b>	<b>\$ 69,369.4</b>
<b>Liabilities and Equity</b>		
Current Liabilities:		
Accounts payable	\$ 36.1	\$ 26.2
Other current liabilities	244.6	1,376.7
Performance bonds and guaranty fund contributions	46,942.3	37,542.7
<b>Total current liabilities</b>	<b>47,223.0</b>	<b>38,945.6</b>
Long-term debt	2,232.6	2,231.2
Deferred income tax liabilities, net	7,437.0	7,291.0
Other liabilities	566.5	560.9
<b>Total Liabilities</b>	<b>57,459.1</b>	<b>49,028.7</b>
Shareholders' Equity:		
Preferred stock, \$0.01 par value, 10,000 shares authorized at September 30, 2017 and December 31, 2016; none issued	—	—
Class A common stock, \$0.01 par value, 1,000,000 shares authorized at September 30, 2017 and December 31, 2016; 339,115 and 338,240 shares issued and outstanding as of September 30, 2017 and December 31, 2016, respectively	3.4	3.4
Class B common stock, \$0.01 par value, 3 shares authorized, issued and outstanding as of September 30, 2017 and December 31, 2016	—	—
Additional paid-in capital	17,874.6	17,826.9
Retained earnings	2,973.8	2,524.5
Accumulated other comprehensive income (loss)	12.1	(14.1)
<b>Total shareholders' equity</b>	<b>20,863.9</b>	<b>20,340.7</b>
<b>Total Liabilities and Equity</b>	<b>\$ 78,323.0</b>	<b>\$ 69,369.4</b>

See accompanying notes to unaudited consolidated financial statements.

**CME GROUP INC. AND SUBSIDIARIES**  
**CONSOLIDATED STATEMENTS OF INCOME**  
(dollars in millions, except per share data; shares in thousands)  
(unaudited)

	Quarter Ended		Nine Months Ended	
	September 30,		September 30,	
	2017	2016	2017	2016
<b>Revenues</b>				
Clearing and transaction fees	\$ 756.2	\$ 704.2	\$ 2,340.2	\$ 2,267.9
Market data and information services	96.9	101.1	289.8	306.4
Access and communication fees	25.7	23.8	74.9	67.7
Other	12.0	12.6	39.8	40.3
<b>Total Revenues</b>	<b>890.8</b>	<b>841.7</b>	<b>2,744.7</b>	<b>2,682.3</b>
<b>Expenses</b>				
Compensation and benefits	141.4	130.6	423.0	394.2
Communications	6.1	6.9	18.4	19.9
Technology support services	19.3	17.3	56.2	52.4
Professional fees and outside services	25.8	33.5	83.0	104.2
Amortization of purchased intangibles	23.8	24.0	71.8	72.0
Depreciation and amortization	26.9	31.2	85.1	95.5
Occupancy and building operations	19.8	19.6	59.1	65.3
Licensing and other fee agreements	41.5	31.5	108.2	103.3
Other	18.3	21.8	65.2	113.0
<b>Total Expenses</b>	<b>322.9</b>	<b>316.4</b>	<b>970.0</b>	<b>1,019.8</b>
<b>Operating Income</b>	<b>567.9</b>	<b>525.3</b>	<b>1,774.7</b>	<b>1,662.5</b>
<b>Non-Operating Income (Expense)</b>				
Investment income	139.9	36.5	391.2	71.3
Interest and other borrowing costs	(29.1)	(31.1)	(87.9)	(91.9)
Equity in net earnings (losses) of unconsolidated subsidiaries	33.9	28.6	96.5	82.4
Other non-operating income (expense)	(105.3)	(10.5)	(222.9)	(30.9)
<b>Total Non-Operating Income (Expense)</b>	<b>39.4</b>	<b>23.5</b>	<b>176.9</b>	<b>30.9</b>
<b>Income before Income Taxes</b>	<b>607.3</b>	<b>548.8</b>	<b>1,951.6</b>	<b>1,693.4</b>
Income tax provision	298.7	76.0	827.4	532.7
<b>Net Income</b>	<b>\$ 308.6</b>	<b>\$ 472.8</b>	<b>\$ 1,124.2</b>	<b>\$ 1,160.7</b>
<b>Earnings per Common Share:</b>				
Basic	\$ 0.91	\$ 1.40	\$ 3.32	\$ 3.44
Diluted	0.91	1.39	3.31	3.43
<b>Weighted Average Number of Common Shares:</b>				
Basic	338,771	337,592	338,557	337,299
Diluted	340,329	339,143	340,114	338,834

See accompanying notes to unaudited consolidated financial statements.

**CME GROUP INC. AND SUBSIDIARIES**  
**CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME**

(in millions)  
(unaudited)

	Quarter Ended		Nine Months Ended	
	September 30,		September 30,	
	2017	2016	2017	2016
<b>Net income</b>	\$ 308.6	\$ 472.8	\$ 1,124.2	\$ 1,160.7
Other comprehensive income (loss), net of tax:				
Investment securities:				
Net unrealized holding gains (losses) arising during the period	(1.0)	(17.7)	30.1	177.7
Reclassification of net (gains) losses on sales included in investment income	(2.0)	(6.3)	(89.1)	(6.3)
Income tax benefit (expense)	1.6	(65.3)	77.7	(65.9)
Investment securities, net	(1.4)	(89.3)	18.7	105.5
Defined benefit plans:				
Net change in defined benefit plans arising during the period	—	—	0.5	3.1
Amortization of net actuarial (gains) losses included in compensation and benefits expense	0.7	0.8	2.1	2.4
Income tax benefit (expense)	(1.2)	(0.3)	(1.9)	(2.1)
Defined benefit plans, net	(0.5)	0.5	0.7	3.4
Derivative investments:				
Amortization of effective portion of net (gains) losses on cash flow hedges included in interest expense	(0.3)	(0.3)	(0.9)	(0.9)
Income tax benefit (expense)	0.1	0.1	0.3	0.3
Derivative investments, net	(0.2)	(0.2)	(0.6)	(0.6)
Foreign currency translation:				
Foreign currency translation adjustments	0.9	(0.6)	10.3	(5.6)
Income tax benefit (expense)	—	(0.8)	(2.9)	1.0
Foreign currency translation, net	0.9	(1.4)	7.4	(4.6)
Other comprehensive income (loss), net of tax	(1.2)	(90.4)	26.2	103.7
<b>Comprehensive Income</b>	<b>\$ 307.4</b>	<b>\$ 382.4</b>	<b>\$ 1,150.4</b>	<b>\$ 1,264.4</b>

See accompanying notes to unaudited consolidated financial statements.

**CME GROUP INC. AND SUBSIDIARIES**  
**CONSOLIDATED STATEMENTS OF EQUITY**  
(dollars in millions, except per share data; shares in thousands)  
(unaudited)

	Class A Common Stock (Shares)	Class B Common Stock (Shares)	Common Stock and Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Total Shareholders' Equity
Balance at December 31, 2016	338,240	3	\$ 17,830.3	\$ 2,524.5	\$ (14.1)	\$ 20,340.7
Net income				1,124.2		1,124.2
Other comprehensive income (loss)					26.2	26.2
Dividends on common stock of \$1.98 per share				(672.7)		(672.7)
Impact of adoption of standards update on employee share-based payments, net of tax			1.4	(2.2)		(0.8)
Exercise of stock options	345		30.4			30.4
Vesting of issued restricted Class A common stock	501		(30.5)			(30.5)
Shares issued to Board of Directors	20		2.4			2.4
Shares issued under Employee Stock Purchase Plan	9		1.2			1.2
Stock-based compensation			42.8			42.8
<b>Balance at September 30, 2017</b>	<b>339,115</b>	<b>3</b>	<b>\$ 17,878.0</b>	<b>\$ 2,973.8</b>	<b>\$ 12.1</b>	<b>\$ 20,863.9</b>

See accompanying notes to unaudited consolidated financial statements.



**CME GROUP INC. AND SUBSIDIARIES**  
**CONSOLIDATED STATEMENTS OF EQUITY** (continued)  
(dollars in millions, except per share data; shares in thousands)  
(unaudited)

	Class A Common Stock (Shares)	Class B Common Stock (Shares)	Common Stock and Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Total Shareholders' Equity
Balance at December 31, 2015	336,938	3	\$ 17,725.0	\$ 2,907.6	\$ (80.8)	\$ 20,551.8
Net income				1,160.7		1,160.7
Other comprehensive income (loss)					103.7	103.7
Dividends on common stock of \$1.80 per share				(609.7)		(609.7)
Exercise of stock options	434		29.5			29.5
Excess tax benefits from option exercises and restricted stock vesting			10.0			10.0
Vesting of issued restricted Class A common stock	570		(26.8)			(26.8)
Shares issued to Board of Directors	26		2.5			2.5
Shares issued under Employee Stock Purchase Plan	10		0.9			0.9
Stock-based compensation			42.3			42.3
<b>Balance at September 30, 2016</b>	<b>337,978</b>	<b>3</b>	<b>\$ 17,783.4</b>	<b>\$ 3,458.6</b>	<b>\$ 22.9</b>	<b>\$ 21,264.9</b>

See accompanying notes to unaudited consolidated financial statements.

**CME GROUP INC. AND SUBSIDIARIES**  
**CONSOLIDATED STATEMENTS OF CASH FLOWS**

(in millions)  
(unaudited)

	Nine Months Ended September 30,	
	2017	2016
<b>Cash Flows from Operating Activities</b>		
Net income	\$ 1,124.2	\$ 1,160.7
Adjustments to reconcile net income to net cash provided by operating activities:		
Stock-based compensation	42.8	42.3
Amortization of purchased intangibles	71.8	72.0
Depreciation and amortization	85.1	95.5
Gain on sale of BM&FBOVESPA shares	(86.5)	(6.4)
Gain on sale of Bolsa Mexicana de Valores, S.A.B de C.V.	(2.0)	—
Income tax expense reclassified from accumulated other comprehensive income upon final sale of BM&FBOVESPA shares	87.8	—
Loss on datacenter	—	27.1
Undistributed earnings, net of losses, of unconsolidated subsidiaries	(33.2)	(29.3)
Deferred income taxes	129.7	(79.3)
Change in:		
Accounts receivable	(23.8)	(18.7)
Other current assets	(27.6)	(12.5)
Other assets	59.5	9.5
Accounts payable	10.0	5.7
Income taxes payable	(86.2)	21.3
Other current liabilities	(23.3)	(40.5)
Other liabilities	2.9	(14.3)
Other	(1.0)	(0.7)
<b>Net Cash Provided by Operating Activities</b>	<b>1,330.2</b>	<b>1,232.4</b>
<b>Cash Flows from Investing Activities</b>		
Proceeds from maturities of available-for-sale marketable securities	2.3	40.1
Purchases of available-for-sale marketable securities	(2.3)	(44.9)
Purchases of property, net	(53.0)	(62.9)
Investments in business ventures	(5.3)	(4.9)
Proceeds from sale of business venture	—	8.8
Proceeds from sale of BM&FBOVESPA shares	244.0	—
Proceeds from sale of Bolsa Mexicana de Valores, S.A.B de C.V.	15.1	—
<b>Net Cash Provided by (Used in) Investing Activities</b>	<b>200.8</b>	<b>(63.8)</b>
<b>Cash Flows from Financing Activities</b>		
Cash dividends	(1,769.6)	(1,584.3)
Proceeds from finance lease obligation	—	130.0
Proceeds from exercise of stock options	30.4	29.5
Excess tax benefits related to employee option exercises and restricted stock vesting	—	10.0
Employee taxes paid on restricted stock vesting	(30.5)	(26.8)
Other	1.2	0.9
<b>Net Cash Used in Financing Activities</b>	<b>(1,768.5)</b>	<b>(1,440.7)</b>
Net change in cash and cash equivalents	(237.5)	(272.1)
Cash and cash equivalents, beginning of period	1,868.6	1,692.6
<b>Cash and Cash Equivalents, End of Period</b>	<b>\$ 1,631.1</b>	<b>\$ 1,420.5</b>
<b>Supplemental Disclosure of Cash Flow Information</b>		
Income taxes paid	\$ 642.7	\$ 545.5
Interest paid	84.8	84.8
Non-cash investing activities:		
Accrued proceeds from sale of investments	1.4	20.8

See accompanying notes to unaudited consolidated financial statements.

## NOTES TO UNAUDITED CONSOLIDATED FINANCIAL STATEMENTS

### 1. Basis of Presentation

The consolidated financial statements consist of CME Group Inc. (CME Group) and its subsidiaries (collectively, the company), including Chicago Mercantile Exchange Inc. (CME), Board of Trade of the City of Chicago, Inc. (CBOT), New York Mercantile Exchange, Inc. (NYMEX), Commodity Exchange, Inc. (COMEX), CME Clearing Europe Limited (CMECE) and CME Europe Limited (CME Europe). CME, CBOT, NYMEX, COMEX, CMECE and CME Europe and their subsidiaries are referred to collectively as “the exchange” in the notes to the consolidated financial statements. The clearing houses include CME Clearing, which is the U.S. clearing house and a division of CME, and CMECE.

The accompanying interim consolidated financial statements have been prepared by CME Group without audit. Certain notes and other information normally included in financial statements prepared in accordance with accounting principles generally accepted in the United States have been condensed or omitted. In the opinion of management, the accompanying consolidated financial statements include all normal recurring adjustments considered necessary to present fairly the financial position of the company at September 30, 2017 and December 31, 2016 and the results of operations and cash flows for the periods indicated. Quarterly results are not necessarily indicative of results for any subsequent period.

The accompanying consolidated financial statements should be read in conjunction with the consolidated financial statements and notes thereto in CME Group’s Annual Report on Form 10-K for the year ended December 31, 2016, filed with the Securities and Exchange Commission (SEC) on February 27, 2017.

### 2. Accounting Policies

**Newly Adopted Accounting Policies.** In March 2016, the Financial Accounting Standards Board (FASB) issued a standards update that changes certain aspects of accounting for share-based payments to employees. The guidance requires all income tax effects of awards to be recognized in the income statement when the awards vest or are settled. It also allows an employer to repurchase more of an employee’s shares for tax withholding purposes without triggering liability accounting and to make a policy election to account for forfeitures as they occur. The company implemented this standards update as of January 1, 2017 on a prospective basis. Starting in the first quarter of 2017, all income tax effects of awards are recognized in the income statement as part of income tax expense when the awards vest or are settled. During the first nine months of 2017, the company recognized a net tax benefit of \$11.5 million related to the income tax effects of awards as part of income tax expense. The company also adopted a policy to recognize forfeitures as compensation expense as the forfeitures occur. Previously, the company estimated the number of awards that would be forfeited and recognized the estimate as part of compensation expense. This policy change was adopted on a modified retrospective basis with a cumulative-effect adjustment to additional paid in capital and retained earnings as of January 1, 2017. The excess tax benefits are now reported as an operating activity within the change in income taxes payable instead of a financing activity on the statements of cash flows. Prior periods have not been adjusted for this change. The employee taxes paid by the company when the company withholds shares for tax-withholding purposes when restricted stock awards vest are now classified as a financing activity on the statements of cash flows. Prior periods have been adjusted for this change.

**Recently Issued Accounting Pronouncements.** In May 2014, the FASB issued a new standard on revenue recognition that replaces numerous, industry-specific requirements and converges U.S. accounting standards with International Financial Reporting Standards. The new standard introduces a framework for recognizing revenue that focuses on the transfer of control rather than risks and rewards. The new standard also requires significant additional disclosures about the nature, amount, timing and uncertainty of revenue and cash flows arising from customer contracts, including significant judgments, changes in judgments and assets recognized from costs incurred to obtain or fulfill a contract. The application of the new standard becomes effective in the first annual period beginning after December 15, 2017, with early adoption permitted. This guidance may be adopted using one of two transition methods: retrospectively to each prior reporting period presented (full retrospective method) or retrospectively with the cumulative effect of initially applying the guidance recognized at the date of initial adoption (the modified retrospective approach). Management is on course to comply with the guidance by the effective date as the project team has completed the contract review and implementation phases. Based on the assessment, management expects the impact to the financial statements and internal controls environment to be immaterial. Management also notes that adoption of the guidance will result in expanded disclosures within the footnotes.

In January 2016, the FASB issued a standards update that will change how entities measure certain equity investments. It does not change the guidance for classifying and measuring investments in debt securities and loans. Under the new guidance, entities will have to measure many equity investments at fair value and recognize any changes in fair value in net income, unless the investments qualify for a practicability exception. Entities will no longer be able to recognize unrealized holding gains and losses on equity securities classified today as available for sale in other comprehensive income. The update is effective for reporting periods beginning after December 15, 2017. Early adoption is permitted. The company is still in the process of evaluating the impact of this update on the consolidated financial statements.

In February 2016, the FASB issued a standards update that requires lessees to recognize on the balance sheet the assets and liabilities associated with the rights and obligations created by those leases. The guidance for lessors is largely unchanged from current U.S. GAAP. Under the new guidance, a lessee will be required to recognize assets and liabilities for leases with terms of more than 12 months. Consistent with current U.S. GAAP, the recognition, measurement, and presentation of expenses and cash flows arising from a lease by a lessee primarily will depend on its classification as a finance or operating lease. The update is effective for reporting periods beginning after December 15, 2018. Early adoption is permitted. The company is in the process of evaluating the impact of this update on the consolidated financial statements.

In June 2016, the FASB issued guidance that changes how credit losses are measured for most financial assets measured at amortized cost and certain other instruments. The standard requires an entity to estimate its lifetime expected credit loss and record an allowance, that when deducted from the amortized cost basis of the financial asset, presents the net amount expected to be collected on the financial asset. This forward-looking expected loss model generally will result in the earlier recognition of allowances for losses. The standard also amends the impairment model for available for sale debt securities and requires entities to determine whether all or a portion of the unrealized loss on an available for sale debt security is a credit loss. Severity and duration of the unrealized loss are no longer permissible factors in concluding whether a credit loss exists. Entities will recognize improvements to estimated credit losses on available for sale debt securities immediately in earnings rather than as interest income over time. The standard is effective for reporting periods beginning after December 15, 2019. The standard's provisions must be applied as a cumulative-effect adjustment to retained earnings as of the beginning of the first reporting period in which the guidance is effective. Early adoption is permitted for reporting periods beginning in 2019. The company is in the process of evaluating the impact of this standard on the consolidated financial statements.

In November 2016, the FASB issued a standards update aimed at promoting consistency in the classification and presentation of changes in restricted cash on the statement of cash flows. Previously, there was diversity in practice as to whether the change in restricted cash was included in the reconciliation of beginning-of-period and end-of-period total cash amounts shown on the statement of cash flows. The amendments require that a statement of cash flows explain the change during the period in the total of cash, cash equivalents, as well as amounts described as restricted cash on the balance sheet. This guidance is effective for fiscal years beginning after December 15, 2017 and interim periods within those fiscal years. Early adoption is permitted. The amendments must be applied using a retrospective transition method to each period presented. The company is in the process of evaluating the impact of this update on our consolidated financial statements.

In March 2017, the FASB issued a standards update that will change certain presentation and disclosure requirements for employers that sponsor defined benefit pension as well as other postretirement benefit plans. Under current accounting rules, defined benefit pension cost and postretirement benefit cost (net benefit cost) comprise several components that reflect different aspects of an employer's financial arrangements as well as the cost of benefits provided to the employees. Those components are aggregated for reporting in the financial statements within compensation and benefits on the income statement. The amendments in the update require that the service cost component is reported in the same line as other compensation costs, whereas the other components of net benefit cost are required to be presented in the income statement separately from the service cost component. The amendments are effective for reporting periods beginning after December 15, 2017. Early adoption is permitted as of the beginning of an annual period for which financial statements have not been issued. The company is in the process of evaluating the impact of this update on the consolidated financial statements.

In August 2017, the FASB issued a standards update that amends the existing hedge accounting model to enable entities to better reflect their risk management activities in the financial statements. The amendments expand an entity's ability to hedge nonfinancial and financial risk components and reduce complexity in fair value hedges of interest rate risk. The guidance eliminates the requirement to separately measure and report hedge ineffectiveness and generally requires the entire change in the fair value of a hedging instrument to be presented in the same income statement line as the hedged item. The guidance also eases certain documentation and assessment requirements and modifies the accounting for components excluded from the assessment of hedge effectiveness. The guidance is effective for fiscal years beginning after December 15, 2018. Early adoption is permitted. We do not believe that the adoption of this standard will have a material impact on our consolidated financial statements.

### **3. Performance Bonds and Guaranty Fund Contributions**

*Performance Bonds and Guaranty Fund Contributions.* CME has been designated as a systemically important financial market utility by the Financial Stability Oversight Council and is authorized to establish and maintain a cash account at the Federal Reserve Bank of Chicago. At September 30, 2017, CME maintained \$38.1 billion within the cash account at the Federal Reserve Bank of Chicago.

*Clearing House Contract Settlement.* CME Clearing and CMECE mark-to-market open positions for all futures and options contracts twice a day (once a day for CME's cleared-only credit default swap and interest rate swap contracts). Based on values derived from the mark-to-market process, CME Clearing and CMECE require payments from clearing firms whose positions have lost value and make payments to clearing firms whose positions have gained value. Under the extremely unlikely scenario

of simultaneous default by every clearing firm who has open positions with unrealized losses, the maximum exposure related to positions other than cleared-only credit default and interest rate swap contracts would be one half day of changes in fair value of all open positions, before considering the clearing houses' ability to access defaulting clearing firms' collateral deposits.

For CME's cleared-only credit default swap (CDS) and interest rate swap contracts, the maximum exposure related to CME Clearing's guarantee would be one full day of changes in fair value of all open positions, before considering CME Clearing's ability to access defaulting clearing firms' collateral. It is noted that CME is committed to exiting the company's CDS clearing business by mid-2018. During the transition, CME will continue to provide full clearing services so that participants can continue to manage their risk.

In connection with the CMECE and CME Europe wind down announced in April 2017, all CMECE client guaranty fund contributions have been returned to the clearing firms as of September 30, 2017. The guarantee fund balance as recorded in other current assets represents \$50.0 million of company capital retained in the guaranty fund for transition purposes as of September 30, 2017.

During the first nine months of 2017, CME Clearing and CMECE transferred an average of approximately \$2.4 billion a day through their clearing systems for settlement from clearing firms whose positions had lost value to clearing firms whose positions had gained value. CME Clearing and CMECE reduce their guarantee exposure through initial and maintenance performance bond requirements and mandatory guaranty fund contributions. The company believes that its guarantee liability is immaterial and therefore has not recorded any liability at September 30, 2017.

#### 4. Intangible Assets

Intangible assets consisted of the following at September 30, 2017 and December 31, 2016:

<i>(in millions)</i>	September 30, 2017			December 31, 2016		
	Assigned Value	Accumulated Amortization	Net Book Value	Assigned Value	Accumulated Amortization	Net Book Value
<b>Amortizable Intangible Assets:</b>						
Clearing firm, market data and other customer relationships	\$ 2,838.8	\$ (920.1)	\$ 1,918.7	\$ 2,838.8	\$ (849.2)	\$ 1,989.6
Technology-related intellectual property	29.4	(29.4)	—	29.4	(28.6)	0.8
Other	2.4	(1.1)	1.3	2.4	(1.0)	1.4
<b>Total amortizable intangible assets</b>	<b>\$ 2,870.6</b>	<b>\$ (950.6)</b>	<b>1,920.0</b>	<b>\$ 2,870.6</b>	<b>\$ (878.8)</b>	<b>1,991.8</b>
<b>Indefinite-Lived Intangible Assets:</b>						
Trade names			450.0			450.0
<b>Total intangible assets – other, net</b>			<b>\$ 2,370.0</b>			<b>\$ 2,441.8</b>
Trading products <sup>(1)</sup>			\$ 17,175.3			\$ 17,175.3

(1) Trading products represent futures and options products acquired in our business combinations with CBOT Holdings, Inc., NYMEX Holdings, Inc. and The Board of Trade of Kansas City, Missouri, Inc. Clearing and transaction fees are generated through the trading of these products. These trading products, most of which have traded for decades, require authorization from the Commodity Futures Trading Commission (CFTC). Product authorizations from the CFTC have no term limits.

Total amortization expense for intangible assets was \$23.8 million for the quarter ended September 30, 2017 and \$24.0 million for the quarter ended September 30, 2016. Total amortization expense for intangible assets was \$71.8 million for the nine months ended September 30, 2017 and \$72.0 million for the nine months ended September 30, 2016. As of September 30, 2017, the future estimated amortization expense related to amortizable intangible assets is expected to be as follows:

<i>(in millions)</i>	Amortization Expense	
Remainder of 2017	\$	23.7
2018		94.7
2019		94.7
2020		94.7
2021		94.7
2022		94.7
Thereafter		1,422.8

## 5. Long-Term Investments

The company maintains various long-term investments as included in other assets in the consolidated balance sheets.

In January 2017, the company sold its remaining 43.4 million shares of BM&FBOVESPA S.A. (BM&FBOVESPA) and recognized a net gain of \$86.5 million, net of transaction costs, within investment income on the consolidated statements of income. In conjunction with the final sale of shares, the company reclassified income tax expense of \$87.8 million from accumulated other comprehensive income to the income tax provision.

In the third quarter of 2017, the company sold 9.9 million shares of Bolsa Mexicana de Valores, S.A.B de C.V. (Bolsa Mexicana) and recognized a net gain of \$2.0 million, net of transaction costs, within investment income on the consolidated statements of income. As of September 30, 2017, the company owned an approximate 0.3% interest in Bolsa Mexicana. At September 30, 2017, the fair value and cost basis of the remaining investment in Bolsa Mexicana was \$3.1 million and \$2.7 million respectively.

## 6. Debt

Long-term debt consisted of the following at September 30, 2017 and December 31, 2016:

<i>(in millions)</i>	September 30, 2017		December 31, 2016	
\$750.0 million fixed rate notes due September 2022, stated rate of 3.00% <sup>(1)</sup>	\$	745.8	\$	745.2
\$750.0 million fixed rate notes due March 2025, stated rate of 3.00% <sup>(2)</sup>		744.7		744.2
\$750.0 million fixed rate notes due September 2043, stated rate of 5.30% <sup>(3)</sup>		742.1		741.8
Total long-term debt	\$	2,232.6	\$	2,231.2

- (1) In August 2012, the company entered into a forward-starting interest rate swap agreement that modified the interest obligation associated with these notes so that the interest payable on the notes effectively became fixed at a rate of 3.32%.
- (2) In December 2014, the company entered into a forward-starting interest rate swap agreement that modified the interest obligation associated with these notes so that the interest payable on the notes effectively became fixed at a rate of 3.11%.
- (3) In August 2012, the company entered into a forward-starting interest rate swap agreement that modified the interest obligation associated with these notes so that the interest payable on the notes effectively became fixed at a rate of 4.73%.

Long-term debt maturities, at par value, were as follows at September 30, 2017:

<i>(in millions)</i>	<b>Par Value</b>
2018	\$ —
2019	—
2020	—
2021	—
2022	750.0
Thereafter	1,500.0

## 7. Contingencies

*Legal and Regulatory Matters.* In 2013, the CFTC filed suit against NYMEX and two former employees alleging disclosure of confidential customer information in violation of the Commodity Exchange Act. NYMEX's motion to dismiss was denied in 2014. Based on its investigation to date and advice from legal counsel, the company believes that it has strong factual and legal defenses to the claim.

In 2003, the U.S. Futures Exchange, L.L.C. (Eurex U.S.) and U.S. Exchange Holdings, Inc. filed suit in federal court alleging that CBOT and CME violated the antitrust laws and tortuously interfered with the business relationship and contract between Eurex U.S. and The Clearing Corporation. While the complaint requests treble damages, the plaintiffs have not specified the amount of damages sought. After years of relative inactivity, the case was recently reassigned to a new judge and a trial date was set for April 9, 2018. Based on its investigation to date and advice from legal counsel, the company believes that it has strong factual and legal defenses to the claim. Given the uncertainty of factors which may potentially impact the resolution of the matter, at this time the company is unable to estimate the reasonably possible loss or range of reasonably possible losses in the unlikely event it were found to be liable at trial in the matter.

In the normal course of business, the company discusses matters with its regulators raised during regulatory examinations or otherwise subject to their inquiry and oversight. These matters could result in censures, fines, penalties or other sanctions. Management believes the outcome of any resulting actions will not have a material impact on its consolidated financial position or results of operations. However, the company is unable to predict the outcome or the timing of the ultimate resolution of these matters, or the potential fines, penalties or injunctive or other equitable relief, if any, that may result from these matters.

In addition, the company is a defendant in, and has potential for, various other legal proceedings arising from its regular business activities. While the ultimate results of such proceedings against the company cannot be predicted with certainty, the company believes that the resolution of any of these matters on an individual or aggregate basis will not have a material impact on its consolidated financial position or results of operations.

No accrual was required for legal and regulatory matters that were probable and estimable as of September 30, 2017 and December 31, 2016.

*Intellectual Property Indemnifications.* Certain agreements with customers and other third parties related to accessing the CME Group platforms, utilizing market data services and licensing CME SPAN software may contain indemnifications from intellectual property claims that may be made against them as a result of their use of the applicable products and/or services. The potential future claims relating to these indemnifications cannot be estimated and therefore no liability has been recorded.

## 8. Guarantees

*Mutual Offset Agreement.* CME and Singapore Exchange Limited (SGX) have a mutual offset agreement with a current term through October 2018. This agreement enables market participants to open a futures position on one exchange and liquidate it on the other. The term of the agreement will automatically renew for a one-year period unless either party provides advance notice of their intent to terminate. CME must maintain U.S. Treasury securities or irrevocable, standby letters of credit as collateral for this agreement. At September 30, 2017, CME was contingently liable to SGX on letters of credit totaling \$285.0 million. Regardless of the collateral, CME guarantees all cleared transactions submitted through SGX and would initiate procedures designed to satisfy these financial obligations in the event of a default, such as the use of performance bonds and guaranty fund contributions of the defaulting clearing firm. The company believes that its guarantee liability is immaterial and therefore has not recorded any liability at September 30, 2017.

*Family Farmer and Rancher Protection Fund.* In 2012, the company established the Family Farmer and Rancher Protection Fund (the Fund). The Fund is designed to provide payments, up to certain maximum levels, to family farmers, ranchers and other agricultural industry participants who use the company's agricultural commodity products and who suffer losses to their segregated account balances due to their CME clearing member becoming insolvent. Under the terms of the Fund, farmers and ranchers are eligible for up to \$25,000 per participant. Farming and ranching cooperatives are eligible for up to \$100,000 per

cooperative. The Fund was established with a maximum of \$100.0 million available for distribution to participants. Since its establishment, the Fund has made payments of approximately \$2.0 million, which leaves \$98.0 million available for future claims. If, at any time, payments due to participants were to exceed the amount remaining in the fund, payments would be pro-rated. Clearing members and customers must register with the company in advance and provide certain documentation in order to substantiate their eligibility. The company believes that its guarantee liability is immaterial and therefore has not recorded any liability at September 30, 2017.

## 9. Accumulated Other Comprehensive Income (Loss)

The following tables present changes in the accumulated balances for each component of other comprehensive income (loss), including current period other comprehensive income (loss) and reclassifications out of accumulated other comprehensive income (loss):

<i>(in millions)</i>	Investment Securities	Defined Benefit Plans	Derivative Investments	Foreign Currency Translation	Total
Balance at December 31, 2016	\$ (19.5)	\$ (37.8)	\$ 58.9	\$ (15.7)	\$ (14.1)
Other comprehensive income (loss) before reclassifications and income tax benefit (expense)	30.1	0.5	—	10.3	40.9
Amounts reclassified from accumulated other comprehensive income (loss)	(89.1)	2.1	(0.9)	—	(87.9)
Income tax benefit (expense)	77.7	(1.9)	0.3	(2.9)	73.2
Net current period other comprehensive income (loss)	18.7	0.7	(0.6)	7.4	26.2
Balance at September 30, 2017	\$ (0.8)	\$ (37.1)	\$ 58.3	\$ (8.3)	\$ 12.1

<i>(in millions)</i>	Investment Securities	Defined Benefit Plans	Derivative Investments	Foreign Currency Translation	Total
Balance at December 31, 2015	\$ (95.0)	\$ (36.6)	\$ 59.6	\$ (8.8)	\$ (80.8)
Other comprehensive income (loss) before reclassifications and income tax benefit (expense)	177.7	3.1	—	(5.6)	175.2
Amounts reclassified from accumulated other comprehensive income (loss)	(6.3)	2.4	(0.9)	—	(4.8)
Income tax benefit (expense)	(65.9)	(2.1)	0.3	1.0	(66.7)
Net current period other comprehensive income (loss)	105.5	3.4	(0.6)	(4.6)	103.7
Balance at September 30, 2016	\$ 10.5	\$ (33.2)	\$ 59.0	\$ (13.4)	\$ 22.9

## 10. Fair Value Measurements

The company uses a three-level classification hierarchy of fair value measurements for disclosure purposes.

- Level 1 inputs, which are considered the most reliable evidence of fair value, consist of quoted prices (unadjusted) for identical assets or liabilities in active markets.
- Level 2 inputs consist of observable market data, such as quoted prices for similar assets and liabilities in active markets, or inputs other than quoted prices that are directly observable.
- Level 3 inputs consist of unobservable inputs which are derived and cannot be corroborated by market data or other entity-specific inputs.

Level 1 assets generally include investments in publicly traded mutual funds, equity securities and corporate debt securities with quoted market prices. In general, the company uses quoted prices in active markets for identical assets to determine the fair value of marketable securities and equity investments. If quoted prices are not available to determine fair value, the company uses other inputs that are directly observable.

Assets included in level 2 generally consist of asset-backed securities. Asset-backed securities were measured at fair value based on matrix pricing using prices of similar securities with similar inputs such as maturity dates, interest rates and credit ratings.



Financial assets recorded in the consolidated balance sheet as of September 30, 2017 were classified in their entirety based on the lowest level of input that was significant to each asset's fair value measurement. There were no liabilities that were measured at fair value as of September 30, 2017. The following tables present financial instruments measured at fair value on a recurring basis:

<i>(in millions)</i>	September 30, 2017			
	Level 1	Level 2	Level 3	Total
<b>Assets at Fair Value:</b>				
Marketable securities:				
Corporate debt securities	\$ 20.8	\$ —	\$ —	\$ 20.8
Mutual funds	66.8	—	—	66.8
Equity securities	0.1	—	—	0.1
Asset-backed securities	—	0.3	—	0.3
<b>Total Marketable Securities</b>	<b>87.7</b>	<b>0.3</b>	<b>—</b>	<b>88.0</b>
Equity investments	3.1	—	—	3.1
<b>Total Assets at Fair Value</b>	<b>\$ 90.8</b>	<b>\$ 0.3</b>	<b>\$ —</b>	<b>\$ 91.1</b>

There were no transfers of assets or liabilities between level 1, level 2 and level 3 during the first nine months of 2017. There were no level 3 assets or liabilities valued at fair value on a recurring or non-recurring basis during the first nine months of 2017.

The following presents the estimated fair values of long-term debt notes, which are carried at amortized cost on the consolidated balance sheets. The fair values, which are classified as level 2 under the fair value hierarchy, were estimated using quoted market prices. At September 30, 2017, the fair values were as follows:

<i>(in millions)</i>	Fair Value
\$750.0 million fixed rate notes due September 2022, stated rate of 3.00%	\$ 771.2
\$750.0 million fixed rate notes due March 2025, stated rate of 3.00%	763.4
\$750.0 million fixed rates notes due September 2043, stated rate of 5.30%	954.0

## 11. Earnings Per Share

Basic earnings per share is computed by dividing net income attributable to the company by the weighted average number of shares of all classes of CME Group common stock outstanding for each reporting period. Diluted earnings per share reflects the increase in shares using the treasury stock method to reflect the impact of an equivalent number of shares of common stock if stock options were exercised and restricted stock awards were converted into common stock. Anti-dilutive stock options, restricted stock and performance share awards were as follows for the periods presented:

<i>(in thousands)</i>	Quarter Ended September 30,		Nine Months Ended September 30,	
	2017	2016	2017	2016
Stock options	—	311	—	315
Restricted stock and performance shares	438	530	438	530
<b>Total</b>	<b>438</b>	<b>841</b>	<b>438</b>	<b>845</b>

The following table presents the earnings per share calculation for the periods presented:

	Quarter Ended September 30,		Nine Months Ended September 30,	
	2017	2016	2017	2016
Net Income (in millions)	\$ 308.6	\$ 472.8	\$ 1,124.2	\$ 1,160.7
Weighted Average Number of Common Shares (in thousands):				
Basic	338,771	337,592	338,557	337,299
Effect of stock options, restricted stock and performance shares	1,558	1,551	1,557	1,535
Diluted	340,329	339,143	340,114	338,834
Earnings per Common Share:				
Basic	\$ 0.91	\$ 1.40	\$ 3.32	\$ 3.44
Diluted	0.91	1.39	3.31	3.43

## 12. Subsequent Events

The company has evaluated subsequent events through the date the financial statements were issued. The company has determined that there were no subsequent events that require disclosure except the following:

Following a request for de-authorization submitted by the company in September 2017, CME Europe has received confirmation from the Financial Conduct Authority (FCA) that its status as a recognized investment exchange (RIE) has been revoked effective October 12, 2017. CMECE has received confirmation from the Bank of England that revocation of its status as a European Market Infrastructure Regulation (EMIR) authorized central counterparty clearing house (CCP) and UK recognized CCP was effective October 12, 2017.

**ITEM 2. MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS**

The following discussion is provided as a supplement to, and should be read in conjunction with, the accompanying unaudited consolidated financial statements and notes in this Quarterly Report on Form 10-Q and our Annual Report on Form 10-K for the year ended December 31, 2016.

References in this discussion and analysis to “we,” “us” and “our” are to CME Group Inc. (CME Group) and its consolidated subsidiaries, collectively. References to “exchange” are to Chicago Mercantile Exchange Inc. (CME), Board of Trade of the City of Chicago, Inc. (CBOT), New York Mercantile Exchange, Inc. (NYMEX), Commodity Exchange, Inc. (COMEX), CME Clearing Europe Limited (CMECE) and CME Europe Limited (CME Europe), collectively, unless otherwise noted. The clearing houses include CME Clearing, which is the U.S. clearing house and a division of CME, and CMECE.

**RESULTS OF OPERATIONS**
**Financial Highlights**

The following summarizes significant changes in our financial performance for the periods presented.

<i>(dollars in millions, except per share data)</i>	Quarter Ended September 30,			Nine Months Ended September 30,		
	2017	2016	Change	2017	2016	Change
Total revenues	\$ 890.8	\$ 841.7	6 %	\$ 2,744.7	\$ 2,682.3	2 %
Total expenses	322.9	316.4	2	970.0	1,019.8	(5)
Operating margin	63.8%	62.4%		64.7%	62.0%	
Non-operating income (expense)	\$ 39.4	\$ 23.5	68	\$ 176.9	\$ 30.9	n.m.
Effective tax rate	49.2%	13.8%		42.4%	31.5%	
Net income	\$ 308.6	\$ 472.8	(35)	\$ 1,124.2	\$ 1,160.7	(3)
Diluted earnings per common share	0.91	1.39	(35)	3.31	3.43	(3)
Cash flows from operating activities				1,330.2	1,232.4	8

n.m. not meaningful

**Revenues**

<i>(dollars in millions)</i>	Quarter Ended September 30,			Nine Months Ended September 30,		
	2017	2016	Change	2017	2016	Change
Clearing and transaction fees	\$ 756.2	\$ 704.2	7 %	\$ 2,340.2	\$ 2,267.9	3 %
Market data and information services	96.9	101.1	(4)	289.8	306.4	(5)
Access and communication fees	25.7	23.8	8	74.9	67.7	11
Other	12.0	12.6	(5)	39.8	40.3	(1)
Total Revenues	\$ 890.8	\$ 841.7	6	\$ 2,744.7	\$ 2,682.3	2

## Clearing and Transaction Fees

### Futures and Options Contracts

The following table summarizes our total contract volume, revenue and average rate per contract for futures and options. Total contract volume includes contracts that are traded on our exchange and cleared through our clearing houses and certain cleared-only contracts. Volume is measured in round turns, which is considered a completed transaction that involves a purchase and an offsetting sale of a contract. Average rate per contract is determined by dividing total clearing and transaction fees by total contract volume. Contract volume and average rate per contract disclosures exclude interest rate swaps and credit default swaps.

	Quarter Ended September 30,			Nine Months Ended September 30,		
	2017	2016	Change	2017	2016	Change
Total contract volume (in millions)	989.3	916.4	8%	3,085.9	2,915.2	6 %
Clearing and transaction fees (in millions)	\$ 741.2	\$ 687.2	8	\$ 2,292.0	\$ 2,222.9	3
Average rate per contract	\$ 0.749	\$ 0.750	—	\$ 0.743	\$ 0.763	(3)

We estimate the following increases in clearing and transaction fees based on changes in total contract volumes and changes in average rate per contract for futures and options during the third quarter and first nine months of 2017 when compared with the same periods in 2016.

<i>(in millions)</i>	Quarter Ended	Nine Months Ended
Increases due to changes in total contract volume	\$ 54.7	\$ 126.8
Decreases due to changes in average rate per contract	(0.7)	(57.7)
Net increases in clearing and transaction fees	\$ 54.0	\$ 69.1

Average rate per contract is impacted by our rate structure, including volume-based incentives; product mix; trading venue, and the percentage of volume executed by customers who are members compared with non-member customers. Due to the relationship between average rate per contract and contract volume, the change in clearing and transaction fees attributable to changes in each is only an approximation.

## Contract Volume

The following table summarizes average daily contract volume. Contract volume can be influenced by many factors, including political and economic conditions, the regulatory environment and market competition.

<i>(amounts in thousands)</i>	Quarter Ended September 30,			Nine Months Ended September 30,		
	2017	2016	Change	2017	2016	Change
<b>Average Daily Volume by Product Line:</b>						
Interest rate	7,424	6,791	9 %	8,263	7,255	14 %
Equity	2,624	2,876	(9)	2,698	3,123	(14)
Foreign exchange	971	771	26	915	850	8
Agricultural commodity	1,381	1,156	19	1,378	1,364	1
Energy	2,693	2,294	17	2,608	2,381	10
Metal	611	431	42	552	451	22
Aggregate average daily volume	15,704	14,319	10	16,414	15,424	6
<b>Average Daily Volume by Venue:</b>						
Electronic	14,264	12,672	13	14,596	13,562	8
Open outcry	889	982	(9)	1,120	1,156	(3)
Privately negotiated	551	665	(17)	698	706	(1)
Aggregate average daily volume	15,704	14,319	10	16,414	15,424	6
Electronic Volume as a Percentage of Total Volume	91%	88%		89%	88%	

Overall contract volumes increased in the third quarter and first nine months of 2017 when compared with the same periods in 2016. Interest rate volatility remained high in the first nine months of 2017 as the markets continued to experience uncertainty surrounding the Federal Reserve's interest rate policy. In June 2017, the Federal Open Markets Committee raised the federal funds rate, which contributed to additional interest rate volatility through the third quarter. These factors resulted in strong volume for our interest rate contracts in the first nine months of 2017. There was a shift in crude oil supplies caused by an increase in United States crude oil production following the Organization of Petroleum Exporting Countries' decision to cut oil supplies in the fourth quarter of 2016, which contributed to stronger energy volumes in the first nine months of 2017. The equity markets experienced lower volatility in the first nine months of 2017 due to fewer market-moving geopolitical events, which resulted in lower equity contract volume.

### Interest Rate Products

The following table summarizes average daily contract volume for our key interest rate products. Eurodollar Front 8 futures include contracts expiring in two years or less. Eurodollar Back 32 futures include contracts with expirations after two years through ten years.

<i>(amounts in thousands)</i>	Quarter Ended September 30,			Nine Months Ended September 30,		
	2017	2016	Change	2017	2016	Change
<b>Eurodollar futures and options:</b>						
Front 8 futures	1,495	1,665	(10)%	1,795	1,773	1%
Back 32 futures	702	620	13	792	647	22
Options	1,066	1,052	1	1,379	1,200	15
<b>U.S. Treasury futures and options:</b>						
10-Year	1,902	1,539	24	1,921	1,664	15
5-Year	925	808	15	1,004	862	17
2-Year	370	316	17	378	324	17
Treasury bond	386	326	18	379	342	11
Federal Funds futures and options	159	142	12	209	136	54

In the third quarter and first nine months of 2017 when compared with the same periods in 2016, overall interest rate contract volumes increased largely due to volatility caused by continued uncertainty surrounding the Federal Reserve's interest rate policy, including volatility caused by the federal funds rate increase by the Federal Open Markets Committee in June 2017. In addition, we believe the increase in short-term interest rate contract volume in the first nine months of 2017 when compared

with the same period in 2016 was also due to the uncertainty surrounding other global events, including 2017 elections throughout Europe. We believe the increases in long-term interest rate contract volumes were also due to the volatility resulting from the uncertainty surrounding the policies of the political administration in the United States, uncertainty regarding future rates of inflation, and potential for additional government spending.

#### Equity Products

The following table summarizes average daily contract volume for our key equity products.

<i>(amounts in thousands)</i>	Quarter Ended September 30,			Nine Months Ended September 30,		
	2017	2016	Change	2017	2016	Change
E-mini S&P 500 futures and options	1,968	2,347	(16)%	2,111	2,492	(15)%
E-mini NASDAQ 100 futures and options	328	236	39	282	281	—

Overall equity contract volume decreased in the third quarter of 2017 when compared with the same period in 2016 due to overall lower market volatility, as measured by the CBOE Volatility Index and CBOE Nasdaq-100 Volatility Index. The comparatively low volatility is believed to be caused by fewer market-moving geopolitical and macro-level events that impacted these indexes in the first nine months of 2017. In the first nine months of 2016, there were periods of higher volatility within the equity markets resulting from uncertainty regarding whether the Federal Open Markets Committee would begin to raise the federal funds rate in 2016, the deceleration of the Chinese economy and declining global crude oil prices.

#### Foreign Exchange Products

The following table summarizes average daily contract volume for our key foreign exchange products.

<i>(amounts in thousands)</i>	Quarter Ended September 30,			Nine Months Ended September 30,		
	2017	2016	Change	2017	2016	Change
Euro	239	184	30%	229	225	2 %
Japanese yen	173	140	24	172	159	8
British pound	119	114	5	123	122	—
Australian dollar	105	103	2	97	109	(12)
Canadian dollar	91	76	21	82	82	1

In the third quarter and first nine months of 2017 when compared with the same periods in 2016, overall foreign exchange contract volumes increased. In the third quarter of 2017, Euro contract volume was higher due to volatility caused by the uncertainty surrounding the European Central Bank policy. The Japanese yen contract volumes increased as market participants turned to the yen as a safe-haven currency as currency rates steadied. In the first nine months of 2017 when compared with the same period in 2016, we believe the decrease in Australian dollar contract volume was driven by lower interest rate volatility in Australia.

#### Agricultural Commodity Products

The following table summarizes average daily contract volume for our key agricultural commodity products.

<i>(amounts in thousands)</i>	Quarter Ended September 30,			Nine Months Ended September 30,		
	2017	2016	Change	2017	2016	Change
Corn	467	374	25%	470	452	4 %
Soybean	289	253	14	279	333	(16)
Wheat	216	173	25	226	196	15

Overall agricultural commodity contract volumes increased in the third quarter of 2017 and remained relatively flat in the first nine months of 2017, when compared with the same periods in 2016. In the third quarter of 2017, agricultural commodity contract volume increased due to higher price volatility, which we believe was caused by greater uncertainty related to weather conditions and crop production, as the harvest development phase experienced cooling patterns. In the third quarter of 2016, there was lower price volatility due to improved weather conditions.

### Energy Products

The following table summarizes average daily contract volume for our key energy products.

(amounts in thousands)	Quarter Ended September 30,			Nine Months Ended September 30,		
	2017	2016	Change	2017	2016	Change
WTI crude oil	1,616	1,248	30%	1,476	1,290	14%
Natural gas	521	509	2	567	521	9
Refined products	431	365	18	402	369	9
Brent crude oil	90	81	11	99	96	3

Overall energy contract volumes increased in the third quarter and first nine months of 2017 when compared with the same periods in 2016, largely due to increases in crude oil contract volumes caused by higher volatility in the third quarter of 2017. We believe the increased volatility in 2017 was caused by a shift in crude oil supplies as United States crude oil production rose following the Organization of Petroleum Exporting Countries' decision to cut oil supplies in the fourth quarter of 2016. Natural gas and refined products contract volumes also increased in the third quarter and the first nine months of 2017 due to higher price volatility caused by shifts in supply and demand in the underlying markets.

### Metal Products

The following table summarizes average daily volume for our key metal products.

(amounts in thousands)	Quarter Ended September 30,			Nine Months Ended September 30,		
	2017	2016	Change	2017	2016	Change
Gold	368	255	44%	324	270	20%
Copper	112	73	52	103	80	29
Silver	105	80	31	98	78	26

We believe the increases in metal contract volumes in the third quarter and first nine months of 2017 when compared with the same periods in 2016 were due to investors using gold and other precious metals as safe-haven alternative investments to other markets.

### Average Rate per Contract

The average rate per contract in the third quarter of 2017 when compared with the same period in 2016 remained relatively flat. In the first nine months of 2017 compared with the same period in 2016, the average rate per contract decreased as interest rate, energy, and metal contract volumes increased by 4 percentage points, while agricultural commodity and equity contract volumes collectively decreased by 4 percentage points. Agricultural commodity and equity contracts have a higher average rate per contract compared with interest rate contracts. The overall decreases in average rates per contract were partially offset by a rate increase that was effective in the first quarter of 2017.

### Concentration of Revenue

We bill a substantial portion of our clearing and transaction fees directly to our clearing firms. The majority of clearing and transaction fees received from clearing firms represent charges for trades executed and cleared on behalf of their customers. One firm represented 13% and another firm represented 12% of our clearing and transaction fees in the first nine months of 2017. Should a clearing firm withdraw, we believe that the customer portion of the firm's trading activity would likely transfer to another clearing firm of the exchange. Therefore, we do not believe we are exposed to significant risk from the ongoing loss of revenue received from or through a particular clearing firm.

### Other Sources of Revenue

In the third quarter and first nine months of 2017 when compared with the same periods in 2016, market data and information services revenues decreased. The decreases in revenues were attributable to declines in screen counts due to cost-cutting initiatives at member firms and some rationalization as customer firms transitioned into full-priced offerings.

The two largest resellers of our market data represented approximately 40% of our market data and information services revenue in the first nine months of 2017. Despite this concentration, we consider exposure to significant risk of revenue loss to be minimal. In the event that one of these vendors no longer subscribes to our market data, we believe the majority of that vendor's customers would likely subscribe to our market data through another reseller. Additionally, several of our largest institutional customers that utilize services from our two largest resellers report usage and remit payment of their fees directly to us.

**Expenses**

<i>(dollars in millions)</i>	Quarter Ended September 30,			Nine Months Ended September 30,		
	2017	2016	Change	2017	2016	Change
Compensation and benefits	\$ 141.4	\$ 130.6	8 %	\$ 423.0	\$ 394.2	7 %
Communications	6.1	6.9	(13)	18.4	19.9	(8)
Technology support services	19.3	17.3	12	56.2	52.4	7
Professional fees and outside services	25.8	33.5	(23)	83.0	104.2	(20)
Amortization of purchased intangibles	23.8	24.0	(1)	71.8	72.0	—
Depreciation and amortization	26.9	31.2	(12)	85.1	95.5	(11)
Occupancy and building operations	19.8	19.6	—	59.1	65.3	(10)
Licensing and other fee agreements	41.5	31.5	32	108.2	103.3	5
Other	18.3	21.8	(17)	65.2	113.0	(42)
<b>Total Expenses</b>	<b>\$ 322.9</b>	<b>\$ 316.4</b>	<b>2</b>	<b>\$ 970.0</b>	<b>\$ 1,019.8</b>	<b>(5)</b>

Operating expenses increased by \$6.5 million in the third quarter of 2017 and decreased by \$49.8 million in the first nine months of 2017, respectively, when compared with the same periods in 2016. The following table shows the estimated impacts of key factors resulting in the changes in operating expenses:

<i>(dollars in millions)</i>	Quarter Ended, September 30, 2017		Nine Months Ended September 30, 2017	
	Amount of Change	Change as a Percentage of Total Expenses	Amount of Change	Change as a Percentage of Total Expenses
Loss on datacenter and related legal fees	\$ —	— %	\$ (28.6)	(3)%
Foreign currency exchange rate fluctuation	(3.9)	(1)	(26.5)	(3)
Professional fees and outside services	(7.7)	(2)	(21.2)	(2)
Rent expense	—	—	(5.7)	—
Licensing and other fee agreements	10.0	3	4.9	—
Bonus expense	3.2	1	7.4	1
Salaries, benefits and employer taxes	5.0	1	14.0	1
Other expenses, net	(0.1)	—	5.9	1
<b>Total increase (decrease)</b>	<b>\$ 6.5</b>	<b>2 %</b>	<b>\$ (49.8)</b>	<b>(5)%</b>

Decreases in operating expenses in the third quarter and first nine months of 2017 when compared with the same periods in 2016 were as follows:

- In the first quarter of 2016, we sold and leased back our datacenter in the Chicago area. The transaction was recognized under the financing method under generally accepted accounting principles. In the first quarter of 2016, we recognized total losses and expenses of \$28.6 million, representing a net loss on write-down to fair value of the assets and certain other transaction fees of \$27.1 million within other expenses and \$1.5 million of legal and other fees.
- In the third quarter of 2017, we recognized a net gain of \$2.9 million due to a favorable change in exchange rates on foreign cash balances, compared with a net loss of \$1.0 million in the third quarter of 2016. In the first nine months of 2017, we recognized a net gain of \$10.0 million due to a favorable change in exchange rates on foreign cash balances, compared with a net loss of \$16.5 million in the first nine months of 2016. Gains and losses from exchange rate fluctuations result when subsidiaries with a U.S. dollar functional currency hold cash as well as certain other monetary assets and liabilities denominated in foreign currencies.
- In 2016, we recognized higher professional fees and outside services expenses largely due to legal efforts related to our business activities and product offerings as well as higher professional fees related to a greater reliance on consultants for security and systems enhancement work.
- In the first nine months of 2017, rent expense decreased largely due to a reduction in office and data center space throughout 2016.



Increases in operating expenses in the third quarter and first nine months of 2017 when compared with the same periods in 2016 were as follows:

- An increase in licensing and other fee sharing agreements expense in the third quarter of 2017 resulted from higher expense related to incentive payments made to facilitate the acquisition of the Russell contract, as well as increased costs of revenue sharing agreements for certain licensed products. The increase in the third quarter of 2017 was partially offset by lower expense related to revenue sharing agreements for certain equity and energy contracts due to lower volume for these products in the first nine months of 2017.
- Bonus expense increased due to performance relative to our 2017 cash earnings target when compared with 2016 performance relative to our 2016 cash earnings target.
- Compensation and benefits expenses also increased as a result of increases in average headcount primarily in our international locations.

### Non-Operating Income (Expense)

<i>(dollars in millions)</i>	Quarter Ended September 30,			Nine Months Ended September 30,		
	2017	2016	Change	2017	2016	Change
Investment income	\$ 139.9	\$ 36.5	n.m.	\$ 391.2	\$ 71.3	n.m.
Interest and other borrowing costs	(29.1)	(31.1)	(7)	(87.9)	(91.9)	(4)
Equity in net earnings (losses) of unconsolidated subsidiaries	33.9	28.6	19	96.5	82.4	17
Other non-operating income (expense)	(105.3)	(10.5)	n.m.	(222.9)	(30.9)	n.m.
Total Non-Operating	\$ 39.4	\$ 23.5	68	\$ 176.9	\$ 30.9	n.m.

n.m. not meaningful

Investment income increased in the third quarter and first nine months of 2017, when compared with the same periods in 2016, largely due to higher average reinvestment balances and rates of interest earned from cash performance bond and guaranty fund contributions that are reinvested. In the first quarter of 2017, we sold our remaining ownership interest in BM&FBOVESPA and recognized a net gain of \$86.5 million, net of transaction costs. In the third quarter of 2017, the company sold 9.9 million shares of Bolsa Mexicana and recognized a net gain of \$2.0 million, net of transaction costs.

Higher income generated from our S&P/Dow Jones Indices LLC business venture contributed to increases in equity in net earnings (losses) of unconsolidated subsidiaries in the third quarter and first nine months of 2017 when compared with the same periods in 2016.

In the third quarter and first nine months of 2017 when compared with the same periods in 2016, we recognized higher expenses related to the distribution of interest earned on performance bond collateral reinvestment to the clearing firms. These expenses are included in other non-operating income (expense).

### Income Tax Provision

The following table summarizes the effective tax rates for the periods presented:

	2017	2016
Quarter ended September 30	49.2%	13.8%
Nine months ended September 30	42.4%	31.5%

The overall increase in the effective tax rate in the third quarter of 2017 was primarily due to expense recognized for the remeasurement of deferred tax positions resulting from a state and local income tax law change. Also, in the third quarter of 2016, a benefit was recorded relating to the sale of BM&FBOVESPA shares.

The overall increase in the effective tax rate in the first nine months of 2017 was due to expense from a state and local tax law change recorded in the third quarter as well as from reclassifying income tax expense from other comprehensive income for the sale of the remaining BM&FBOVESPA shares in the first quarter. Also, the first nine months of 2016 contain a tax benefit related to the sale of BM&FBOVESPA shares which was partially offset by expense from the remeasurement of deferred tax positions.

## Liquidity and Capital Resources

**Sources and Uses of Cash.** Net cash provided by operating activities increased in the first nine months of 2017 when compared with the same period in 2016. The increase in net cash provided by operating activities was largely attributable to higher investment income related to our reinvestment of cash performance bonds and guaranty fund collateral, net of the distribution of interest earned to the clearing firms, as well as an increase in trading volumes and the reduction of restricted cash related to the CMECE guaranty fund. Net cash provided by investing activities increased in the first nine months of 2017 when compared with the same period of 2016 was due to proceeds received from our sale of BM&FBOVESPA shares in the first quarter of 2017. Cash used in financing activities was higher in the first nine months of 2017 when compared with the same period in 2016. The increase was attributable to higher cash dividends paid in the first nine months of 2017 when compared with the same period in 2016. The increase was also attributable to proceeds from a finance lease obligation related to the sale-leaseback of the datacenter in the first quarter of 2016.

**Debt Instruments.** The following table summarizes our debt outstanding at September 30, 2017:

<i>(in millions)</i>	<b>Par Value</b>
Fixed rate notes due September 2022, stated rate of 3.00% <sup>(1)</sup>	\$ 750.0
Fixed rate notes due March 2025, stated rate of 3.00% <sup>(2)</sup>	750.0
Fixed rate notes due September 2043, stated rate of 5.30% <sup>(3)</sup>	750.0

- (1) In August 2012, we entered into a forward-starting interest rate swap agreement that modified the interest obligation associated with these notes so that the interest payable effectively became fixed at a rate of 3.32%.
- (2) In December 2014, we entered into a forward-starting interest rate swap agreement that modified the interest obligation associated with these notes so that the interest payable effectively became fixed at a rate of 3.11%.
- (3) In August 2012, we entered into a forward starting interest rate swap agreement that modified the interest obligation associated with these notes so that the interest payable effectively became fixed at a rate of 4.73%.

We maintain a \$2.3 billion multi-currency revolving senior credit facility with various financial institutions, which matures in March 2020. The proceeds from this facility can be used for general corporate purposes, which includes providing liquidity for our clearing houses in certain circumstances at CME Group's discretion and, if necessary, for maturities of commercial paper. As long as we are not in default under this facility, we have the option to increase it up to \$3.0 billion with the consent of the agent and lenders providing the additional funds. This facility is voluntarily pre-payable from time to time without premium or penalty. Under this facility, we are required to remain in compliance with a consolidated net worth test, which is defined as our consolidated shareholders' equity at December 31, 2014, giving effect to share repurchases made and special dividends paid during the term of the agreements (and in no event greater than \$2.0 billion in aggregate), multiplied by 0.65. We currently do not have any borrowings outstanding under this facility.

We maintain a 364-day multi-currency revolving secured credit facility with a consortium of domestic and international banks to be used in certain situations by CME Clearing. The facility provides for borrowings of up to \$7.0 billion. We may use the proceeds to provide temporary liquidity in the unlikely event of a clearing firm default, in the event of a liquidity constraint or default by a depository (custodian for our collateral), or in the event of a temporary disruption with the domestic payments system that would delay payment of settlement variation between us and our clearing firms. Under Exchange rules, guaranty fund contributions deposited by clearing members and performance bond assets deposited by defaulting clearing members may be used to collateralize the facility. At September 30, 2017, guaranty funds available to collateralize the facility totaled \$8.4 billion. We have the option to request an increase in the line from \$7.0 billion to \$10.0 billion. Our 364-day facility contains a requirement that CME remain in compliance with a consolidated tangible net worth test, defined as CME consolidated shareholder's equity less intangible assets (as defined in the agreement), of not less than \$800.0 million. We currently do not have any borrowings outstanding under this facility.

The indentures governing our fixed rate notes, our \$2.3 billion multi-currency revolving senior credit facility and our 364-day multi-currency revolving secured credit facility for \$7.0 billion do not contain specific covenants that restrict the ability to pay dividends. These documents, however, do contain other customary financial and operating covenants that place restrictions on the operations of the company that could indirectly affect the ability to pay dividends.

At September 30, 2017, we have excess borrowing capacity for general corporate purposes of approximately \$2.3 billion under our multi-currency revolving senior credit facility.

At September 30, 2017, we were in compliance with the various covenant requirements of all our debt facilities.

CME Group, as a holding company, has no operations of its own. Instead, it relies on dividends declared and paid to it by its subsidiaries in order to provide the funds which it uses to pay dividends to its shareholders.

To satisfy our performance bond obligation with Singapore Exchange Limited, we may pledge CME-owned U.S. Treasury securities in lieu of, or in combination with, irrevocable standby letters of credit. At September 30, 2017, the letters of credit totaled \$285.0 million.

The following table summarizes our credit ratings at September 30, 2017:

Rating Agency	Short-Term Debt Rating	Long-Term Debt Rating	Outlook
Standard & Poor's	A1+	AA-	Stable
Moody's Investors Service	P1	Aa3	Stable

Given our cash flow generation, our ability to pay down debt levels and our ability to refinance existing debt facilities if necessary, we expect to maintain an investment grade rating. If our ratings are downgraded below investment grade due to a change of control, we are required to make an offer to repurchase our fixed rate notes at a price equal to 101% of the principal amount, plus accrued and unpaid interest.

**Liquidity and Cash Management.** Cash and cash equivalents totaled \$1.6 billion and \$1.9 billion at September 30, 2017 and December 31, 2016, respectively. The balance retained in cash and cash equivalents is a function of anticipated or possible short-term cash needs, prevailing interest rates, our investment policy and alternative investment choices. A majority of our cash and cash equivalents balance is invested in money market mutual funds that invest only in U.S. Treasury securities, U.S. government agency securities and U.S. Treasury security reverse repurchase agreements. Our exposure to credit and liquidity risk is minimal given the nature of the investments. Cash that is not available for general corporate purposes because of regulatory requirements or other restrictions is classified as restricted cash and is included in other current assets or other assets in the consolidated balance sheets.

**Regulatory Requirements.** CME is regulated by the CFTC as U.S. Derivatives Clearing Organizations (DCO). DCOs are required to maintain capital, as defined by the CFTC, in an amount at least equal to one year of projected operating expenses as well as cash, liquid securities, or a line of credit at least equal to six months of projected operating expenses. CME was designated by the Financial Stability Oversight Council as a systemically important financial market utility under Title VIII of Dodd-Frank. As a result, CME must comply with CFTC regulations applicable to a systemically important DCO for financial resources and liquidity resources. CME is in compliance with all DCO financial requirements. CMECE is no longer regulated by the CFTC effective August 8, 2017 in connection with the wind down of our clearing operations in the UK.

CME, CBOT, NYMEX and COMEX are regulated by the CFTC as Designated Contract Markets (DCM). DCMs are required to maintain capital, as defined by the CFTC, in an amount at least equal to one year of projected operating expenses as well as cash, liquid securities or a line of credit at least equal to six months of projected operating expenses. Our DCMs are in compliance with all DCM financial requirements.

#### Recent Accounting Pronouncements

In May 2014, the FASB issued a new standard on revenue recognition that replaces numerous, industry-specific requirements and converges U.S. accounting standards with International Financial Reporting Standards. The new standard introduces a framework for recognizing revenue that focuses on the transfer of control rather than risks and rewards. The new standard also requires significant additional disclosures about the nature, amount, timing and uncertainty of revenue and cash flows arising from customer contracts, including significant judgments, changes in judgments and assets recognized from costs incurred to obtain or fulfill a contract. The application of the new standard becomes effective in the first annual period beginning after December 15, 2017, with early adoption permitted. This guidance may be adopted using one of two transition methods: retrospectively to each prior reporting period presented (full retrospective method) or retrospectively with the cumulative effect of initially applying the guidance recognized at the date of initial adoption (the modified retrospective approach). Management is on course to comply with the guidance by the effective date as the project team has completed the contract review and implementation phases. Based on the assessment, management expects the impact to the financial statements and internal controls environment to be immaterial. Management also notes that adoption of the guidance will result in expanded disclosures within the footnotes.

In January 2016, the FASB issued a standards update that will change how entities measure certain equity investments. It does not change the guidance for classifying and measuring investments in debt securities and loans. Under the new guidance, entities will have to measure many equity investments at fair value and recognize any changes in fair value in net income, unless the investments qualify for a practicability exception. Entities will no longer be able to recognize unrealized holding gains and losses on equity securities classified today as available for sale in other comprehensive income. The update is effective for reporting periods beginning after December 15, 2017. Early adoption is permitted. We are in the process of evaluating the impact of this update on our consolidated financial statements.

In February 2016, the FASB issued a standards update that requires lessees to recognize on the balance sheet the assets and liabilities associated with the rights and obligations created by those leases. The guidance for lessors is largely unchanged from current U.S. GAAP. Under the new guidance, a lessee will be required to recognize assets and liabilities for leases with lease terms of more than 12 months. Consistent with current U.S. GAAP, the recognition, measurement, and presentation of expenses and cash flows arising from a lease by a lessee primarily will depend on its classification as a finance or operating lease. The update is effective for reporting periods beginning after December 15, 2018. Early adoption is permitted. We are in the process of evaluating the impact of this update on our consolidated financial statements.

In June 2016, the FASB issued guidance that changes how credit losses are measured for most financial assets measured at amortized cost and certain other instruments. The standard requires an entity to estimate its lifetime expected credit loss and record an allowance, that when deducted from the amortized cost basis of the financial asset, presents the net amount expected to be collected on the financial asset. This forward-looking expected loss model generally will result in the earlier recognition of allowances for losses. The standard also amends the impairment model for available for sale debt securities and requires entities to determine whether all or a portion of the unrealized loss on an available for sale debt security is a credit loss. Severity and duration of the unrealized loss are no longer permissible factors in concluding whether a credit loss exists. Entities will recognize improvements to estimated credit losses on available for sale debt securities immediately in earnings rather than as interest income over time. The standard is effective for reporting periods beginning after December 15, 2019. The standard's provisions must be applied as a cumulative-effect adjustment to retained earnings as of the beginning of the first reporting period in which the guidance is effective. Early adoption is permitted for reporting periods beginning in 2019. We are in the process of evaluating the impact of this standard on our consolidated financial statements.

In November 2016, the FASB issued a standards update aimed at promoting consistency in the classification and presentation of changes in restricted cash on the statement of cash flows. Previously, there was diversity in practice as to whether the change in restricted cash was included in the reconciliation of beginning-of-period and end-of-period total cash amounts shown on the statement of cash flows. The amendments require that a statement of cash flows explain the change during the period in the total of cash, cash equivalents, as well as amounts described as restricted cash on the balance sheet. This guidance is effective for fiscal years beginning after December 15, 2017 and interim periods within those fiscal years. Early adoption is permitted. The amendments must be applied using a retrospective transition method to each period presented. We are in the process of evaluating the impact of this update on our consolidated financial statements.

In March 2017, the FASB issued a standards update that will change certain presentation and disclosure requirements for employers that sponsor defined benefit pension as well as other postretirement benefit plans. Under current accounting rules, defined benefit pension cost and postretirement benefit cost (net benefit cost) comprise several components that reflect different aspects of an employer's financial arrangements as well as the cost of benefits provided to the employees. Those components are aggregated for reporting in the financial statements within compensation and benefits on the income statement. The amendments in the update require that the service cost component is reported in the same line as other compensation costs, whereas the other components of net benefit cost are required to be presented in the income statement separately from the service cost component. The amendments are effective for reporting periods beginning after December 15, 2017. Early adoption is permitted as of the beginning of an annual period for which financial statements have not been issued. We are in the process of evaluating the impact of this update on our consolidated financial statements.

In August 2017, the FASB issued a standards update that amends the existing hedge accounting model to enable entities to better portray their risk management activities in the financial statements. The amendments expand an entity's ability to hedge nonfinancial and financial risk components and reduce complexity in fair value hedges of interest rate risk. The guidance eliminates the requirement to separately measure and report hedge ineffectiveness and generally requires the entire change in the fair value of a hedging instrument to be presented in the same income statement line as the hedged item. The guidance also eases certain documentation and assessment requirements and modifies the accounting for components excluded from the assessment of hedge effectiveness. The guidance is effective for fiscal years beginning after December 15, 2018. Early adoption is permitted. We do not believe that the adoption of this standard will have a material impact on our consolidated financial statements.

### **ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK**

We are subject to various market risks, including those caused by changes in interest rates, credit, foreign currency exchange rates and equity prices. There have not been material changes in our exposure to market risk since December 31, 2016. Refer to Item 7A. of CME Group's Annual Report on Form 10-K for the year ended December 31, 2016 for additional information.

**ITEM 4. CONTROLS AND PROCEDURES**

(a) Disclosure Controls and Procedures. Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, has evaluated the effectiveness of our disclosure controls and procedures (as such term is defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the Exchange Act)) as of the end of the period covered by this report. Based on such evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that, as of the end of such period, our disclosure controls and procedures are effective.

(b) Changes in Internal Control Over Financial Reporting. As required by Rule 13a-15(d) under the Exchange Act, the company's management, including the company's Chief Executive Officer and Chief Financial Officer, have evaluated the company's internal control over financial reporting (as such term is defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) to determine whether any changes occurred during the quarter covered by this quarterly report that have materially affected, or are reasonably likely to materially affect, the company's internal control over financial reporting. During the quarter ended September 30, 2017, we completed the implementation of our new enterprise resource planning ("ERP") system. The company has evaluated the impact of the system on its internal control over financial reporting and where appropriate, made changes to these controls to address related system functionality and potential gaps. There were no other changes in the company's internal control over financial reporting which occurred during the fiscal quarter ended September 30, 2017, that have materially affected, or are reasonably likely to materially affect, the company's internal control over financial reporting.

**PART II. OTHER INFORMATION****ITEM 1. LEGAL PROCEEDINGS**

See "Legal and Regulatory Matters" in Note 7. Contingencies to the Consolidated Financial Statements for updates to CME Group's existing legal proceedings disclosure which is incorporated herein by reference. Note 7. Contingencies includes updates to the legal proceedings disclosed in the company's Annual Report on Form 10-K, filed with the SEC on February 27, 2017.

**ITEM 1A. RISK FACTORS**

There have been no material updates to the Risk Factors disclosure included in the company's Annual Report on Form 10-K, filed with the SEC on February 27, 2017. In addition to the other information contained in this Quarterly Report on Form 10-Q, you should carefully consider the factors discussed in our Annual Report on Form 10-K, which are the risks that we believe are material at this time. These risks could materially and adversely affect our business, financial condition and results of operations. These risks and uncertainties are not the only ones facing us. Additional risks and uncertainties not presently known to us or that we currently believe to be immaterial may also adversely affect our business in the future.

**ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS**

(c) Issuer Purchases of Equity Securities

Period	(a) Total Number of Class A Shares Purchased (1)	(b) Average Price Paid Per Share	(c) Total Number of Class A Shares Purchased as Part of Publicly Announced Plans or Programs	(d) Maximum Number (or Approximate Value) that May Yet Be Purchased Under the Plans or Programs (in millions)
July 1 to July 31	734	\$ 122.28	—	\$ —
August 1 to August 31	112	124.85	—	—
September 1 to September 30	142,460	131.29	—	—
Total	143,306	\$ 131.24	—	—

(1) Shares purchased consist of an aggregate of 143,306 shares of Class A common stock surrendered in the third quarter of 2017 to satisfy employees' tax obligations upon the vesting of restricted stock.

**ITEM 4. MINE SAFETY DISCLOSURES**

Not applicable.

**ITEM 6. EXHIBITS**

31.1	<a href="#">Section 302 Certification—Terrence A. Duffy</a>
31.2	<a href="#">Section 302 Certification—John W. Pietrowicz</a>
32.1	<a href="#">Section 906 Certification</a>
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
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.

**CME Group Inc.**  
(Registrant)

Dated: November 2, 2017

By:

*/s/ John W. Pietrowicz*

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**Chief Financial Officer & Senior Managing  
Director Finance**

## CERTIFICATION

I, Terrence A. Duffy, certify that:

1. I have reviewed this report on Form 10-Q of CME Group 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 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.

Dated: November 2, 2017

/s/ Terrence A. Duffy

Name: Terrence A. Duffy

Title: Chief Executive Officer



## CERTIFICATION

I, John W. Pietrowicz, certify that:

1. I have reviewed this report on Form 10-Q of CME Group 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 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.

Dated: November 2, 2017

/s/ John W. Pietrowicz

Name: John W. Pietrowicz

Title: Chief Financial Officer

**Certification of CEO and CFO 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 on Form 10-Q of CME Group Inc. (the "Company") for the quarter ended September 30, 2017 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), Terrence A. Duffy, as Chief Executive Officer of the Company, and John W. Pietrowicz, as Chief Financial Officer of the Company, each hereby certifies, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that, to the best of his 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.

/s/ Terrence A. Duffy

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Name: Terrence A. Duffy

Title: Chief Executive Officer

Dated: November 2, 2017

/s/ John W. Pietrowicz

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Name: John W. Pietrowicz

Title: Chief Financial Officer

Dated: November 2, 2017

This certification accompanies the Report pursuant to § 906 of the Sarbanes-Oxley Act of 2002 and shall not, except to the extent required by the Sarbanes-Oxley Act of 2002, be deemed filed by the Company for purposes of §18 of the Securities Exchange Act of 1934, as amended.

A signed original of this written statement required by § 906 of the Sarbanes-Oxley Act of 2002 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.