

**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 March 31, 2018

- 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)

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

(Address of principal executive offices)

**36-4459170**

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

**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 April 11, 2018 was as follows: 340,509,620 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**  
**INDEX**

	<b>Page</b>
<b><u>PART I. FINANCIAL INFORMATION</u></b>	<b>3</b>
<b>Item 1. <u>Financial Statements</u></b>	<b>5</b>
<u>Consolidated Balance Sheets at March 31, 2018 and December 31, 2017</u>	5
<u>Consolidated Statements of Income for the Quarters Ended March 31, 2018 and 2017</u>	6
<u>Consolidated Statements of Comprehensive Income for the Quarters Ended March 31, 2018 and 2017</u>	7
<u>Consolidated Statements of Equity for the Quarters Ended March 31, 2018 and 2017</u>	8
<u>Consolidated Statements of Cash Flows for the Quarters Ended March 31, 2018 and 2017</u>	10
<u>Notes to Unaudited Consolidated Financial Statements</u>	11
<b>Item 2. <u>Management’s Discussion and Analysis of Financial Condition and Results of Operations</u></b>	<b>21</b>
<b>Item 3. <u>Quantitative and Qualitative Disclosures About Market Risk</u></b>	<b>28</b>
<b>Item 4. <u>Controls and Procedures</u></b>	<b>28</b>
<b><u>PART II. OTHER INFORMATION</u></b>	<b>29</b>
<b>Item 1. <u>Legal Proceedings</u></b>	<b>29</b>
<b>Item 1A. <u>Risk Factors</u></b>	<b>29</b>
<b>Item 2. <u>Unregistered Sales of Equity Securities and Use of Proceeds</u></b>	<b>29</b>
<b>Item 4. <u>Mine Safety Disclosures</u></b>	<b>29</b>
<b>Item 6. <u>Exhibits</u></b>	<b>30</b>
<b><u>SIGNATURES</u></b>	<b>31</b>

## **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 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 (CDS) contracts. CME exited the CDS clearing business in March 2018.

### **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;
- failure to maintain our brand's reputation;
- the unfavorable resolution of material legal proceedings; and
- the uncertainties of the ultimate impact of the Tax Cuts and Jobs Acts (2017 Tax Act).

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 28, 2018 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)

	March 31, 2018	December 31, 2017
	(unaudited)	
<b>Assets</b>		
<b>Current Assets:</b>		
Cash and cash equivalents	\$ 784.6	\$ 1,903.6
Marketable securities	90.4	90.1
Accounts receivable, net of allowance of \$2.7 and \$2.2	444.1	359.7
Other current assets (includes \$492.3 and \$0 in restricted cash)	646.8	367.8
Performance bonds and guaranty fund contributions	39,088.9	44,185.3
<b>Total current assets</b>	<b>41,054.8</b>	<b>46,906.5</b>
Property, net of accumulated depreciation and amortization of \$704.8 and \$676.6	387.2	399.7
Intangible assets—trading products	17,175.3	17,175.3
Intangible assets—other, net	2,322.6	2,346.3
Goodwill	7,569.0	7,569.0
Other assets (includes \$1.4 and \$2.4 in restricted cash)	1,410.4	1,394.4
<b>Total Assets</b>	<b>\$ 69,919.3</b>	<b>\$ 75,791.2</b>
<b>Liabilities and Equity</b>		
<b>Current Liabilities:</b>		
Accounts payable	\$ 25.0	\$ 31.3
Other current liabilities	331.4	1,456.3
Performance bonds and guaranty fund contributions	39,088.9	44,185.3
<b>Total current liabilities</b>	<b>39,445.3</b>	<b>45,672.9</b>
Long-term debt	2,233.5	2,233.1
Deferred income tax liabilities, net	4,846.6	4,857.7
Other liabilities	621.1	615.7
<b>Total Liabilities</b>	<b>47,146.5</b>	<b>53,379.4</b>
<b>Shareholders' Equity:</b>		
Preferred stock, \$0.01 par value, 10,000 shares authorized at March 31, 2018 and December 31, 2017; none issued	—	—
Class A common stock, \$0.01 par value, 1,000,000 shares authorized at March 31, 2018 and December 31, 2017; 339,435 and 339,235 shares issued and outstanding as of March 31, 2018 and December 31, 2017, respectively	3.4	3.4
Class B common stock, \$0.01 par value, 3 shares authorized, issued and outstanding as of March 31, 2018 and December 31, 2017	—	—
Additional paid-in capital	17,904.1	17,896.9
Retained earnings	4,845.4	4,497.2
Accumulated other comprehensive income (loss)	19.9	14.3
<b>Total shareholders' equity</b>	<b>22,772.8</b>	<b>22,411.8</b>
<b>Total Liabilities and Equity</b>	<b>\$ 69,919.3</b>	<b>\$ 75,791.2</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	
	March 31,	
	2018	2017
<b>Revenues</b>		
Clearing and transaction fees	\$ 973.6	\$ 792.0
Market data and information services	94.9	96.8
Access and communication fees	26.0	24.3
Other	14.5	16.2
<b>Total Revenues</b>	<b>1,109.0</b>	<b>929.3</b>
<b>Expenses</b>		
Compensation and benefits	152.7	142.6
Communications	5.9	6.3
Technology support services	19.6	18.7
Professional fees and outside services	42.6	28.6
Amortization of purchased intangibles	23.7	24.0
Depreciation and amortization	28.1	29.4
Occupancy and building operations	20.0	20.1
Licensing and other fee agreements	49.5	33.8
Other	26.0	24.9
<b>Total Expenses</b>	<b>368.1</b>	<b>328.4</b>
<b>Operating Income</b>	<b>740.9</b>	<b>600.9</b>
<b>Non-Operating Income (Expense)</b>		
Investment income	156.4	138.9
Interest and other borrowing costs	(30.1)	(29.8)
Equity in net earnings of unconsolidated subsidiaries	40.1	30.8
Other non-operating income (expense)	(118.6)	(33.8)
<b>Total Non-Operating Income (Expense)</b>	<b>47.8</b>	<b>106.1</b>
<b>Income before Income Taxes</b>	<b>788.7</b>	<b>707.0</b>
Income tax provision	189.9	307.2
<b>Net Income</b>	<b>\$ 598.8</b>	<b>\$ 399.8</b>
<b>Earnings per Common Share:</b>		
Basic	\$ 1.76	\$ 1.18
Diluted	1.76	1.18
<b>Weighted Average Number of Common Shares:</b>		
Basic	339,305	338,339
Diluted	340,747	339,946

See accompanying notes to unaudited consolidated financial statements.

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

(in millions)  
(unaudited)

	Quarter Ended	
	March 31,	
	2018	2017
<b>Net income</b>	\$ 598.8	\$ 399.8
Other comprehensive income (loss), net of tax:		
Investment securities:		
Net unrealized holding gains (losses) arising during the period	(0.9)	29.4
Reclassification of net (gains) losses on sales included in investment income	—	(87.1)
Income tax benefit (expense)	0.2	76.6
Investment securities, net	(0.7)	18.9
Defined benefit plans:		
Net change in defined benefit plans arising during the period	1.7	0.4
Amortization of net actuarial (gains) losses included in compensation and benefits expense	0.7	0.7
Income tax benefit (expense)	(0.6)	(0.4)
Defined benefit plans, net	1.8	0.7
Derivative investments:		
Amortization of effective portion of net (gains) losses on cash flow hedges included in interest expense	(0.3)	(0.3)
Income tax benefit (expense)	0.1	0.1
Derivative investments, net	(0.2)	(0.2)
Foreign currency translation:		
Foreign currency translation adjustments	0.9	8.4
Income tax benefit (expense)	—	(2.9)
Foreign currency translation, net	0.9	5.5
Other comprehensive income (loss), net of tax	1.8	24.9
<b>Comprehensive Income</b>	<b>\$ 600.6</b>	<b>\$ 424.7</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, 2017	339,235	3	\$ 17,900.3	\$ 4,497.2	\$ 14.3	\$ 22,411.8
Net income				598.8		598.8
Other comprehensive income (loss)					1.8	1.8
Dividends on common stock of \$0.70 per share				(238.1)		(238.1)
Impact of adoption of standards update on tax effects related to accumulated other comprehensive income and revenue recognition, net of tax				(12.5)	3.8	(8.7)
Exercise of stock options	59		4.2			4.2
Vesting of issued restricted Class A common stock	141		(14.7)			(14.7)
Stock-based compensation			17.7			17.7
<b>Balance at March 31, 2018</b>	<b>339,435</b>	<b>3</b>	<b>\$ 17,907.5</b>	<b>\$ 4,845.4</b>	<b>\$ 19.9</b>	<b>\$ 22,772.8</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, 2016	338,240	3	\$ 17,830.3	\$ 2,524.5	\$ (14.1)	\$ 20,340.7
Net income				399.8		399.8
Other comprehensive income (loss)					24.9	24.9
Dividends on common stock of \$0.66 per share				(224.2)		(224.2)
Impact of adoption of standards update on employee share-based payments			1.4	(2.2)		(0.8)
Exercise of stock options	113		10.5			10.5
Vesting of issued restricted Class A common stock	153		(11.6)			(11.6)
Stock-based compensation			14.9			14.9
<b>Balance at March 31, 2017</b>	<u>338,506</u>	<u>3</u>	<u>\$ 17,845.5</u>	<u>\$ 2,697.9</u>	<u>\$ 10.8</u>	<u>\$ 20,554.2</u>

See accompanying notes to unaudited consolidated financial statements.

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

(in millions)  
(unaudited)

	Quarter Ended March 31,	
	2018	2017
<b>Cash Flows from Operating Activities</b>		
Net income	\$ 598.8	\$ 399.8
Adjustments to reconcile net income to net cash provided by operating activities:		
Stock-based compensation	17.7	14.9
Amortization of purchased intangibles	23.7	24.0
Depreciation and amortization	28.1	29.4
Gain on sale of BM&FBOVESPA shares	—	(86.5)
Income tax expense reclassified from accumulated other comprehensive income upon final sale of BM&FBOVESPA shares	—	87.8
Undistributed earnings, net of losses, of unconsolidated subsidiaries	10.9	(4.3)
Deferred income taxes	(11.7)	2.2
Change in:		
Accounts receivable	(85.0)	(61.5)
Other current assets	(12.9)	(9.3)
Other assets	(3.8)	7.7
Accounts payable	(6.4)	12.2
Income taxes payable	264.8	168.1
Other current liabilities	0.3	(67.8)
Other liabilities	(0.3)	2.6
Other	0.8	0.1
<b>Net Cash Provided by Operating Activities</b>	<b>825.0</b>	<b>519.4</b>
<b>Cash Flows from Investing Activities</b>		
Proceeds from maturities of available-for-sale marketable securities	1.6	0.5
Purchases of available-for-sale marketable securities	(0.8)	—
Purchases of property, net	(18.2)	(20.0)
Investments in business ventures	—	(0.3)
Proceeds from sale of BM&FBOVESPA shares	—	244.0
<b>Net Cash Provided by (Used in) Investing Activities</b>	<b>(17.4)</b>	<b>224.2</b>
<b>Cash Flows from Financing Activities</b>		
Cash dividends	(1,424.8)	(1,322.6)
Proceeds from exercise of stock options	4.2	10.5
Employee taxes paid on restricted stock vesting	(14.7)	(11.6)
<b>Net Cash Used in Financing Activities</b>	<b>(1,435.3)</b>	<b>(1,323.7)</b>
Net change in cash, cash equivalents and restricted cash	(627.7)	(580.1)
Cash, cash equivalents and restricted cash, beginning of period	1,906.0	1,960.3
<b>Cash, Cash Equivalents and Restricted Cash, End of Period</b>	<b>\$ 1,278.3</b>	<b>\$ 1,380.2</b>
<b>Reconciliation of cash, cash equivalents and restricted cash:</b>		
Cash and cash equivalents	784.6	1,287.8
Short-term restricted cash	492.3	30.0
Long-term restricted cash	1.4	62.4
<b>Total</b>	<b>\$ 1,278.3</b>	<b>\$ 1,380.2</b>
<b>Supplemental Disclosure of Cash Flow Information</b>		
Income taxes paid	\$ 8.8	\$ 10.1
Interest paid	42.4	42.4

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), and Commodity Exchange, Inc. (COMEX). CME, CBOT, NYMEX, COMEX and their subsidiaries are referred to collectively as “the exchange” in the notes to the consolidated financial statements. The clearing house is a division of CME.

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 March 31, 2018 and December 31, 2017 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, 2017, filed with the Securities and Exchange Commission (SEC) on February 28, 2018.

### 2. Accounting Policies

**Newly Adopted Accounting Policies.** In May 2014, the Financial Accounting Standards Board (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 company implemented this standard as of January 1, 2018 using the modified retrospective approach with the cumulative effect of initially applying the guidance recognized at the date of initial adoption. Management recognized an \$8.7 million reduction to the opening balance of retained earnings as of January 1, 2018, which it believes to be an immaterial impact to the consolidated financial statements. The adjustment to the opening balance of retained earnings primarily relates to a deferral of a portion of clearing and transaction fees revenue earned and recognized subsequent to the contract trade execution date. The on-going application of the new standard is not expected to have a material impact on the company’s financial statements.

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. For equity investments in privately held entities that do not have a readily determinable fair value, our accounting policy is to utilize the measurement alternative for valuation of these investments, which permits the company to estimate fair value at cost minus impairment, plus or minus changes resulting from observable price changes. Adoption of this guidance on January 1, 2018 did not result in an adjustment to the financial statements as our investment portfolio consists primarily of debt securities, to which this accounting standards update does not apply.

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 was adopted on January 1, 2018 using the retrospective approach. The statements of cash flows shows a change in our cash balances in the amount of \$627.7 million and \$580.1 million for the quarters ended March 31, 2018 and 2017, respectively.

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 consolidated statement of income. 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 on the consolidated statement of income separately from the service cost component. This update was adopted as of January 1, 2018 with

retrospective application to the earliest period presented. For the quarters ended March 31, 2018 and 2017, the company recognized total net pension expense of \$2.5 million and \$4.3 million, respectively. Total net pension expense includes service cost of \$4.7 million and \$4.6 million, which is recorded in compensation and benefits on the consolidated statements of income for the quarters ended March 31, 2018 and 2017, respectively. The other components of total net pension expense were recognized as income within other non-operating income (expense) in the amount of \$2.2 million and \$0.3 million for the quarters ended March 31, 2018 and 2017, respectively. Total net pension expense remains unchanged upon adoption of the standards update.

In February 2018, the FASB issued guidance that gives entities the option to reclassify to retained earnings the tax effects related to items in accumulated other comprehensive income (AOCI) that were previously stranded within AOCI as a result of applying the Tax Cuts and Jobs Act (2017 Tax Act). An entity that elects to reclassify these amounts must reclassify stranded tax effects related to the change in federal tax rate for all items accounted for within AOCI. Entities can also elect to reclassify other stranded tax effects that relate to the 2017 Tax Act but do not directly relate to the change in federal rate. Tax effects that are stranded in AOCI for other reasons may not be reclassified. These amendments should be applied either in the period of adoption as a cumulative adjustment to the opening balance of retained earnings or retrospectively to each period in which the effect of the 2017 Tax Act is recognized. This guidance is effective for entities with fiscal years beginning after December 15, 2018. The company early adopted this guidance as of January 1, 2018, resulting in an adjustment in the amount of \$3.8 million to reduce beginning retained earnings and increase AOCI. Tax effects from previously stranded items are released from AOCI when the entire portfolio of similar items is liquidated.

**Recently Issued Accounting Pronouncements.** 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. Adoption of the guidance in 2019 will result in the gross-up of our balance sheet to reflect the present value of the lease payments over the lease term and offsetting lease liability at the lease commencement date. Presentation of lease expense and the pattern of expense recognition on the consolidated statement of income is expected to remain materially consistent with existing lease accounting guidance.

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 does not believe that the adoption of this guidance in 2020 will have a material impact 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. The company does not believe that the adoption of this standard will have a material impact on the consolidated financial statements.

### 3. Revenue Recognition

**Revenue from Contracts with Customers.** The majority of our revenue is driven by clearing and transaction fees. We account for revenue in accordance with "Revenue from Contracts with Customers," which we adopted on January 1, 2018, using the modified retrospective approach. The new standard introduces a framework for recognizing revenue that focuses on the transfer of control rather than risks and rewards. We have recognized a one-time adjustment of \$8.7 million within the opening balance of retained earnings as of January 1, 2018 as a result of adopting this standard. This deferral of revenue is primarily related to the outstanding performance obligations for clearing and transaction fees for our longer-term cleared swap products.

*Clearing and transaction fees.* Clearing and transaction fees include electronic trading fees, surcharges for privately negotiated transactions, and other volume-related charges for exchange-traded and cleared swaps contracts. Clearing and transaction fees are assessed upfront at the time of trade execution. As such, we recognize the majority of the fee revenue upon successful execution of the trade. The minimal remaining portion of the fee revenue related to clearing activities performed after the trade execution is recognized over the short-term period that the contract is outstanding, based on management's estimates of the average contract lifecycle. These estimates are based on various assumptions to approximate the amount of fee revenue to be attributed to services performed through contract settlement, expiration, or termination. These assumptions include the average number of days that a contract remains in open interest, contract turnover, average revenue per day, and revenue remaining in open interest at the end of each period.

The nature of our contracts gives rise to several types of variable consideration, including incentive tiers, incentives associated with market maker programs and other fee discounts. We include fee discounts and incentives in the estimated transaction price when there is a basis to reasonably estimate the amount of the fee. These estimates are based on historical experience, anticipated performance, and our best judgment at the time. Because of our certainty in estimating these amounts, they are included in the transaction price of our contracts.

*Market data and information services.* Market data and information services fees represents revenue from the dissemination of our market data to subscribers, distributors, and other third-party licensees of our market data. Pricing for market data is primarily based on the number of reportable devices used as well as the number of subscribers enrolled under the arrangement. Fees for these services are generally billed monthly. Market data services are satisfied over time and revenue is recognized on a monthly basis as the customers receive and consume the benefit of the market data services. However, we also maintain certain annual license arrangements with one-time upfront fees. The fees for annual licenses are initially recorded as a contract liability and recognized as revenue monthly over the term of the annual period.

*Access and communication fees.* Access and communication fees are charges to members and clearing firms that utilize our various telecommunications networks and communications services. Fees for these services are generally billed monthly. These services are satisfied over time and revenue is recognized on a monthly basis as the customers receive and consume the benefit of the services.

*Other.* Other revenues include fees for collateral management, fees for trade order routing through agreements from various strategic relationships, as well as other services to members and clearing firms. Collateral management fees are charged to clearing firms that have collateral on deposit with CME to meet their minimum performance bond and guaranty fund obligations. These fees are calculated based on daily collateral balances and billed monthly. This fee revenue is recognized as billed as the customers receive and consume the benefits of the services. Pricing for strategic relationships may be driven by customer levels and activity. There are fee arrangements which provide for monthly as well as quarterly payments in arrears. Revenue is recognized monthly for strategic relationships arrangements as the customers receive and consume the benefits of the services.

The following table represents a disaggregation of revenue from contracts with customers for the quarters ended March 31, 2018 and 2017:

<i>(in millions)</i>	Quarter Ended March 31,	
	2018	2017
Interest rate	\$ 338.4	\$ 279.6
Equity	195.0	123.1
Foreign exchange	51.1	45.6
Agricultural commodity	121.1	104.4
Energy	191.5	174.6
Metal	59.4	47.4
Interest rate swap and credit default swap	17.1	17.3
Total clearing and transaction fees	973.6	792.0
Market data and information services	94.9	96.8
Access and communication fees	26.0	24.3
Other	14.5	16.2
<b>Total revenues</b>	<b>\$ 1,109.0</b>	<b>\$ 929.3</b>
<b>Timing of Revenue Recognition</b>		
Services transferred at a point in time	957.7	777.1
Services transferred over time	148.8	148.6
One-time charges and miscellaneous revenues	2.5	3.6
<b>Total revenues</b>	<b>\$ 1,109.0</b>	<b>\$ 929.3</b>

The timing of revenue recognition, billings and cash collections results in billed accounts receivable, and customer advances and deposits (contract liabilities) on the consolidated balance sheets. Certain fees for transactions, annual licenses, and other revenue arrangements are billed upfront before revenue is recognized, which results in the recognition of contract liabilities. These liabilities are reported on the consolidated balance sheets on a contract-by-contract basis at the end of each reporting period. For our annual licenses and upfront fee arrangements, we generally bill customers upon contract execution. These payments are recognized as revenue over time as the obligations under the contracts are satisfied. Changes in the contract liability balances during the quarter ended March 31, 2018, were not materially impacted by any other factors. The balance of contract liabilities is \$29.7 million and \$3.9 million as of March 31, 2018 and December 31, 2017 respectively.

As part of our adoption of the new revenue guidance in the first quarter of 2018, we have elected to use the package of practical expedients available under the standard. This guidance has been applied only to contracts that are not completed at the date of initial application on January 1, 2018. We have not restated completed contracts that begin and end in the same annual reporting period. In addition, we have excluded disclosures of transaction prices allocated to remaining performance obligations and when we expect to recognize such revenue for reporting periods presented before the date of initial application. As our material contracts have an original expected duration of one year or less, we utilized the practical expedient which does not require disclosure of the aggregate amount of the transaction price, including variable consideration, which is allocated to performance obligations that are unsatisfied as of the end of the reporting period.

#### 4. 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 March 31, 2018, CME maintained \$29.7 billion within the cash account at the Federal Reserve Bank of Chicago.

At March 31, 2018, performance bonds and guaranty fund contribution assets on the consolidated balance sheets also included U.S. Treasury securities with maturity dates of 90 days or less. U.S. Treasury securities are purchased by CME, at its discretion, using cash collateral. The benefits, including interest earned, and risks of ownership accrue to CME. Interest earned is included in investment income on the consolidated statements of income. At March 31, 2018, the amortized cost and fair value of the U.S. Treasury securities were \$547.8 million and \$547.9 million, respectively.

**Clearing House Contract Settlement.** The clearing house marks-to-market open positions for all futures and options contracts twice a day (once a day for CME's cleared-only credit default swap (CDS) and interest rate swap contracts). Based on values derived from the mark-to-market process, the clearing house requires 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 CDS and interest rate swap contracts, the maximum exposure related to CME's guarantee would be one full day of changes in fair value of all open positions, before considering CME's ability to access defaulting clearing firms' collateral. CME exited the CDS clearing business in March 2018.

During the first quarter of 2018, the clearing house transferred an average of approximately \$3.8 billion a day through its clearing systems for settlement from clearing firms whose positions had lost value to clearing firms whose positions had gained value. The clearing house reduces its 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 March 31, 2018.

## 5. Intangible Assets

Intangible assets consisted of the following at March 31, 2018 and December 31, 2017:

<i>(in millions)</i>	March 31, 2018			December 31, 2017		
	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	\$ (967.4)	\$ 1,871.4	\$ 2,838.8	\$ (943.7)	\$ 1,895.1
Technology-related intellectual property	29.4	(29.4)	—	29.4	(29.4)	—
Other	2.4	(1.2)	1.2	2.4	(1.2)	1.2
<b>Total amortizable intangible assets</b>	<b>\$ 2,870.6</b>	<b>\$ (998.0)</b>	<b>1,872.6</b>	<b>\$ 2,870.6</b>	<b>\$ (974.3)</b>	<b>1,896.3</b>
<b>Indefinite-Lived Intangible Assets:</b>						
Trade names			450.0			450.0
<b>Total intangible assets – other, net</b>			<b>\$ 2,322.6</b>			<b>\$ 2,346.3</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 \$23.7 million and \$24.0 million for the quarters ended March 31, 2018 and 2017, respectively. As of March 31, 2018, the future estimated amortization expense related to amortizable intangible assets is expected to be as follows:

<i>(in millions)</i>	Amortization Expense
Remainder of 2018	\$ 71.0
2019	94.7
2020	94.7
2021	94.7
2022	94.7
2023	94.7
Thereafter	1,328.1

## 6. Debt

Long-term debt consisted of the following at March 31, 2018 and December 31, 2017:

<i>(in millions)</i>	March 31, 2018	December 31, 2017
\$750.0 million fixed rate notes due September 2022, stated rate of 3.00% <sup>(1)</sup>	\$ 746.2	\$ 746.0
\$750.0 million fixed rate notes due March 2025, stated rate of 3.00% <sup>(2)</sup>	745.1	744.9
\$750.0 million fixed rate notes due September 2043, stated rate of 5.30% <sup>(3)</sup>	742.2	742.2
Total long-term debt	<u>\$ 2,233.5</u>	<u>\$ 2,233.1</u>

- (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 March 31, 2018:

<i>(in millions)</i>	Par Value
2019	\$ —
2020	—
2021	—
2022	750.0
2023	—
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. On April 27, 2018, the Court informed the parties that it has reached a preliminary decision to grant CBOT's and CME's motion for summary judgment on the antitrust claims. The Court is expected to issue a written decision finalizing that decision and dismissing the entire case. In the meantime, the previously set trial date has been vacated.

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 March 31, 2018 and December 31, 2017.



*Intellectual Property Indemnifications.* Certain agreements with customers and other third parties related to accessing the CME 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 can maintain collateral in the form of U.S. Treasury securities or irrevocable, standby letters of credit. At March 31, 2018, 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 March 31, 2018.

*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 March 31, 2018.

## 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, 2017	\$ 0.6	\$ (36.1)	\$ 58.0	\$ (8.2)	\$ 14.3
Other comprehensive income (loss) before reclassifications and income tax benefit (expense)	(0.9)	1.7	—	0.9	1.7
Amounts reclassified from accumulated other comprehensive income (loss)	—	0.7	(0.3)	—	0.4
Income tax benefit (expense)	0.2	(0.6)	0.1	—	(0.3)
Net current period other comprehensive income (loss)	(0.7)	1.8	(0.2)	0.9	1.8
Impact of adoption of standards update on tax effects related to accumulated other comprehensive income	0.1	(8.2)	11.9	—	3.8
Balance at March 31, 2018	\$ —	\$ (42.5)	\$ 69.7	\$ (7.3)	\$ 19.9

<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)	29.4	0.4	—	8.4	38.2
Amounts reclassified from accumulated other comprehensive income (loss)	(87.1)	0.7	(0.3)	—	(86.7)
Income tax benefit (expense)	76.6	(0.4)	0.1	(2.9)	73.4
Net current period other comprehensive income (loss)	18.9	0.7	(0.2)	5.5	24.9
Balance at March 31, 2017	\$ (0.6)	\$ (37.1)	\$ 58.7	\$ (10.2)	\$ 10.8

## 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. Level 2 assets also include a foreign exchange option contract. The company is using the foreign exchange option to mitigate certain exposure to foreign exchange rate fluctuation on anticipated currency required to facilitate the previously announced acquisition of NEX Group plc. The foreign exchange option was measured at fair value based on similar assets with similar inputs.

Financial assets recorded in the consolidated balance sheet as of March 31, 2018 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 March 31, 2018. The following tables present financial instruments measured at fair value on a recurring basis:

<i>(in millions)</i>	March 31, 2018			
	Level 1	Level 2	Level 3	Total
<b>Assets at Fair Value:</b>				
Marketable securities:				
Corporate debt securities	\$ 19.2	\$ —	\$ —	\$ 19.2
Mutual funds	70.8	—	—	70.8
Equity securities	0.1	—	—	0.1
Asset-backed securities	—	0.3	—	0.3
<b>Total Marketable Securities</b>	<b>90.1</b>	<b>0.3</b>	<b>—</b>	<b>90.4</b>
Performance bonds and guaranty fund contributions <sup>(1)</sup> :				
U.S. Treasury securities	547.9	—	—	547.9
Foreign exchange option contract	—	30.0	—	30.0
<b>Total Assets at Fair Value</b>	<b>\$ 638.0</b>	<b>\$ 30.3</b>	<b>\$ —</b>	<b>\$ 668.3</b>

(1) Performance bonds and guaranty fund contributions on the consolidated balance sheet at March 31, 2018 include cash collateral that has been invested in U.S. Treasury securities.

There were no transfers of assets or liabilities between level 1, level 2 and level 3 during the first quarter of 2018. There were no level 3 assets or liabilities valued at fair value on a recurring or non-recurring basis during the first quarter of 2018.

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 March 31, 2018, 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%	\$ 743.2
\$750.0 million fixed rate notes due March 2025, stated rate of 3.00%	729.6
\$750.0 million fixed rates notes due September 2043, stated rate of 5.30%	911.1

## 11. Earnings Per Share

Basic earnings per share is computed by dividing net income 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 March 31,	
	2018	2017
Stock options	—	—
Restricted stock and performance shares	49	80
<b>Total</b>	<b>49</b>	<b>80</b>

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

	Quarter Ended March 31,	
	2018	2017
Net Income (in millions)	\$ 598.8	\$ 399.8
Weighted Average Number of Common Shares (in thousands):		
Basic	339,305	338,339
Effect of stock options, restricted stock and performance shares	1,442	1,607
Diluted	<u>340,747</u>	<u>339,946</u>
Earnings per Common Share:		
Basic	\$ 1.76	\$ 1.18
Diluted	1.76	1.18

## 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.

**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, 2017.

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), collectively, unless otherwise noted.

**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 March 31,		Change
	2018	2017	
Total revenues	\$ 1,109.0	\$ 929.3	19 %
Total expenses	368.1	328.4	12
Operating margin	66.8%	64.7%	
Non-operating income (expense)	\$ 47.8	\$ 106.1	(55)
Effective tax rate	24.1%	43.5%	
Net income	\$ 598.8	\$ 399.8	50
Diluted earnings per common share	1.76	1.18	49
Cash flows from operating activities	825.0	519.4	59

**Revenues**

<i>(dollars in millions)</i>	Quarter Ended March 31,		Change
	2018	2017	
Clearing and transaction fees	\$ 973.6	\$ 792.0	23 %
Market data and information services	94.9	96.8	(2)
Access and communication fees	26.0	24.3	7
Other	14.5	16.2	(11)
Total Revenues	\$ 1,109.0	\$ 929.3	19

## 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 house 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 March 31,		Change
	2018	2017	
Total contract volume (in millions)	1,354.4	1,060.1	28 %
Clearing and transaction fees (in millions)	\$ 956.4	\$ 774.7	23
Average rate per contract	\$ 0.706	\$ 0.731	(3)

We estimate the following net increase in clearing and transaction fees based on a change in total contract volumes and a change in average rate per contract for futures and options during the first quarter of 2018 when compared with the same period in 2017.

(in millions)	Quarter Ended
Increase due to a change in total contract volume	\$ 215.1
Decrease due to a change in average rate per contract	(33.4)
Net increase in clearing and transaction fees	\$ 181.7

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.

(amounts in thousands)	Quarter Ended March 31,		Change
	2018	2017	
<b>Average Daily Volume by Product Line:</b>			
Interest rate	11,948	9,169	30%
Equity	4,096	2,766	48
Foreign exchange	1,100	894	23
Agricultural commodity	1,593	1,261	26
Energy	2,754	2,496	10
Metal	713	512	39
Aggregate average daily volume	22,204	17,098	30
<b>Average Daily Volume by Venue:</b>			
Electronic	19,797	14,947	32
Open outcry	1,556	1,362	14
Privately negotiated	851	789	8
Aggregate average daily volume	22,204	17,098	30
Electronic Volume as a Percentage of Total Volume	89%	87%	

Overall market volatility remained high throughout the first quarter of 2018, resulting in record quarterly average daily volume. The markets continued to experience uncertainty surrounding the Federal Reserve's interest rate policy. In March 2018, the Federal Open Markets Committee (FOMC) raised the federal funds rate, which contributed to additional interest rate volatility for the quarter. In addition, there was market uncertainty regarding the United States' foreign trade policies, with the threat of new tariffs on certain imports and exports, as well as the potential for increased United States' government spending and future inflation. We believe this generated additional market volatility, which resulted in higher volumes across all of the asset classes.

#### 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 March 31,		Change
	2018	2017	
<b>Eurodollar futures and options:</b>			
Front 8 futures	2,802	2,134	31%
Back 32 futures	1,171	938	25
Options	1,988	1,611	23
<b>U.S. Treasury futures and options:</b>			
10-Year	2,537	1,980	28
5-Year	1,370	1,095	25
2-Year	632	384	65
Treasury bond	503	371	36
Federal Funds futures and options	283	252	12

In the first quarter of 2018 when compared with the same period in 2017, overall interest rate contract volume increased largely due to volatility caused by continued uncertainty surrounding future interest rate hikes by the Federal Reserve, including volatility caused by the federal funds rate increase by the FOMC in March 2018. In addition, we believe the increase in contract volume in the first quarter of 2018 when compared with the same period in 2017 was also due to the uncertainty surrounding the United States' foreign trade policies, future rates of inflation and the potential for increased government spending.

#### Equity Products

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

<i>(amounts in thousands)</i>	Quarter Ended March 31,		Change
	2018	2017	
E-mini S&P 500 futures and options	2,957	2,250	31%
E-mini NASDAQ 100 futures and options	495	214	131

Overall equity contract volume increased in the first quarter of 2018 when compared with the same period in 2017 due to overall high market volatility, as measured by the CBOE Volatility Index and CBOE Nasdaq-100 Volatility Index. We believe the comparatively higher volatility within the equity markets resulted from uncertainty surrounding the Federal Reserve's interest rate policy for the upcoming year and uncertainty surrounding the United States' foreign trade policy.

#### Foreign Exchange Products

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

<i>(amounts in thousands)</i>	Quarter Ended March 31,		Change
	2018	2017	
Euro	330	233	41%
Japanese yen	187	179	4
British pound	156	126	24
Australian dollar	133	93	42
Canadian dollar	98	72	36

In the first quarter of 2018 when compared with the same period in 2017, overall foreign exchange contract volume increased. Euro contract volume was higher due to volatility caused by the uncertainty surrounding future interest rate increases by the European Central Bank and the Federal Reserve. We believe the increase in Australian dollar contract volume was driven by volatile commodity markets and uncertainty surrounding the United States' foreign trade policies. In addition, we believe the increase in British pound contract volume resulted from the uncertainty surrounding the United Kingdom European Union membership referendum as well as a potential for future interest rate hikes in 2018.

#### *Agricultural Commodity Products*

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

<i>(amounts in thousands)</i>	Quarter Ended March 31,		Change
	2018	2017	
Corn	515	409	26%
Soybean	341	268	27
Wheat	274	203	35

Overall agricultural commodity contract volume increased in the first quarter of 2018 when compared with the same period in 2017 due to higher price volatility, which we believe was caused by greater uncertainty surrounding crop production due to dry weather conditions over the winter months. We believe the overall increase in commodity contract volume was also attributable to volatility caused by concern surrounding the United States' foreign trade policies.

#### *Energy Products*

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

<i>(amounts in thousands)</i>	Quarter Ended March 31,		Change
	2018	2017	
WTI crude oil	1,542	1,328	16%
Natural gas	665	601	11
Refined products	419	389	8

In the first quarter of 2018 when compared with the same period in 2017, overall energy contract volume increased largely due to higher volatility within the crude oil markets. We believe the increased volatility in 2018 was caused by strong growth in United States crude oil production in early 2018. Natural gas contract volume also increased in the first quarter of 2018 due to higher price volatility caused by colder than expected winter months across much of the United States.

#### *Metal Products*

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

<i>(amounts in thousands)</i>	Quarter Ended March 31,		Change
	2018	2017	
Gold	437	309	41%
Copper	137	95	44
Silver	109	81	34

We believe the increase in metal contract volume in the first quarter of 2018 when compared with the same period in 2017 was due to an increase in investors using gold and other precious metals as safe-haven alternative investments to other volatile markets.

#### Average Rate per Contract

The average rate per contract decreased in the first quarter of 2018 when compared with the same period in 2017 largely due to an increase in trades executed by members, as a percentage of total trading volume, as well as a shift in relative mix of product volume. Equity contract volume, when measured as a percentage of total volume, increased by 2 percentage points in the first quarter of 2018, while energy contract volume decreased by 2 percentage points. In general, equity contracts have a lower rate per contract compared with energy contracts. In addition, average rate per contract decreased due to higher volume-based incentives and discounts on our contracts.



### 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 11% of our clearing and transaction fees in the first quarter of 2018. 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 first quarter of 2018 when compared with the same period in 2017, market data and information services revenue decreased, which was attributable to a modest decline in screen counts due to cost-cutting initiatives at member firms.

The two largest resellers of our market data represented approximately 43% of our market data and information services revenue in the first quarter of 2018. 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 March 31,		Change
	2018	2017	
Compensation and benefits	\$ 152.7	\$ 142.6	7 %
Communications	5.9	6.3	(7)
Technology support services	19.6	18.7	5
Professional fees and outside services	42.6	28.6	49
Amortization of purchased intangibles	23.7	24.0	(1)
Depreciation and amortization	28.1	29.4	(4)
Occupancy and building operations	20.0	20.1	—
Licensing and other fee agreements	49.5	33.8	47
Other	26.0	24.9	4
Total Expenses	<u>\$ 368.1</u>	<u>\$ 328.4</u>	12

Operating expenses increased by \$39.7 million in the first quarter of 2018 when compared with the same period in 2017. The following table shows the estimated impacts of key factors resulting in the changes in operating expenses:

<i>(dollars in millions)</i>	Quarter Ended, March 31, 2018	
	Amount of Change	Change as a Percentage of Total Expenses
Licensing and other fee agreements	\$ 15.7	5 %
Professional fees and outside services	14.0	4
Bonus expense	6.8	2
Salaries, benefits and employer taxes	4.6	1
Foreign currency exchange rate fluctuation	4.1	1
Non-qualified deferred compensation plans	(3.4)	(1)
Other expenses, net	(2.1)	—
Total increase (decrease)	<u>\$ 39.7</u>	<u>12 %</u>

Increases in operating expenses in the first quarter of 2018 when compared with the same period in 2017 were as follows:

- Licensing and other fee sharing agreements expense increased due to higher expense related to revenue sharing agreements for certain equity and energy contracts due to both an increase in volume and an increase in license rates for certain equity products.
- Professional fees and outside services expense increased compared to the same period in 2017, largely due to higher legal fees in 2018 incurred as a result of the Eurex litigation and our proposed transaction with NEX Group plc (NEX).
- Bonus expense increased due to performance relative to our 2018 cash earnings target when compared with 2017 performance relative to our 2017 cash earnings target.
- Compensation and benefits expense increased as a result of higher average headcount primarily in our international locations as well as normal cost of living adjustments.
- In the first quarter of 2018, we recognized a net loss of \$1.6 million due to an unfavorable change in exchange rates on foreign cash balances, compared with a net gain of \$2.5 million in the first quarter of 2017. 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.

The decrease in operating expenses in the first quarter of 2018 when compared with the same period in 2017 was as follows:

- A decrease in our non-qualified deferred compensation liability, the impact of which does not affect net income because of an equal and offsetting change in investment income, contributed to a decrease in compensation and benefits expense.

### Non-Operating Income (Expense)

(dollars in millions)	Quarter Ended March 31,		Change
	2018	2017	
Investment income	\$ 156.4	\$ 138.9	13 %
Interest and other borrowing costs	(30.1)	(29.8)	1
Equity in net earnings (losses) of unconsolidated subsidiaries	40.1	30.8	30
Other non-operating income (expense)	(118.6)	(33.8)	n.m.
Total Non-Operating	\$ 47.8	\$ 106.1	(55)

*n.m. not meaningful*

Investment income increased in the first quarter of 2018, when compared with the same period in 2017, largely due to an increase in earnings from cash performance bond and guaranty fund contributions that are reinvested, which resulted primarily from higher average reinvestment balances and higher rates of interest earned in the cash account at the Federal Reserve Bank of Chicago. The increase in 2018 was partially offset by the net gain of \$86.5 million that we recognized on the sale of our remaining ownership interest in BM&FBOVESPA, S.A. (BM&FBOVESPA) during 2017.

Higher income generated from our S&P/Dow Jones Indices LLC business venture contributed to an increase in equity in net earnings (losses) of unconsolidated subsidiaries in the first quarter of 2018 when compared with the same period in 2017.

We recognized higher expense in the first quarter of 2018 related to the distribution of interest earned on performance bond collateral reinvestment to the clearing firms. This expense is included in other non-operating income (expense).

### Income Tax Provision

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

	2018	2017
Quarter ended March 31	24.1%	43.5%

The overall decrease in the effective tax rate in the first quarter of 2018 was primarily due to a reduction in the federal statutory rate from 35% to 21% as a result of the recent tax law changes. Also, in the first quarter of 2017, we reclassified income tax expense from accumulated other comprehensive income for the sale of the remaining BM&FBOVESPA shares.

## Liquidity and Capital Resources

**Sources and Uses of Cash.** Net cash provided by operating activities increased in the first quarter of 2018 when compared with the same period in 2017. The increase in net cash provided by operating activities was largely attributable to the increase in trading volume as well as 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. Net cash provided by investing activities decreased in the first quarter of 2018 when compared with the same period of 2017. In the first quarter of 2017, we received proceeds from our sale of BM&FBOVESPA shares. Cash used in financing activities was higher in the first quarter of 2018 when compared with the same period in 2017 due to higher cash dividends paid in the first quarter of 2018 when compared with the same period in 2017.

**Debt Instruments.** The following table summarizes our debt outstanding at March 31, 2018:

<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. Clearing firm guaranty fund contributions received in the form of cash or U.S. Treasury securities as well as the performance bond assets deposited by defaulting clearing members can be used to collateralize the facility. At March 31, 2018, 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 March 31, 2018, we have excess borrowing capacity for general corporate purposes of approximately \$2.3 billion under our multi-currency revolving senior credit facility.

At March 31, 2018, 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 March 31, 2018, the letters of credit totaled \$285.0 million.

The following table summarizes our credit ratings at March 31, 2018:

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 \$0.8 billion and \$1.9 billion at March 31, 2018 and December 31, 2017, 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.

In March 2018, we announced that we have reached an agreement to acquire NEX in a transaction valued at £10 per share, consisting of 500 pence in cash and 0.0444 CME Group shares. The proposed transaction is pending approvals by regulators and NEX shareholders and is expected to close in the second half of 2018. As of March 31, 2018, \$491.3 million of cash has been restricted related to the proposed transaction with NEX. In conjunction with the proposed transaction, we also purchased a foreign exchange option contract to mitigate certain exposure to foreign exchange rate fluctuation on anticipated currency required to facilitate the acquisition. The foreign exchange option has a notional value of £1.6 billion and expires in July 2018. The income statement impact of the foreign exchange option was immaterial for the quarter ended March 31, 2018.

**Regulatory Requirements.** CME is regulated by the CFTC as a U.S. Derivatives Clearing Organization (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.

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

Refer to Note 2. Accounting Policies in our notes to the consolidated financial statements for information on new and recently adopted accounting pronouncements that are applicable to us.

### 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, 2017. Refer to Item 7A. of CME Group's Annual Report on Form 10-K for the year ended December 31, 2017 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. There were no changes in the company’s internal control over financial reporting which occurred during the fiscal quarter ended March 31, 2018, 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 28, 2018.

**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 28, 2018. 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)
January 1 to January 31	2,686	\$ 152.90	—	\$ —
February 1 to February 28	53	159.11	—	—
March 1 to March 31	86,511	165.38	—	—
Total	<u>89,250</u>	\$ <u>165.01</u>	<u>—</u>	<u>—</u>

(1) Shares purchased consist of an aggregate of 89,250 shares of Class A common stock surrendered in the first quarter of 2018 to satisfy employees’ tax obligations upon the vesting of restricted stock.

**ITEM 4. MINE SAFETY DISCLOSURES**

Not applicable.

**ITEM 6. EXHIBITS**

10.1	<a href="#">Consulting Agreement between Leo Melamed and CME Group Inc., dated April 27, 2018</a>
10.2	<a href="#">Consulting Agreement between John F. Sandner and CME Group Inc., dated April 23, 2018</a>
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: May 3, 2018

By: \_\_\_\_\_ */s/ John W. Pietrowicz*  
**Chief Financial Officer & Senior Managing  
Director Finance**

April 27, 2018

Mr. Leo Melamed  
Melamed & Associates  
30 South Wacker Drive, Suite 1625  
Chicago, IL 60606

Dear Mr. Melamed:

Reference is made to that certain letter agreement between you and the undersigned CME Group Inc. ("CME"), dated June 26, 2009, which governs, among other things, the terms of your consulting arrangement with CME and its subsidiaries and affiliates (collectively with CME, the "CME Entities") following your retirement from the Board of Directors of CME (such agreement, the "Post-Board Agreement"). Notwithstanding anything to the contrary in the Post-Board Agreement, you and CME hereby agree as follows:

1. During the term of the Post-Board Agreement, you will render consulting services to CME and CME Entities upon request with respect to the futures business and industry and related matters and other matters in which you have expertise. In providing such services, you shall comply with all applicable laws, statutes, regulations, orders, codes and other acts of any applicable governmental authority and the policies, standards and regulations of CME and the CME Entities. You will personally perform all of the consulting services required under the Post-Board Agreement. Any request for consulting services under the Post-Board Agreement will be made by the Chief Executive Officer of CME. The Chief Executive Officer insofar as reasonably practicable, shall consider your convenience in the timing of his requests, and your failure or inability, by reason of temporary illness or other cause beyond your control or because of your absence for reasonable periods, to respond to such requests during any such temporary period shall not be deemed to constitute a default on your part in the performance of your consulting services under the Post-Board Agreement.

2. Section 3 of the Post-Board Agreement is hereby amended and restated in its entirety as follows:



Consulting Fee. In consideration for your consulting services and the non-compete and confidentiality provisions of this Agreement, during the first two years of the term of this Agreement (the “Initial Term”) CME shall pay to you \$1,300,000 per annum, payable in four equal installments of \$325,000 and a pro-rata amount for periods less than a full three-month period. After the Initial Term and for the remainder of the term of this Agreement, CME shall pay to you \$300,000 per annum, payable in four equal installments of \$75,000 and a pro-rata amount for periods less than a full three-month period. The first such installment due during the Initial Term shall be paid as soon as practicable following the beginning of the Initial Term, with respect to the first three-month period, and all subsequent installments due during the term of this Agreement shall be due and payable on or about the first day of each subsequent three-month period during the term of this Agreement.

3. During the term of the Post-Board Agreement, you will not use the names “CME” or “Chicago Mercantile Exchange” or any related logo or trademark, or any other trademark or intellectual property owned or used by any CME Entity (“CME IP”), or otherwise use or make reference to your prior relationship, experience or role with any CME Entity, to (i) promote any product, service, business or enterprise, whether offered by you or by any other entity or (ii) otherwise further the interests of any entity, in each case regardless of whether such entity engages in a business that is competitive with any CME Entity. Notwithstanding the foregoing, you may use the name or CME IP of any CME Entity in a non-promotional manner in your resume, curriculum vitae or other description of your prior professional experience that is not inconsistent with the foregoing.
4. Effective upon your retirement from the Board of Directors of CME on May 9, 2018, you resign from the Chicago Mercantile Exchange Trust and CME Group Foundation, and any other board or board committee of any CME Entity that you serve on.
5. Each reference in the Post-Board Agreement to “this Agreement,” “hereof,” “herein,” “hereunder,” “hereby” or any other similar reference shall be deemed to refer to the Post-Board Agreement as amended hereby.
6. This letter agreement shall be effective as of the date hereof. Except as expressly provided above, all terms, conditions and provisions contained in the Post-Board Agreement are hereby ratified and confirmed and shall remain in full force and effect without any further change or modification whatsoever. This letter agreement is made a part of, and is incorporated into, the Post-Board Agreement and is subject to all terms, conditions and provisions contained therein as amended hereby.

7. The provisions of Sections 8 through 11 of the Post-Board Agreement are incorporated herein by reference on a mutatis mutandis basis.

\* \* \*

Please confirm that the foregoing letter agreement correctly sets forth the agreement between CME and yourself by signing and returning to CME one of the enclosed copies of this letter.

Very truly yours,

CME GROUP INC.

/s/ Terrence A. Duffy

Terrence A. Duffy  
Chairman and CEO

April 23, 2018

Agreed and Accepted as of  
April 27, 2018

/s/ Leo Melamed  
Leo Melamed

Address for Notice Purposes:

Melamed & Associates  
30 South Wacker Drive, Suite 1625  
Chicago, IL 60606

Address for Notice Purposes:

CME Group Inc.  
20 South Wacker Drive  
Chicago, IL 60606  
Attention: General Counsel

April 23, 2018

Mr. John F. Sandner  
John F. Sandner & Associates  
30 S. Wacker #1912  
Chicago, IL 60606

Dear Mr. Sandner:

This letter agreement will confirm the terms of your agreement (the "Agreement") with the undersigned CME Group Inc. ("CME"), with respect to your performance of consulting services for CME and its subsidiaries and affiliates (collectively with CME, the "CME Entities") following your retirement from the Board of Directors of CME (the "Board").

1. Term. The term of this Agreement shall commence effective upon the actual date of your retirement from the Board and shall end on the second anniversary thereof, unless sooner terminated as provided herein ("Term").
2. Scope of Consulting Services. During the Term, you will render consulting services to the CME Entities upon request with respect to the businesses of the CME Entities and other matters in which you have expertise. In providing such services, you shall comply with all applicable laws, statutes, regulations, orders, codes and other acts of any applicable governmental authority and the policies, standards and regulations of CME and the CME Entities. You will personally perform all of the consulting services required under this Agreement. Any request for consulting services under this Agreement will be made by the Chief Executive Officer of CME. The Chief Executive Officer insofar as reasonably practicable, shall consider your convenience in the timing of his requests, and your failure or inability, by reason of temporary illness or other cause beyond your control or because of your absence for reasonable periods, to respond to such requests during any such temporary period shall not be deemed to constitute a default on your part in the performance of your consulting services under this Agreement.
3. Consulting Fee. In consideration for your consulting services and the non-compete and confidentiality provisions of this Agreement, CME shall pay to you \$1,000,000

per annum during the Term, payable in four equal installments of \$250,000 and a pro-rata amount for periods less than a full three-month period. The first such installment shall be paid as soon as practicable following the beginning of the Term, with respect to the first three-month period, and all subsequent installments shall be due and payable on or about the first day of each subsequent three-month period during the Term.

4. Expense Reimbursement / Other Benefits. During the Term, CME shall reimburse you for, or advance to you, all reasonable and necessary out-of-pocket travel and other expenses incurred by you at the specific request of a CME Entity and otherwise consistent with CME expense reimbursement policies from time to time in effect in connection with your performance of consulting services hereunder. Such expenses shall be reimbursed or advanced promptly after your submission to CME of expense statements, including copies of receipts and other documents verifying the amounts included therein, in such reasonable detail as CME may require.
  
5. Nature of the Consulting Relationship. You will perform the consulting services required under this Agreement as an independent contractor to, and not as an agent or employee of, any CME Entity. Except as and to the extent that a CME Entity, as the case may be, may otherwise prescribe in writing, you shall not have any authority to negotiate or to conclude any contracts on behalf of, or otherwise bind, CME or any other CME Entity. You shall be solely responsible for and shall pay all amounts of applicable federal and state income and self-employment taxes. You shall not be eligible to participate in any employee benefit, group insurance or compensation plans or programs maintained by any CME Entity. Neither CME nor any other CME Entity shall provide Social Security, unemployment compensation, disability insurance, workers' compensation or similar coverage, or any other statutory employment benefit, to you.
  
6. Restrictive Covenants.
  - (a) During the Term and for a period of one year thereafter, you will not, without the prior written consent of CME (i) render any services whether or not for compensation, to other individuals, firms, corporations or entities in connection with any matter that involves material interests adverse to any CME Entity, (ii) directly or indirectly compete with any CME Entity anywhere in the world or (iii) engage in any business or activity that you reasonably believe to be materially detrimental to the business or interests of any CME Entity.

(b) You will not use the names “CME” or “Chicago Mercantile Exchange” or any related logo or trademark, or any other trademark or intellectual property owned or used by any CME Entity (“CME IP”), or otherwise use or make reference to your prior relationship, experience or role with any CME Entity, to (i) promote any product, service, business or enterprise, whether offered by you or by any other entity or (ii) otherwise further the interests of any entity, in each case regardless of whether such entity engages in a business that is competitive with any CME Entity. Notwithstanding the foregoing, you may use the name or CME IP of any CME Entity in a non-promotional manner in your resume, curriculum vitae or other description of your prior professional experience that is not inconsistent with the foregoing.

7. Confidential Information. In connection with your service to the CME Entities, and pursuant to this Agreement, you have acquired or may acquire confidential information with respect to the business, plans, strategies, finances, technology, markets, operations, customers, members, employees, suppliers and vendors and other matters of or related to the CME Entities (collectively, the “Confidential Information”). Unless disclosure is required by law, you shall not, without the prior written consent of CME, at any time, whether during or after the Term, communicate or divulge any Confidential Information to anyone other than a CME Entity or those other persons or entities designated by CME. All records, files, documents, notes, data and the like relating to the business or activities of any CME Entity which you shall prepare, develop, use, compile or receive shall be and remain the sole property of such CME Entity, as the case may be, and shall be returned upon CME’s request. “Confidential Information” shall exclude information (a) readily available in the public domain other than as a result of your act or omission or (b) obtained from third parties rightfully in possession of such information and having no direct or indirect confidentiality obligation to any CME Entity.
8. Retirement. Effective upon your retirement from the Board of Directors of CME on May 9, 2018, you resign from the Chicago Mercantile Exchange Trust, CME Group Foundation and any other board or committee of any CME Entity that you serve on.
9. Non-Waiver. The failure by either party to exercise any of its or his rights in the event of a breach of this Agreement by the other party shall not be construed as a waiver of such breach or any subsequent breach, or prevent either party from later enforcing strict compliance with this Agreement as to such breach or any subsequent breach.

10. Severability. If any provision of this Agreement is held by a court of competent jurisdiction to be void or unenforceable for any reason, such provision shall be modified or deleted in such manner so as to make this Agreement, as modified, legal and enforceable, and the remaining provisions hereof shall continue in full force and effect.
11. Notices. All notices and other required communications under this Agreement (“Notices”) shall be in writing, and shall be sent to a party at the address set forth below such party’s signature block below. A party may change its address by sending Notice to the other party of the new address. Notices shall be given: (a) by personal delivery to the other party; (b) by facsimile, with a confirmation sent by registered or certified mail, return receipt requested; (c) by registered or certified mail, return receipt requested; or (d) by express courier (e.g., FedEx). Notices shall be effective and shall be deemed delivered: (i) if by personal delivery, on the date of the personal delivery; (ii) if by facsimile, on the date stated in the electronic confirmation, delivered during normal business hours (8:00 a.m. to 5:00 p.m. at recipient’s location), and, if not delivered during normal business hours, on the next business day following delivery; (iii) if solely by mail, on the date of receipt as stated on the return receipt; or (iv) if by express courier, on the date signed for or rejected as reflected in the courier’s delivery log.
12. Miscellaneous. This Agreement is personal to you, and you shall not assign this Agreement, and any purported assignment is void. This Agreement shall be governed by and construed in accordance with the laws of the State of Illinois. This Agreement contains the entire understanding between CME and yourself with respect to the subject matter hereof and supersedes and voids all prior negotiations, discussions, and agreements, whether written or oral. This Agreement may not be amended, modified or extended other than by a written agreement executed by the parties hereto.

\* \* \*

Please confirm that the foregoing Agreement correctly sets forth the agreement between CME and yourself by signing and returning to CME one of the enclosed copies of this letter.

Very truly yours,

CME GROUP INC.

/s/ Terrence A. Duffy\_\_\_\_\_  
Terrence A. Duffy  
Chairman and CEO

April 23, 2018

Agreed and Accepted as of  
April , 2018

/s/ John F. Sandner  
John F. Sandner

Address for Notice Purposes:

John F. Sandner & Associates  
30 S. Wacker #1912  
Chicago, IL 60606

Address for Notice Purposes:

CME Group Inc.  
20 South Wacker Drive  
Chicago, IL 60606  
Attention: General Counsel

[Signature Page to Consulting Agreement]



## 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: May 3, 2018

/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: May 3, 2018

/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 March 31, 2018 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

---

Name: Terrence A. Duffy

Title: Chief Executive Officer

Dated: May 3, 2018

/s/ John W. Pietrowicz

---

Name: John W. Pietrowicz

Title: Chief Financial Officer

Dated: May 3, 2018

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.