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 June 30, 2017

- OR -

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

For the transition period from to

Commission file number 001-31553

CME GROUP INC.

(Exact name of registrant as specified in its charter)

Delaware	**36-4459170**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
20 South Wacker Drive, Chicago, Illinois	**60606**
(Address of principal executive offices)	**(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 x	Accelerated filer o
Non-accelerated filer o (Do not check if a smaller reporting company)	Smaller reporting company o
	Emerging growth company o

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. o

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 July 12, 2017 was as follows: 339,909,019 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

PART I. FINANCIAL INFORMATION

Certain Terms

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

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

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

Information about Contract Volume and Average Rate per Contract

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

Trademark Information

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

Forward-Looking Statements

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

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

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

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

ITEM 1. FINANCIAL STATEMENTS

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

	June 30, 2017	December 31, 2016
Assets		
Current Assets:		
Cash and cash equivalents	$ 1,362.3	$ 1,868.6
Marketable securities	84.3	83.3
Accounts receivable, net of allowance of $2.1 and $3.5	416.4	364.4
Other current assets (includes $30.0 in restricted cash)	228.9	171.7
Performance bonds and guaranty fund contributions	47,405.0	37,543.5
Total current assets	49,496.9	40,031.5
Property, net of accumulated depreciation and amortization of $631.8 and $597.2	399.5	425.2
Intangible assets—trading products	17,175.3	17,175.3
Intangible assets—other, net	2,393.8	2,441.8
Goodwill	7,569.0	7,569.0
Other assets (includes $22.1 and $61.7 in restricted cash)	1,509.3	1,726.6
Total Assets	$ 78,543.8	$ 69,369.4
Liabilities and Equity		
Current Liabilities:		
Accounts payable	$ 25.5	$ 26.2
Other current liabilities	239.1	1,376.7
Performance bonds and guaranty fund contributions	47,405.0	37,542.7
Total current liabilities	47,669.6	38,945.6
Long-term debt	2,232.1	2,231.2
Deferred income tax liabilities, net	7,318.8	7,291.0
Other liabilities	546.5	560.9
Total Liabilities	57,767.0	49,028.7
Shareholders’ Equity:		
Preferred stock, $0.01 par value, 10,000 shares authorized at June 30, 2017 and December 31, 2016; none issued	—	—
Class A common stock, $0.01 par value, 1,000,000 shares authorized at June 30, 2017 and December 31, 2016; 338,673 and 338,240 shares issued and outstanding as of June 30, 2017 and December 31, 2016, respectively	3.4	3.4
Class B common stock, $0.01 par value, 3 shares authorized, issued and outstanding as of June 30, 2017 and December 31, 2016	—	—
Additional paid-in capital	17,870.4	17,826.9
Retained earnings	2,889.7	2,524.5
Accumulated other comprehensive income (loss)	13.3	(14.1)
Total shareholders’ equity	20,776.8	20,340.7
Total Liabilities and Equity	$ 78,543.8	$ 69,369.4

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 June 30,		Six Months Ended June 30,	
	2017	2016	2017	2016
Revenues				
Clearing and transaction fees	$ 792.0	$ 767.6	$ 1,584.0	$ 1,563.7
Market data and information services	96.1	102.9	192.9	205.3
Access and communication fees	24.9	22.3	49.2	43.9
Other	11.6	13.6	27.8	27.7
Total Revenues	924.6	906.4	1,853.9	1,840.6
Expenses				
Compensation and benefits	139.3	131.7	281.6	263.6
Communications	6.0	6.3	12.3	13.0
Technology support services	18.2	17.7	36.9	35.1
Professional fees and outside services	28.6	39.0	57.2	70.7
Amortization of purchased intangibles	24.0	24.0	48.0	48.0
Depreciation and amortization	28.8	30.4	58.2	64.3
Occupancy and building operations	19.2	24.4	39.3	45.7
Licensing and other fee agreements	32.9	32.8	66.7	71.8
Other	22.0	36.8	46.9	91.2
Total Expenses	319.0	343.1	647.1	703.4
Operating Income	605.6	563.3	1,206.8	1,137.2
Non-Operating Income (Expense)				
Investment income	112.4	17.2	251.3	34.8
Interest and other borrowing costs	(29.0)	(31.0)	(58.8)	(60.8)
Equity in net earnings (losses) of unconsolidated subsidiaries	31.8	27.0	62.6	53.8
Other non-operating income (expense)	(83.5)	(10.4)	(117.6)	(20.4)
Total Non-Operating Income (Expense)	31.7	2.8	137.5	7.4
Income before Income Taxes	637.3	566.1	1,344.3	1,144.6
Income tax provision	221.5	246.0	528.7	456.7
Net Income	$ 415.8	$ 320.1	$ 815.6	$ 687.9
Earnings per Common Share:				
Basic	$ 1.23	$ 0.95	$ 2.41	$ 2.04
Diluted	1.22	0.95	2.40	2.03
Weighted Average Number of Common Shares:				
Basic	338,556	337,289	338,448	337,152
Diluted	340,020	338,706	339,974	338,599

See accompanying notes to unaudited consolidated financial statements.

CME GROUP INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(in millions)
(unaudited)

	Quarter Ended June 30,		Six Months Ended June 30,	
	2017	2016	2017	2016
Net income	$ 415.8	$ 320.1	$ 815.6	$ 687.9
Other comprehensive income (loss), net of tax:				
Investment securities:				
Net unrealized holding gains (losses) arising during the period	1.7	85.8	31.1	195.4
Reclassification of net (gains) losses on sales included in investment income	—	—	(87.1)	—
Income tax benefit (expense)	(0.5)	0.2	76.1	(0.6)
Investment securities, net	1.2	86.0	20.1	194.8
Defined benefit plans:				
Net change in defined benefit plans arising during the period	—	—	0.4	3.1
Amortization of net actuarial (gains) losses included in compensation and benefits expense	0.7	0.8	1.4	1.6
Income tax benefit (expense)	(0.3)	(0.3)	(0.7)	(1.8)
Defined benefit plans, net	0.4	0.5	1.1	2.9
Derivative investments:				
Amortization of effective portion of net (gains) losses on cash flow hedges included in interest expense	(0.3)	(0.3)	(0.6)	(0.6)
Income tax benefit (expense)	0.1	0.1	0.2	0.2
Derivative investments, net	(0.2)	(0.2)	(0.4)	(0.4)
Foreign currency translation:				
Foreign currency translation adjustments	1.1	(1.7)	9.5	(5.0)
Income tax benefit (expense)	—	0.6	(2.9)	1.8
Foreign currency translation, net	1.1	(1.1)	6.6	(3.2)
Other comprehensive income (loss), net of tax	2.5	85.2	27.4	194.1
Comprehensive Income	$ 418.3	$ 405.3	$ 843.0	$ 882.0

See accompanying notes to unaudited consolidated financial statements.

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

	Class A Common Stock (Shares)	Class B Common Stock (Shares)	Common Stock and Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Total Shareholders' Equity
Balance at December 31, 2016	338,240	3	$ 17,830.3	$ 2,524.5	$ (14.1)	$ 20,340.7
Net income				815.6		815.6
Other comprehensive income (loss)					27.4	27.4
Dividends on common stock of $1.32 per share				(448.2)		(448.2)
Impact of adoption of standards update on employee share-based payments, net of tax			1.4	(2.2)		(0.8)
Exercise of stock options	242		22.9			22.9
Vesting of issued restricted Class A common stock	162		(12.1)			(12.1)
Shares issued to Board of Directors	20		2.4			2.4
Shares issued under Employee Stock Purchase Plan	9		1.2			1.2
Stock-based compensation			27.7			27.7
Balance at June 30, 2017	338,673	3	$ 17,873.8	$ 2,889.7	$ 13.3	$ 20,776.8

See accompanying notes to unaudited consolidated financial statements.

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

	Class A Common Stock (Shares)	Class B Common Stock (Shares)	Common Stock and Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Total Shareholders' Equity
Balance at December 31, 2015	336,938	3	$ 17,725.0	$ 2,907.6	$ (80.8)	$ 20,551.8
Net income				687.9		687.9
Other comprehensive income (loss)					194.1	194.1
Dividends on common stock of $1.20 per share				(406.2)		(406.2)
Exercise of stock options	292		20.0			20.0
Excess tax benefits from option exercises and restricted stock vesting			3.4			3.4
Vesting of issued restricted Class A common stock	181		(10.5)			(10.5)
Shares issued to Board of Directors	27		2.5			2.5
Shares issued under Employee Stock Purchase Plan	10		0.9			0.9
Stock-based compensation			30.0			30.0
Balance at June 30, 2016	337,448	3	$ 17,771.3	$ 3,189.3	$ 113.3	$ 21,073.9

See accompanying notes to unaudited consolidated financial statements.

CME GROUP INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in millions)
(unaudited)

	Six Months Ended June 30,	
	2017	2016
Cash Flows from Operating Activities		
Net income	$ 815.6	$ 687.9
Adjustments to reconcile net income to net cash provided by operating activities:		
Stock-based compensation	27.7	30.0
Amortization of purchased intangibles	48.0	48.0
Depreciation and amortization	58.2	64.3
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	—
Loss on datacenter	—	27.1
Undistributed earnings, net of losses, of unconsolidated subsidiaries	(12.4)	(3.3)
Deferred income taxes	11.8	22.0
Change in:		
Accounts receivable	(50.6)	(71.1)
Other current assets	(2.6)	6.0
Other assets	48.6	(20.3)
Accounts payable	(0.7)	6.8
Income taxes payable	(98.6)	(12.8)
Other current liabilities	(25.5)	(30.8)
Other liabilities	2.6	(5.3)
Other	(0.4)	5.2
Net Cash Provided by Operating Activities	823.0	753.7
Cash Flows from Investing Activities		
Proceeds from maturities of available-for-sale marketable securities	1.2	36.4
Purchases of available-for-sale marketable securities	(0.5)	(40.3)
Purchases of property, net	(37.6)	(39.6)
Investments in business ventures	(2.3)	(3.8)
Proceeds from sale of BM&FBOVESPA shares	244.0	—
Net Cash Provided by (Used in) Investing Activities	204.8	(47.3)
Cash Flows from Financing Activities		
Cash dividends	(1,546.1)	(1,381.7)
Proceeds from finance lease obligation	—	130.0
Proceeds from exercise of stock options	22.9	20.0
Excess tax benefits related to employee option exercises and restricted stock vesting	—	3.4
Employee taxes paid on restricted stock vesting	(12.1)	(10.5)
Other	1.2	0.9
Net Cash Used in Financing Activities	(1,534.1)	(1,237.9)
Net change in cash and cash equivalents	(506.3)	(531.5)
Cash and cash equivalents, beginning of period	1,868.6	1,692.6
Cash and Cash Equivalents, End of Period	$ 1,362.3	$ 1,161.1
Supplemental Disclosure of Cash Flow Information		
Income taxes paid	$ 476.2	$ 410.3
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), Commodity Exchange, Inc. (COMEX), CME Clearing Europe Limited (CMECE) and CME Europe Limited (CME Europe). CME, CBOT, NYMEX, COMEX, CMECE and CME Europe and their subsidiaries are referred to collectively as “the exchange” in the notes to the consolidated financial statements. The clearing houses include CME Clearing, which is the U.S. clearing house and a division of CME, and CMECE.

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

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

2. Accounting Policies

Newly Adopted Accounting Policies. In March 2016, the Financial Accounting Standards Board (FASB) issued a standards update that changes certain aspects of accounting for share-based payments to employees. The guidance requires all income tax effects of awards to be recognized in the income statement when the awards vest or are settled. It also allows an employer to repurchase more of an employee’s shares for tax withholding purposes without triggering liability accounting and to make a policy election to account for forfeitures as they occur. The company implemented this standards update as of January 1, 2017 on a prospective basis. Starting in the first quarter of 2017, all income tax effects of awards are recognized in the income statement as part of income tax expense when the awards vest or are settled. During the first six months of 2017, the company recognized a net tax benefit of $3.7 million related to the income tax effects of awards as part of income tax expense. The company also adopted a policy to recognize forfeitures as compensation expense as the forfeitures occur. Previously, the company estimated the number of awards that would be forfeited and recognized the estimate as part of compensation expense. This policy change was adopted on a modified retrospective basis with a cumulative-effect adjustment to additional paid in capital and retained earnings as of January 1, 2017. The excess tax benefits are now reported as an operating activity within the change in income taxes payable instead of a financing activity on the statements of cash flows. Prior periods have not been adjusted for this change. The employee taxes paid by the company when the company withholds shares for tax-withholding purposes when restricted stock awards vest are now classified as a financing activity on the statements of cash flows. Prior periods have been adjusted for this change.

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

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

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

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

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

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

3. Performance Bonds and Guaranty Fund Contributions

Performance Bonds and Guaranty Fund Contributions. CME has been designated as a systemically important financial market utility by the Financial Stability Oversight Council and is authorized to establish and maintain a cash account at the Federal Reserve Bank of Chicago. CME has received approval to establish this account at the Federal Reserve Bank of Chicago for clearing members' cash balances and the account is now operational. At June 30, 2017, CME maintained $38.6 billion within the cash account at the Federal Reserve Bank of Chicago.

Clearing House Contract Settlement. CME Clearing and CMECE mark-to-market open positions for all futures and options contracts twice a day (once a day for CME's cleared-only credit default swap and interest rate swap contracts). Based on values derived from the mark-to-market process, CME Clearing and CMECE require payments from clearing firms whose positions have lost value and make payments to clearing firms whose positions have gained value. Under the extremely unlikely scenario of simultaneous default by every clearing firm who has open positions with unrealized losses, the maximum exposure related to positions other than cleared-only credit default and interest rate swap contracts would be one half day of changes in fair value of all open positions, before considering the clearing houses' ability to access defaulting clearing firms' collateral deposits. For CME's cleared-only credit default swap and interest rate swap contracts, the maximum exposure related to CME Clearing's guarantee would be one full day of changes in fair value of all open positions, before considering CME Clearing's ability to access defaulting clearing firms' collateral. During the first six months of 2017, CME Clearing and CMECE transferred an average of approximately $2.4 billion a day through their clearing systems for settlement from clearing firms whose positions had lost value to clearing firms whose positions had gained value. CME Clearing and CMECE reduce their guarantee exposure through initial and maintenance performance bond requirements and mandatory guaranty fund contributions. The company believes that its guarantee liability is immaterial and therefore has not recorded any liability at June 30, 2017.

4. Intangible Assets

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

	June 30, 2017			December 31, 2016		
(in millions)	Assigned Value	Accumulated Amortization	Net Book Value	Assigned Value	Accumulated Amortization	Net Book Value
Amortizable Intangible Assets:						
Clearing firm, market data and other customer relationships	$ 2,838.8	$ (896.4)	$ 1,942.4	$ 2,838.8	$ (849.2)	$ 1,989.6
Technology-related intellectual property	29.4	(29.3)	0.1	29.4	(28.6)	0.8
Other	2.4	(1.1)	1.3	2.4	(1.0)	1.4
Total amortizable intangible assets	$ 2,870.6	$ (926.8)	1,943.8	$ 2,870.6	$ (878.8)	1,991.8
Indefinite-Lived Intangible Assets:						
Trade names			450.0			450.0
Total intangible assets – other, net			$ 2,393.8			$ 2,441.8
Trading products [(1)]			$ 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 $24.0 million for the quarters ended June 30, 2017 and 2016, respectively. Total amortization expense for intangible assets was $48.0 million for the six months ended June 30, 2017 and 2016, As of June 30, 2017, the future estimated amortization expense related to amortizable intangible assets is expected to be as follows:

(in millions)	Amortization Expense
Remainder of 2017	$ 47.5
2018	94.7
2019	94.7
2020	94.7
2021	94.7
2022	94.7
Thereafter	1,422.8

5. Long-Term Investments

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

6. Debt

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

(in millions)	June 30, 2017	December 31, 2016
$750.0 million fixed rate notes due September 2022, stated rate of 3.00% (1)	$ 745.6	$ 745.2
$750.0 million fixed rate notes due March 2025, stated rate of 3.00% (2)	744.5	744.2
$750.0 million fixed rate notes due September 2043, stated rate of 5.30% (3)	742.0	741.8
Total long-term debt	$ 2,232.1	$ 2,231.2

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

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

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

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

(in millions)	Par Value
2018	$ —
2019	—
2020	—
2021	—
2022	750.0
Thereafter	1,500.0

7. Contingencies

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

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

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

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

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

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

8. Guarantees

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

Family Farmer and Rancher Protection Fund. In 2012, the company established the Family Farmer and Rancher Protection Fund (the Fund). The Fund is designed to provide payments, up to certain maximum levels, to family farmers, ranchers and other agricultural industry participants who use the company's agricultural commodity products and who suffer losses to their segregated account balances due to their CME clearing member becoming insolvent. Under the terms of the Fund, farmers and ranchers are eligible for up to $25,000 per participant. Farming and ranching cooperatives are eligible for up to $100,000 per cooperative. The Fund was established with a maximum of $100.0 million available for distribution to participants. Since its establishment, the Fund has made payments of approximately $2.0 million, which leaves $98.0 million available for future claims. If, at any time, payments due to participants were to exceed the amount remaining in the fund, payments would be pro-rated. Clearing members and customers must register with the company in advance and provide certain documentation in order to substantiate their eligibility. The company believes that its guarantee liability is immaterial and therefore has not recorded any liability at June 30, 2017.

9. Accumulated Other Comprehensive Income (Loss)

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

(in millions)	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)	31.1	0.4	—	9.5	41.0
Amounts reclassified from accumulated other comprehensive income (loss)	(87.1)	1.4	(0.6)	—	(86.3)
Income tax benefit (expense)	76.1	(0.7)	0.2	(2.9)	72.7
Net current period other comprehensive income (loss)	20.1	1.1	(0.4)	6.6	27.4
Balance at June 30, 2017	$ 0.6	$ (36.7)	$ 58.5	$ (9.1)	$ 13.3

(in millions)	Investment Securities	Defined Benefit Plans	Derivative Investments	Foreign Currency Translation	Total
Balance at December 31, 2015	$ (95.0)	$ (36.6)	$ 59.6	$ (8.8)	$ (80.8)
Other comprehensive income (loss) before reclassifications and income tax benefit (expense)	195.4	3.1	—	(5.0)	193.5
Amounts reclassified from accumulated other comprehensive income (loss)	—	1.6	(0.6)	—	1.0
Income tax benefit (expense)	(0.6)	(1.8)	0.2	1.8	(0.4)
Net current period other comprehensive income (loss)	194.8	2.9	(0.4)	(3.2)	194.1
Balance at June 30, 2016	$ 99.8	$ (33.7)	$ 59.2	$ (12.0)	$ 113.3

10. Fair Value Measurements

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

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

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

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

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

	June 30, 2017			
(in millions)	Level 1	Level 2	Level 3	Total
Assets at Fair Value:				
Marketable securities:				
Corporate debt securities	$ 20.0	$ —	$ —	$ 20.0
Mutual funds	63.9	—	—	63.9
Equity securities	0.1	—	—	0.1
Asset-backed securities	—	0.3	—	0.3
Total Marketable Securities	84.0	0.3	—	84.3
Equity investments	20.7	—	—	20.7
Total Assets at Fair Value	$ 104.7	$ 0.3	$ —	$ 105.0

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

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

(in millions)	Fair Value
$750.0 million fixed rate notes due September 2022, stated rate of 3.00%	$ 774.0
$750.0 million fixed rate notes due March 2025, stated rate of 3.00%	763.1
$750.0 million fixed rates notes due September 2043, stated rate of 5.30%	933.0

11. Earnings Per Share

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

	Quarter Ended June 30,		Six Months Ended June 30,	
(in thousands)	2017	2016	2017	2016
Stock options	—	320	—	320
Restricted stock and performance shares	70	—	71	—
Total	70	320	71	320

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

	Quarter Ended June 30,		Six Months Ended June 30,	
	2017	2016	2017	2016
Net Income (in millions)	$ 415.8	$ 320.1	$ 815.6	$ 687.9
Weighted Average Number of Common Shares (in thousands):				
Basic	338,556	337,289	338,448	337,152
Effect of stock options, restricted stock and performance shares	1,464	1,417	1,526	1,447
Diluted	340,020	338,706	339,974	338,599
Earnings per Common Share:				
Basic	$ 1.23	$ 0.95	$ 2.41	$ 2.04
Diluted	1.22	0.95	2.40	2.03

12. Subsequent Events

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

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

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

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

RESULTS OF OPERATIONS

Financial Highlights

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

	Quarter Ended June 30,			Six Months Ended June 30,		
(dollars in millions, except per share data)	2017	2016	Change	2017	2016	Change
Total revenues	$ 924.6	$ 906.4	2 %	$ 1,853.9	$ 1,840.6	1 %
Total expenses	319.0	343.1	(7)	647.1	703.4	(8)
Operating margin	65.5%	62.1%		65.1%	61.8%	
Non-operating income (expense)	$ 31.7	$ 2.8	n.m.	$ 137.5	$ 7.4	n.m.
Effective tax rate	34.7%	43.5%		39.3%	39.9%	
Net income	$ 415.8	$ 320.1	30	$ 815.6	$ 687.9	19
Diluted earnings per common share	1.22	0.95	28	2.40	2.03	18
Cash flows from operating activities				823.0	753.7	9

n.m. not meaningful

Revenues

	Quarter Ended June 30,			Six Months Ended June 30,		
(dollars in millions)	2017	2016	Change	2017	2016	Change
Clearing and transaction fees	$ 792.0	$ 767.6	3 %	$ 1,584.0	$ 1,563.7	1 %
Market data and information services	96.1	102.9	(7)	192.9	205.3	(6)
Access and communication fees	24.9	22.3	11	49.2	43.9	12
Other	11.6	13.6	(16)	27.8	27.7	—
Total Revenues	$ 924.6	$ 906.4	2	$ 1,853.9	$ 1,840.6	1

Clearing and Transaction Fees

Futures and Options Contracts

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

	Quarter Ended June 30,			Six Months Ended June 30,		
	2017	2016	Change	2017	2016	Change
Total contract volume (in millions)	1,036.5	965.2	7 %	2,096.6	1,998.8	5 %
Clearing and transaction fees (in millions)	$ 776.1	$ 754.6	3	$ 1,550.8	$ 1,535.7	1
Average rate per contract	$ 0.749	$ 0.782	(4)	$ 0.740	$ 0.768	(4)

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

(in millions)	Quarter Ended	Six Months Ended
Increases due to changes in total contract volume	$ 53.4	$ 72.3
Decreases due to changes in average rate per contract	(31.9)	(57.2)
Net increases in clearing and transaction fees	$ 21.5	$ 15.1

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

Contract Volume

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

	Quarter Ended June 30,			Six Months Ended June 30,		
(amounts in thousands)	2017	2016	Change	2017	2016	Change
Average Daily Volume by Product Line:						
Interest rate	8,210	6,776	21 %	8,686	7,493	16 %
Equity	2,707	2,957	(8)	2,736	3,250	(16)
Foreign exchange	879	838	5	887	890	—
Agricultural commodity	1,492	1,722	(13)	1,377	1,470	(6)
Energy	2,632	2,322	13	2,565	2,426	6
Metal	533	467	14	522	461	13
Aggregate average daily volume	16,453	15,082	9	16,773	15,990	5
Average Daily Volume by Venue:						
Electronic	14,582	13,355	9	14,763	14,018	5
Open outcry	1,115	1,076	4	1,238	1,245	(1)
Privately negotiated	756	651	16	772	727	6
Aggregate average daily volume	16,453	15,082	9	16,773	15,990	5
Electronic Volume as a Percentage of Total Volume	89%	89%		88%	88%	

Overall interest rate volatility continued to remain high throughout the first half of 2017 due to considerable market uncertainty surrounding the Federal Reserve's interest rate policy. In June 2017, the Federal Open Markets Committee raised the federal funds rate, which led to additional interest rate volatility in the second quarter of 2017. These factors resulted in strong volumes for our interest rate contracts throughout the first half of 2017. During the second quarter, there was a shift in crude oil supplies caused by an increase in United States crude oil production following the Organization of Petroleum Exporting Countries' decision to cut oil supplies in the fourth quarter of 2016, which contributed to stronger energy volumes in the first half of 2017. Volatility within the equity markets continued to remain low throughout the first half of 2017 due to fewer market-moving geopolitical events, which resulted in lower equity contract volumes during the first half of 2017.

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.

	Quarter Ended June 30,			Six Months Ended June 30,		
(amounts in thousands)	2017	2016	Change	2017	2016	Change
Eurodollar futures and options:						
Front 8 futures	1,761	1,630	8%	1,946	1,828	6%
Back 32 futures	738	594	24	837	660	27
Options	1,464	1,043	40	1,537	1,276	20
U.S. Treasury futures and options:						
10-Year	1,883	1,616	17	1,931	1,727	12
5-Year	994	842	18	1,044	889	17
2-Year	381	312	22	382	328	17
Treasury bond	382	318	20	376	351	7
Federal Funds futures and options	217	142	53	235	132	77

In the second quarter and first six months of 2017 when compared with the same periods in 2016, overall interest rate contract volumes increased largely due to volatility caused by continued uncertainty surrounding the Federal Reserve's interest rate policy, including volatility caused by the federal funds rate increase by the Federal Open Markets Committee in June 2017. In addition, we believe the increases in short-term interest rate contract volumes were also due to the uncertainty surrounding other global events, including 2017 elections throughout Europe. We believe the increases in long-term interest rate contract volumes were also due to the volatility resulting from the uncertainty surrounding the policies of the new political administration in the United States, uncertainty regarding future rates of inflation and the potential for additional government spending.

Equity Products

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

	Quarter Ended June 30,			Six Months Ended June 30,		
(amounts in thousands)	**2017**	**2016**	**Change**	**2017**	**2016**	**Change**
E-mini S&P 500 futures and options	2,116	2,360	(10)%	2,182	2,566	(15)%
E-mini NASDAQ 100 futures and options	304	258	18	259	305	(15)

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

Foreign Exchange Products

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

	Quarter Ended June 30,			Six Months Ended June 30,		
(amounts in thousands)	**2017**	**2016**	**Change**	**2017**	**2016**	**Change**
Euro	214	219	(2)%	224	246	(9)%
Japanese yen	165	147	12	172	169	2
British pound	123	134	(9)	124	126	(2)
Australian dollar	91	112	(19)	92	113	(18)
Canadian dollar	83	78	7	78	85	(8)

Overall contract volumes increased slightly in the second quarter of 2017 and remained relatively flat in the first six months of 2017, when compared with the same periods in 2016. The Japanese yen contract volumes increased as market participants turned to the yen as a safe-haven currency as yen currency rates steadied. Declines in Euro contract volumes were largely driven by overall low volatility, which is believed to be caused by a lack of global macroeconomic drivers affecting the Euro. In the first quarter of 2016, Euro contract volumes were higher due to volatility caused by uncertainty surrounding the European Central Bank's quantitative easing program. We believe the decreases in Australian dollar contract volumes were driven by lower volatility within those markets due to lower interest rate volatility in Australia.

Agricultural Commodity Products

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

	Quarter Ended June 30,			Six Months Ended June 30,		
(amounts in thousands)	**2017**	**2016**	**Change**	**2017**	**2016**	**Change**
Corn	532	587	(9)%	471	492	(4)%
Soybean	279	454	(39)	274	374	(27)
Wheat	260	232	12	232	208	12

In the second quarter and first six months of 2017 when compared with the same periods in 2016, overall agricultural commodity contract volumes decreased due to lower corn and soybean contract volumes, which we believe resulted from lower price volatility in the second quarter of 2017. In the second quarter of 2016, price volatility was higher due to greater uncertainty related to weather conditions and the crop production for the 2016 growing season. In addition, we believe the increases in wheat contract volumes in the first half of 2017 were caused by greater uncertainty surrounding the wheat production for the 2017 growing season.

Energy Products

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

(amounts in thousands)	Quarter Ended June 30, 2017	Quarter Ended June 30, 2016	Change	Six Months Ended June 30, 2017	Six Months Ended June 30, 2016	Change
WTI crude oil	1,483	1,231	20%	1,406	1,312	7%
Natural gas	580	531	9	590	527	12
Refined products	387	369	5	388	371	5
Brent crude oil	106	92	15	104	104	—

Overall energy contract volumes increased in the second quarter and first six months of 2017 when compared with the same periods in 2016 largely due to increases in crude oil contract volumes caused by higher volatility in the second quarter of 2017. We believe the increased volatility in the second quarter of 2017 was caused by a shift in crude oil supplies as United States crude oil production rose following the Organization of Petroleum Exporting Countries' decision to cut oil supplies in the fourth quarter of 2016. We believe the increases in natural gas contract volumes were caused by volatility driven by higher supply levels in the first half of 2017.

Metal Products

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

(amounts in thousands)	Quarter Ended June 30, 2017	Quarter Ended June 30, 2016	Change	Six Months Ended June 30, 2017	Six Months Ended June 30, 2016	Change
Gold	296	273	8%	302	278	9%
Copper	102	89	15	99	83	19
Silver	108	84	28	95	77	24

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

Average Rate per Contract

The average rate per contract decreased in the second quarter and first six months of 2017 when compared with the same periods in 2016 largely due to increases in trades executed by members, as a percentage of total trading volumes, as well as a shift in relative mix of product volumes. In the second quarter of 2017 when compared with the same period in 2016, interest rate contract volume, when measured as a percentage of total volume, increased by 5 percentage points, while agricultural commodity and equity contract volumes collectively decreased by 6 percentage points. In the first six months of 2017 when compared with the same period in 2016, interest rate contract volume increased by 5 percentage points, while agricultural commodity and equity contract volumes collectively decreased by 5 percentage points. Agricultural commodity and equity contracts have a higher average rate per contract compared with interest rate contracts.The overall decreases in average rates per contract were partially offset by a rate increase that was effective in the first quarter of 2017.

Concentration of Revenue

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

Other Sources of Revenue

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

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

Expenses

	Quarter Ended June 30,			Six Months Ended June 30,		
(dollars in millions)	2017	2016	Change	2017	2016	Change
Compensation and benefits	$ 139.3	$ 131.7	6 %	$ 281.6	$ 263.6	7 %
Communications	6.0	6.3	(4)	12.3	13.0	(5)
Technology support services	18.2	17.7	2	36.9	35.1	5
Professional fees and outside services	28.6	39.0	(27)	57.2	70.7	(19)
Amortization of purchased intangibles	24.0	24.0	—	48.0	48.0	—
Depreciation and amortization	28.8	30.4	(5)	58.2	64.3	(9)
Occupancy and building operations	19.2	24.4	(21)	39.3	45.7	(14)
Licensing and other fee agreements	32.9	32.8	—	66.7	71.8	(7)
Other	22.0	36.8	(40)	46.9	91.2	(49)
Total Expenses	$ 319.0	$ 343.1	(7)	$ 647.1	$ 703.4	(8)

Operating expenses decreased by $24.1 million and $56.3 million in the second quarter and first six months of 2017, respectively, when compared with the same periods in 2016. The following table shows the estimated impacts of key factors resulting in the changes in operating expenses:

	Quarter Ended, June 30, 2017		Six Months Ended, June 30, 2017	
(dollars in millions)	Amount of Change	Change as a Percentage of Total Expenses	Amount of Change	Change as a Percentage of Total Expenses
Loss on datacenter and related legal fees	$ —	— %	$ (28.6)	(4)%
Foreign currency exchange rate fluctuation	(16.2)	(5)	(22.6)	(3)
Professional fees and outside services	(10.4)	(3)	(12.0)	(2)
Rent expense	(5.0)	(1)	(5.7)	(1)
Licensing and other fee agreements	0.1	—	(5.1)	(1)
Bonus expense	3.6	1	4.2	1
Salaries, benefits and employer taxes	2.8	1	9.0	1
Other expenses, net	1.0	—	4.5	1
Total decrease	$ (24.1)	(7)%	$ (56.3)	(8)%

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

- In the first quarter of 2016, we sold and leased back our datacenter in the Chicago area. The transaction was recognized under the financing method under generally accepted accounting principles. In the first quarter of 2016, we recognized total losses and expenses of $28.6 million, representing a net loss on write-down to fair value of the assets and certain other transaction fees of $27.1 million within other expenses and $1.5 million of legal and other fees.

- In the second quarter of 2017, we recognized a net gain of $4.6 million due to a favorable change in exchange rates on foreign cash balances, compared with a net loss of $11.6 million in the second quarter of 2016. In the first six months of 2017, we recognized a net gain of $7.1 million due to a favorable change in exchange rates on foreign cash balances, compared with a net loss of $15.5 million in the first six months of 2016. Gains and losses from exchange rate fluctuations result when subsidiaries with a U.S. dollar functional currency hold cash as well as certain other monetary assets and liabilities denominated in foreign currencies.

- In 2016, we recognized higher professional fees and outside services expenses largely due to non-recurring legal efforts in 2016 related to our business activities and product offerings as well as higher professional fees related to a greater reliance on consultants for security and systems enhancement work in 2016.

- Rent expense decreased largely due to a reduction in office and data center space throughout 2016.

- A decrease in licensing and other fee sharing agreements expense in the first six months of 2017 resulted from lower expense related to revenue sharing agreements for certain equity and energy contracts due to lower volume for these products in the first six months of 2017.

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

- Bonus expense increased due to performance relative to our 2017 cash earnings target when compared with 2016 performance relative to our 2016 cash earnings target.

- Compensation and benefits expenses also increased as a result of increases in average headcount primarily in our international locations.

Non-Operating Income (Expense)

	Quarter Ended June 30,			Six Months Ended June 30,		
(dollars in millions)	2017	2016	Change	2017	2016	Change
Investment income	$ 112.4	$ 17.2	n.m.	$ 251.3	$ 34.8	n.m.
Interest and other borrowing costs	(29.0)	(31.0)	(6)	(58.8)	(60.8)	(3)
Equity in net earnings (losses) of unconsolidated subsidiaries	31.8	27.0	17	62.6	53.8	16
Other non-operating income (expense)	(83.5)	(10.4)	n.m.	(117.6)	(20.4)	n.m.
Total Non-Operating	$ 31.7	$ 2.8	n.m.	$ 137.5	$ 7.4	n.m.

n.m. not meaningful

Investment income increased in the second quarter and first six months of 2017, when compared with the same periods in 2016, largely due to higher average reinvestment balances and rates of interest earned from cash performance bond and guaranty fund contributions that are reinvested. In addition, we sold our remaining ownership interest in BM&FBOVESPA, S.A. (BM&FBOVESPA) and recognized a net gain of $86.5 million, net of transaction costs, in the first quarter of 2017.

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

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

Income Tax Provision

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

	2017	2016
Quarter ended June 30	34.7%	43.5%
Six months ended June 30	39.3%	39.9%

The overall decrease in the effective tax rate in the second quarter of 2017 when compared with the same period in 2016 was due to benefits recognized in the second quarter of 2017 related to the settlement of various federal and state audit issues. In addition, we recognized tax expense in the second quarter of 2016 related to the remeasurement of tax positions resulting from a state and local income tax law change.

The overall effective tax rate in the first six months of 2017 was relatively flat compared with the same period in 2016. Additional income tax expense recognized in the first quarter of 2017 related to the final sale of BM&FBOVESPA shares that was reclassified from accumulated other comprehensive income was partially offset by the benefits recognized in the second quarter of 2017 related to the settlement of various federal and state audit issues.

Effective July 1, 2017, the state of Illinois raised its corporate state income tax rate. As a result of this state tax rate change, we expect to recognize additional non-cash state income tax expense of approximately $85 million to $90 million in the third quarter of 2017 largely related to the remeasurement of our deferred income tax positions.

Liquidity and Capital Resources

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

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

(in millions)	**Par Value**
Fixed rate notes due September 2022, stated rate of 3.00% (1)	$ 750.0
Fixed rate notes due March 2025, stated rate of 3.00% (2)	750.0
Fixed rate notes due September 2043, stated rate of 5.30% (3)	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 depositary (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. CME clearing firm guaranty fund contributions received in the form of cash or U.S. Treasury securities as well as the performance bond assets of a defaulting firm can be used to collateralize the facility. At June 30, 2017, guaranty funds available to collateralize the facility totaled $6.9 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 June 30, 2017, we have excess borrowing capacity for general corporate purposes of approximately $2.3 billion under our multi-currency revolving senior credit facility.

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

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

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

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

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

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

Liquidity and Cash Management. Cash and cash equivalents totaled $1.4 billion and $1.9 billion at June 30, 2017 and December 31, 2016, respectively. The balance retained in cash and cash equivalents is a function of anticipated or possible short-term cash needs, prevailing interest rates, our investment policy and alternative investment choices. A majority of our cash and cash equivalents balance is invested in money market mutual funds that invest only in U.S. Treasury securities, U.S. government agency securities and U.S. Treasury security reverse repurchase agreements. Our exposure to credit and liquidity risk is minimal given the nature of the investments. Cash that is not available for general corporate purposes because of regulatory requirements or other restrictions is classified as restricted cash and is included in other current assets or other assets in the consolidated balance sheets.

Regulatory Requirements. CME and CMECE are regulated by the CFTC as U.S. Derivatives Clearing Organizations (DCO). DCOs are required to maintain capital, as defined by the CFTC, in an amount at least equal to one year of projected operating expenses as well as cash, liquid securities, or a line of credit at least equal to six months of projected operating expenses. CME was designated by the Financial Stability Oversight Council as a systemically important financial market utility under Title VIII of Dodd-Frank. As a result, CME must comply with CFTC regulations applicable to a systemically important DCO for financial resources and liquidity resources. CME and CMECE are 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

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 application of the new standard becomes effective in the first annual period beginning after December 15, 2017, with early adoption permitted. This guidance may be adopted using one of two transition methods: retrospectively to each prior reporting period presented (full retrospective method) or retrospectively with the cumulative effect of initially applying the guidance recognized at the date of initial adoption (the modified retrospective approach). We are on course to comply with the guidance by the effective date and have completed the contract review phase. Based on our initial assessment, we expect the financial statement impact related to clearing and transaction fees to be immaterial based on current customer trading patterns. We expect to adopt the guidance based on the modified retrospective approach. The impact related to the remaining revenue streams and the impact the guidance will have on policies, processes, controls and disclosures will be finalized by the third quarter of 2017.

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

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

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

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

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

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

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

ITEM 4. CONTROLS AND PROCEDURES

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

(b) Changes in Internal Control Over Financial Reporting. As required by Rule 13a-15(d) under the Exchange Act, the company’s management, including the company’s Chief Executive Officer and Chief Financial Officer, have evaluated the company’s internal control over financial reporting (as such term is defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) to determine whether any changes occurred during the quarter covered by this quarterly report that have materially affected, or are reasonably likely to materially affect, the company’s internal control over financial reporting. There were no changes in the company's internal control over financial reporting during the period covered by this quarterly report that have materially affected, or are reasonably likely to materially affect, internal control over financial reporting.

PART II. OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

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

ITEM 1A. RISK FACTORS

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

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

(c) Issuer Purchases of Equity Securities

Period	(a) Total Number of Class A Shares Purchased (1)	(b) Average Price Paid Per Share	(c) Total Number of Class A Shares Purchased as Part of Publicly Announced Plans or Programs	(d) Maximum Number (or Approximate Value) that May Yet Be Purchased Under the Plans or Programs (in millions)
April 1 to April 30	2,305	$ 117.41	—	$ —
May 1 to May 31	314	117.13	—	—
June 1 to June 30	1,494	126.78	—	—
Total	4,113	$ 120.79	—	

(1) Shares purchased consist of an aggregate of 4,113 shares of Class A common stock surrendered in the second quarter of 2017 to satisfy employees' tax obligations upon the vesting of restricted stock.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

ITEM 6. EXHIBITS

10.1	Chicago Mercantile Exchange Inc. Senior Management Supplemental Deferred Savings Plan (As Amended and Restated Effective January 1, 2017).(1)
31.1	Section 302 Certification—Terrence A. Duffy
31.2	Section 302 Certification—John W. Pietrowicz
32.1	Section 906 Certification
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

(1) Management compensatory plan. The plan was amended and restated to incorporate certain non-material amendments that inadvertently were not previously filed.

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: August 2, 2017	By:	/s/ John W. Pietrowicz
		Chief Financial Officer & Senior Managing Director Finance

CHICAGO MERCANTILE EXCHANGE INC.
SENIOR MANAGEMENT SUPPLEMENTAL DEFERRED SAVINGS PLAN

(As Amended and Restated Effective January 1, 2017)

SECTION 1

General

1.1. History, Purpose and Effective Date.

(a) The Chicago Mercantile Exchange Inc., a Delaware corporation (the “Exchange”), maintains the Chicago Mercantile Exchange Inc. Senior Management Supplemental Deferred Savings Plan (the “Plan”) to provide a select group of key management employees of the Exchange and participating affiliates (each, an “Employer”) with the opportunity to defer receipt of compensation and receive additional retirement income from the Employer. The Plan is intended to constitute a plan maintained primarily for the purpose of providing deferred compensation for a select group of management or highly compensated employees within the meaning of Sections 201(2), 301(a)(3), and 401(a)(1) of the Employee Retirement Income Security Act of 1974, as amended (“ERISA”).

(b) The Plan has been amended and restated, generally effective as of January 1, 2017 (the “Effective Date”), unless otherwise provided, as set forth herein.

(c) Notwithstanding anything herein to the contrary, the terms of the Plan as in effect prior to January 1, 2005, as modified and set forth in the document entitled “Chicago Mercantile Exchange Inc. Grandfathered Senior Management Supplemental Deferred Savings Plan” (the “Pre-2005 Plan”), shall apply to the portion (if any) of a Participant’s Account that was vested as of December 31, 2004, including credited earnings and losses with respect thereto (the “Grandfathered Account”), and the provisions of this amended and restated Plan shall not apply to such Grandfathered Account.

(d) The Employers participating in the Plan as of the Effective Date are listed in Appendix A.

1.2. Administration.

(a) The Retirement Committee (the “Retirement Committee”) appointed by the Compensation Committee (the “Compensation Committee”) of the Board of Directors of the Exchange is the Plan Administrator of the Plan. If the Compensation Committee fails to act to appoint the members of the Retirement Committee, then the Compensation Committee will be deemed to be the Retirement Committee hereunder. The Plan Administrator shall from time to time adopt rules for the administration of the Plan and shall have the sole discretion to make decisions and take any action with respect to questions arising in connection with the Plan, including, but not limited to, the construction and interpretation of the Plan, the resolution of any ambiguities, the determination of the conditions subject to which any benefits may be payable, the resolution of all questions concerning the status and rights of a Participant and others under the Plan, and whether a claimant is eligible for benefits under the Plan, the determination of the amount of benefits, if any, a claimant is entitled to receive, and making any other determinations which it believes necessary or advisable for the administration and operation of the Plan. Any such decision or action shall be final and binding upon all Participants and beneficiaries, and benefits under the Plan shall be paid only if the Plan Administrator decides in its discretion that the claimant is entitled to them. The Plan Administrator's decision or action in respect of any of the above shall be conclusive and binding upon all Participants and their beneficiaries, heirs, assigns, administrators, executors and any other person claiming through or under them, subject to such individual's rights to a review of the denial of any benefit claim under the claims procedure set forth in Section 1.11.

(b) In providing for the administration of the Plan, the Plan Administrator may delegate responsibilities for the operation and administration of the Plan by written document filed with the Plan records. Any such delegation may be revoked at any time. The Secretary of the Exchange (or, on behalf of the Secretary of the Exchange, any Corporate Secretary or Assistant Secretary) shall certify to any interested person the names of the employees of the Exchange who are, from time to time, authorized to act on behalf of the Plan Administrator and who are responsible for the day-to-day operation and administration of the Plan. The Plan Administrator may appoint and compensate such specialists to aid it in the administration of the Plan and arrange for such other services as it considers necessary or appropriate to carry out the provisions of the Plan.

1.3. Plan Year. The term "Plan Year" means the calendar year.

1.4. Source of Benefit Payments. Subject to the terms and conditions of the Plan, any amount payable to or on account of a Participant under this Plan shall be paid from the general assets of the Employer or from one or more trusts, the assets of which are subject to the claims of the Employer's general creditors. The amounts payable hereunder shall be reflected on the accounting records of the Employer but shall not be construed to create, or require the creation of, a trust, custodial or escrow account. None of the individuals entitled to benefits under the Plan shall have any preferred claim on, or any beneficial ownership interest in, any assets of the Employer or to any investment reserves, accounts, trusts or funds that the Employer may purchase, establish or accumulate to aid in providing the benefits under the Plan, and any rights of such individuals under the Plan shall constitute unsecured contractual rights only. Nothing contained in the Plan shall constitute a guarantee by the Employer that the assets of the Employer shall be sufficient to pay any benefits to any person. Nothing contained in the Plan and no action taken pursuant to its provisions shall create a trust or fiduciary relationship of any kind between the Employer and an employee or any other person.

1.5. Expenses. The expenses of administering the Plan shall be borne by the Exchange.

1.6. Effect on Other Benefit Plans. Any amounts credited or paid under this Plan shall not be considered to be compensation for the purposes of any qualified plan (within the meaning of Section 401(a) of the Internal Revenue Code of 1986, as amended (the "Code")) maintained by the Employer. The treatment of such amounts under other employee benefit plans shall be in accordance with the provisions of such plans.

1.7. Applicable Laws. The Plan shall be construed and administered in accordance with the laws of the State of Illinois.

1.8. Gender and Number. Where the context admits, words in any gender shall include any other gender, words in the singular shall include the plural and the plural shall include the singular.

1.9. Notices. Any notice or document required to be given to or filed with the Plan Administrator will be properly filed if delivered or mailed by registered mail, postage prepaid, to the Secretary of the Exchange, at its principal executive offices. The Plan Administrator may, by advance written notice to affected persons, revise such notice procedure from time to time. Any notice required under the Plan may be waived by the person entitled to notice.

1.10. Evidence. Evidence required of anyone under the Plan may be by certificate, affidavit, document or other information which the person acting on it considers pertinent and reliable, and signed, made or presented by the proper party or parties.

1.11. Claims Procedure.

(a) For purposes of the Plan, a claim for a benefit is a written application for a benefit filed with the Plan Administrator. In the event that any Participant or other person claims to be entitled to a benefit under the Plan, and the Plan Administrator or its designee determines that such claim should be denied in whole or in part, the Plan Administrator or its designee shall, in writing, notify such claimant within 90 days (180 days if special circumstance require) of receipt of such claim that his claim has been denied. The notice of denial will be written in a manner calculated to be understood by the average Participant and will include the following information: (a) the specific reason for the denial; (b) specific reference to those Plan provisions on which the denial is based; (c) a description of any additional information necessary to perfect the claim and an explanation of why the information is necessary; and (d) a description of the Plan’s review procedures, the time limits applicable to those procedures, including a statement of the claimant’s right to bring a civil action under ERISA Section 502(a) following the denial of his claim on review.

(b) If the Plan Administrator requests additional information from a claimant prior to an initial determination or a determination on appeal, the Plan Administrator will notify the claimant and permit the claimant to have 45 days to provide the requested information. The time of the Plan Administrator’s decision will be tolled until the information is received or until the 45-day period has elapsed. If the information is not timely received by the Plan Administrator, its decision will be made without the requested information.

(c) Within 60 days after the mailing or delivery by the Plan Administrator or its designee of such notice, such claimant may request, by mailing or delivery of written notice to the Plan Administrator, a review by the Plan Administrator of the decision denying the claim. The clamant may submit written comments, documents, records and other information relating to his claim, whether or not those comments, documents, records or other information were submitted in connection with the initial claim. The claimant may also request that the Plan provide, free of charge, copies of all documents, records or other information relevant to his claim.

(d) If the claimant fails to request such a review within such 60-day period, it shall be conclusively determined for all purposes of this Plan that the denial of such claim by the Plan Administrator is correct.

(e) After such review, the Plan Administrator shall determine whether such denial of the claim was correct and shall notify such claimant in writing of its determination within 60 days of receipt of the claimant's request for review (120 days if special circumstances require). In the case of a claim denial on review, the notice will be written in a manner calculated to be understood by the average Participant and will include the following information: (a) the specific reason or reasons for denial; (b) specific reference to those Plan provisions on which denial is based; (c) a statement that the claimant is entitled to receive, upon written request and free of charge, reasonable access to and copies of all documents, records and other information relevant to his claim for benefits; and (d) a statement of any voluntary appeal procedures offered by the Plan and the claimant's right to obtain information about the procedures and to bring a civil action under ERISA Section 502(a).

SECTION 2

Participation

2.1. Participant.

(a) Employees of the Employer are eligible to participate in the Plan ("Participants") if they satisfy the eligibility criteria set forth in Section 3.2(a), 3.3(a), or 3.4(a); provided, however, that Participants shall be limited to a select group of management or highly compensated employees within the meaning of Sections 201(2), 301(a)(3), and 401(a)(1) of ERISA.

(b) If the Exchange determines that participation by one or more Participants shall cause the Plan to be subject to Part 2, 3 or 4 of Title I of ERISA, the entire interest of such Participant or Participants under the Plan shall be segregated from the Plan in the discretion of the Exchange, and such Participant or Participants shall cease to have any interest under the Plan.

2.2. Plan Not Contract of Employment. The Plan does not constitute a contract of employment, and participation in the Plan will not give any employee the right to be retained in the employ of the Employer nor any right or claim to any benefit under the Plan, unless such right or claim has specifically accrued under the terms of the Plan.

SECTION 3

Deferred Compensation; Plan Accounting

3.1. Deferred Compensation Accounts. The Plan Administrator shall maintain, or cause to be maintained, an Account in the name of each Participant consisting of the following subaccounts (as applicable):

(a) a subaccount (the "Elective Deferral Account") consisting of the base salary and/or bonus deferred by the Participant in accordance with Section 3.2, as adjusted in accordance with Section 3.5;

(b) a subaccount (the “401(k) Make-Whole Account”) consisting of the 401(k) Savings Plan Make-Whole Credits credited to the Participant’s Account in accordance with Section 3.3, as adjusted in accordance with Section 3.5; and

(c) a subaccount (the “Cash Balance Make-Whole Account”) consisting of the Cash Balance Plan Make-Whole Credits credited to the Participant’s Account in accordance with Section 3.4, as adjusted in accordance with Section 3.5.

A Participant’s Account shall also be segregated according to the Plan Year to which credits to the Account relate (each such segregated portion of the Account is sometimes referred to herein as a “Plan Year Account”).

The beginning balance of each Participant’s Plan Year Account on the Effective Date shall be the amount credited to such respective Plan Year Accounts under the Plan as in effect immediately prior to the Effective Date; provided, however, that the portion of the Participant’s Account consisting of the Participant’s Grandfathered Account shall be segregated and shall be subject to the provisions of the Pre-2005 Plan as provided under Section 1.1(c).

3.2. Deferral Election.

(a) The provisions of this Section 3.2 shall apply with respect to a Plan Year only to Participants who (i) as of the October 1 immediately preceding the commencement of such Plan Year, are Eligible Executives, or (ii) become Eligible Executives before October 1 of the Plan Year. As used in the Plan, an “Eligible Executive” means an employee of the Employer having a job level at or above Executive Director.

(b) Subject to such terms, conditions, and limitations as the Plan Administrator may, from time to time, impose, a Participant may make an irrevocable election to defer receipt of base salary and/or bonus earned by him from the Employer in any Plan Year, by filing a deferral election in writing with the Plan Administrator at such time and in such manner as the Plan Administrator shall provide, but in no case later than the day preceding the first day of such Plan Year. Notwithstanding the preceding sentence, a Participant who first becomes an Eligible Executive of the Employer before October 1 of a Plan Year may file a deferral election within 30 days of becoming eligible to participate in the deferral election feature of the Plan with respect to compensation earned by him during the portion of such Plan Year after such election is filed. A Participant’s election under this Section 3.2(b) shall apply only to the Plan Year for which it is made and not for any subsequent Plan Year.

(c) The maximum percentage of base salary that may be deferred by a Participant for a Plan Year shall be 50%. The maximum percentage of bonus that may be deferred by a Participant for a Plan Year shall be 100%.

(d) The Elective Deferral Account of each Participant shall be credited with the amount deferred by the Participant as of the date on which such compensation would otherwise have been paid to the Participant or such other date as the Plan Administrator may reasonably provide.

3.3. 401(k) Savings Plan Make-Whole Credits.

(a) The provisions of this Section 3.3 shall apply effective January 1, 2007 with respect to a Plan Year to a Participant who is an Eligible Executive at any time during such Plan Year.

(b) Subject to such terms, conditions, and limitations as the Plan Administrator may from time to time impose, for each Plan Year the 401(k) Make-Whole Account of each Participant shall be credited with a "401(k) Savings Plan Make-Whole Credit." Such 401(k) Savings Plan Make-Whole Credit shall be credited to the Participant's Account at such time or times as the Plan Administrator shall determine but no later than 2½ months following the end of such Plan Year.

(c) The 401(k) Savings Plan Make-Whole Credit shall be 3 percent of the greater of the following amounts: (i) the amount, if any, by which the Participant's base salary (excluding bonus, but before reduction by any portion of base salary deferred pursuant to Section 3.2) for such Plan Year exceeds the dollar limitation under Section 401(a)(17) of the Code for such Plan Year, or (ii) the portion, if any, of the Participant's base salary deferred for such Plan Year pursuant to Section 3.2.

3.4. Cash Balance Plan Make-Whole Credits.

(a) The provisions of this Section 3.4 shall apply effective January 1, 2007 with respect to a Plan Year to a Participant who is an Eligible Executive at any time during such Plan Year; provided, however, that no Participant who is a "Grandfathered CBOT Participant" as defined in the Pension Plan for Employees of the Chicago Mercantile Exchange (the "Pension Plan") shall be subject to this Section 3.4.

(b) To the extent that the amount credited for any Plan Year to a Participant's account under the Pension Plan is limited or reduced, either by reason of the limitation on compensation imposed by Section 401(a)(17) of the Code, or by reason of the Pension Plan's exclusion from the compensation base used in determining accruals ("Pensionable Compensation") of (x) elective deferrals under this Plan, (y) bonus award amounts under either the Amended and Restated CME Group Inc. Incentive Plan for Named Executive Officers or the Amended and Restated CME Group Inc. Annual Incentive Plan (the "Bonus Plans") that would qualify as Pensionable Compensation but for the Participant's election to receive such amounts in unrestricted shares of common stock of CME Group Inc. ("Company Stock") rather than in cash, and (z) amounts includible in the Participant's gross income under Section 83 of the Code upon the vesting of restricted shares of Company Stock issued to the Participant as payment of a bonus award under the Bonus Plans, the Account of the Participant shall be credited with a "Cash Balance Plan Make-Whole Credit," to be calculated in such manner and credited at such time or times as the Plan Administrator shall determine but no later than 2½ months after the end of such Plan Year.

3.5. Adjustment of Accounts.

(a) Upon becoming a Participant, a Participant shall elect from among the assumed investments that the Plan Administrator offers from time to time those investments in which the Participant's Account shall be deemed invested and the percentage of contributions to be allocated to each such assumed investment. The Participant may change such allocation (with respect to either future credits to his or her Account or existing Account balances) by notification to the Plan Administrator in such manner as it shall direct, and the Plan Administrator shall implement such change in election as soon as practicable following receipt thereof. In the event a Participant fails to provide such direction, the Participant's Account shall be adjusted on the basis of such default investment as the Plan Administrator shall establish from time to time.

(b) The amounts credited to a Participant's Account in accordance with Sections 3.2, 3.3 and 3.4 shall be adjusted from time to time in accordance with uniform procedures established by the Plan Administrator to reflect the value of an investment equal to the Participant's Account balance in the assumed investments elected or deemed elected by the Participant to use for purposes of adjusting his Account. Such amount shall be determined without regard to taxes that would be payable with respect to any such assumed investment. The Plan Administrator may eliminate any assumed investment alternative at any time; provided, however, that the Plan Administrator may not retroactively eliminate any assumed investment alternative. To the extent permitted by the Plan Administrator, the Participant may elect to have different portions of his Account balance for any period adjusted on the basis of different assumed investments.

(c) Notwithstanding the election by Participants of certain assumed investments and the adjustment of their Accounts based on such investment decisions, the Plan does not require, and no trust or other instrument maintained in connection with the Plan shall require, that any assets or amounts which are set aside in trust or otherwise for the purpose of paying Plan benefits shall actually be invested in the investment alternatives selected by Participants.

SECTION 4

Payment of Plan Benefits

4.1. Vesting.

(a) Subject to Section 5.3, the portion of a Participant's Account attributable to base salary or bonus deferred pursuant to Section 3.2 shall be fully vested and nonforfeitable at all times.

(b) Vesting of the portion of a Participant's Account attributable to 401(k) Savings Plan Make-Whole Credits credited under Section 3.3 shall be determined as follows:

(i) The portion of a Participant's Account attributable to 401(k) Savings Plan Make-Whole Credits credited for Plan Years beginning prior to January 1, 2007 shall be fully vested and nonforfeitable.

(ii) The portion of a Participant's Account attributable to 401(k) Savings Plan Make-Whole Credits credited under Section 3.3 for Plan Years beginning on or after January 1, 2007 shall be fully vested and nonforfeitable in the case of a Participant who was an employee of the Employer on December 31, 2006 and has been continuously employed by the Employer from that date until the date as of which the 401(k) Savings Plan Make-Whole Credit is credited.

(iii) Except as otherwise provided in Section 4.1(b)(ii), the vested portion of a Participant's 401(k) Make-Whole Account credited with respect to Plan Years beginning on or after January 1, 2007 shall be based on his or her Years of Vesting Service (as defined in the Chicago Mercantile Exchange Inc. 401(k) Savings Plan), as determined in the following table:

Years of Vesting Service	Vested percentage
Less than 2	0%
2	20%
3	40%
4	60%
5 or more	100%

(iv) In the event of a Participant's termination of employment for any reason other than death before such Participant's 401(k) Make-Whole Account is fully vested, the nonvested portion of his or her 401(k) Make-Whole Account shall be forfeited.

(c) Vesting of the portion of a Participant's Account attributable to Cash Balance Plan Make-Whole Credits credited under Section 3.4 shall be determined as follows:

(i) The portion of a Participant's Account attributable to Cash Balance Plan Make-Whole Credits credited for Plan Years beginning prior to January 1, 2007 shall be fully vested and nonforfeitable.

(ii) The portion of a Participant's Account attributable to Cash Balance Plan Make-Whole Credits credited for Plan Years beginning on or after January 1, 2007 shall be fully vested and nonforfeitable in the case of a Participant who was an employee of the Employer on December 31, 2006 and has been continuously employed by the Employer from that date until the date as of which the Cash Balance Plan Make-Whole Credit is credited.

(iii) Except as otherwise provided by Section 4.1(c)(ii), the portion of a Participant's Account attributable to Cash Balance Plan Make-Whole Credits credited for Plan Years beginning on or after January 1, 2007 shall become 100% vested and nonforfeitable upon the completion of three years of Eligibility Service (as defined in the Pension Plan) and shall be 0% vested prior to that time. In the event of a Participant's termination of employment for any reason other than death prior to the completion of three years of Eligibility Service, the portion of his or her Account to which this Section 4.1(c)(iii) applies shall be forfeited.

4.2. Timing of Payment; Distribution Elections

(a) Except as otherwise provided in this Section 4, the vested balance in each Plan Year Account of a Participant shall be paid in a lump sum on the first payroll date following the end of the Restricted Period. For purposes hereof, the "Restricted Period" means the period commencing on the Participant's separation from service and ending on the six-month anniversary of such separation from service or, if earlier, the date of the Participant's death. Notwithstanding the foregoing, in the event a Participant has made a valid distribution election with respect to a

Plan Year Account in accordance with Section 4.2(b), (c) or (d), such Plan Year Account shall be distributed in accordance with such election (subject to the limitations of Section 4.2(e)).

(b) With respect any Plan Year Account relating to a Plan Year before 2007 for which a Participant made a valid irrevocable distribution election between January 1, 2005 and September 30, 2006, pursuant to rules and procedures adopted by the Plan Administrator intended in good faith to comply with Section 409A of the Code and Internal Revenue Service guidance issued thereunder, the vested balance of such Plan Year Account shall be paid in accordance with such election. Such election must specify (i) whether the Plan Year Account is to be paid in a lump sum or in substantially equal annual installments, in either case paid or commencing at the time of the Participant's separation from service, and (ii) if installments are elected, the number of such installments (not to exceed five).

(c) With respect to any Plan Year Account relating to a Plan Year after 2006, a Participant may elect in such manner as the Plan Administrator may prescribe the time and manner in which the vested portion of such Plan Year Account shall be distributed. Such election shall specify either (i) that payment is to be made (or is to commence) upon the Participant's separation from service, or (ii) that payment is to be made (or is to commence) upon the earlier of the Participant's separation from service or a specific date that is not earlier than two years after the first day of the Plan Year to which the Plan Year Account relates. The election shall also specify whether the Plan Year Account is to be paid in a lump sum or in substantially equal annual installments, and if installments are elected, the number of such installments (not to exceed five) (a "form of payment election"). In the case of a Participant who elects to have payment of his or her Plan Year Account be made (or commence) upon the earlier of the Participant's separation from service or a fixed date in accordance with clause (ii) of this Section 4.2(c), the Participant may make a separate form of payment election for each such payment trigger. A Participant's Payment Election with respect to a Plan Year Account shall be made before the first day of the Plan Year to which such Plan Year Account relates or, in the case of a Participant who first becomes eligible for the Plan after January 1 and before October 1 of the Plan Year pursuant to Section 3.2, within the first 30 days of such eligibility. Except as otherwise provided in this Section 4, a Participant's Payment Election shall be irrevocable.

(d) A Participant may elect to change the time and/or form of payment of his or her non-Grandfathered Account, if such election is filed in accordance with procedures established by the Plan Administrator, and: (i) such election shall not take effect until at least 12 months after the date on which the election is filed, (ii) the first payment with respect to which such election is made shall be deferred for a period of not less than 5 years from the date such payment would otherwise have been made, and (iii) any election related to a payment that was otherwise to be made at a specified time may not be made less than 12 months prior to the date of the first scheduled payment. The election shall also specify the form of payment election applicable to such Plan Year Account in accordance with the options specified in Section 4.2(c). In the case of a Participant who elected to have payment of his or her Plan Year Account be made (or commence) upon the earlier of the Participant's separation from service or a fixed date in accordance with clause (ii) of Section 4.2(c), the Participant may make a separate re-deferral payment election for each such payment trigger.

(e) Notwithstanding any provision herein to the contrary, (i) with respect to any distribution triggered by the Participant's separation from service, no portion of such Plan Year

Account shall be paid until the first payroll date after the end of the Restricted Period, and (ii) the foregoing restriction shall not affect the timing of any installment payment after the first installment.

4.3. Unforeseeable Emergencies.

(a) In the event of a Participant's Unforeseeable Emergency, such Participant may request an emergency withdrawal from his or her vested Account. Any such request shall be subject to the approval of the Plan Administrator, which approval (a) shall only be granted to the extent reasonably needed to satisfy the need created by the Unforeseeable Emergency, and (b) shall not be granted to the extent that such need may be relieved (i) through reimbursement or compensation by insurance or otherwise or (ii) by liquidation of the Participant's assets (to the extent the liquidation of such assets would not itself cause severe financial hardship).

(b) In the event of a Participant's Unforeseeable Emergency on account of which the Participant receives a withdrawal pursuant to Section 4.3(a), the Participant's Deferral Election shall be canceled.

(c) An "Unforeseeable Emergency" means a severe financial hardship of the Participant or beneficiary resulting from an illness or accident of the Participant or his or her spouse or dependent (as defined in Section 152(a) of the Code), loss of the Participant's property due to casualty (including the need to rebuild a home following damage to a home not otherwise covered by insurance), or other similar extraordinary and unforeseeable circumstances arising as a result of events beyond the Participant's control. Circumstances that may constitute an Unforeseeable Emergency include the imminent foreclosure of or eviction from the Participant's primary residence; the need to pay for medical expenses, including non-refundable deductibles, as well as for the costs of prescription drug medication; and the need to pay for the funeral expenses of a spouse or a dependent (as defined in Section 152(a) of the Code). The purchase of a home and the payment of college tuition generally are not Unforeseeable Emergencies. Whether the Participant is faced with an Unforeseeable Emergency permitting an emergency withdrawal shall be determined by the Plan Administrator in its sole discretion, based on the relevant facts and circumstances and applying regulations and other guidance under Section 409A of the Code.

4.4. Beneficiary Designation. Each Participant may from time to time designate any legal or natural person or persons (who may be designated contingently or successively) to whom his benefits under the Plan are to be paid if he dies before he receives all of his vested benefits. A beneficiary designation will be effective only if effected in such manner as the Plan Administrator shall prescribe from time to time, and only if the designation is delivered to the Plan Administrator while the Participant is alive, and will cancel all beneficiary designations with respect to the Plan filed earlier. Except as otherwise specifically provided in this Section 4.4, if no valid beneficiary designation is in effect at the time of a Participant's death, or if the designated beneficiary of a deceased Participant dies before him or before complete payment of the Participant's benefits, his benefits shall be paid to the legal representative or representatives of the estate of the last to die of the Participant and his designated beneficiary.

4.5. Distributions to Disabled Persons. Notwithstanding the provisions of this Section 4, if, in the Plan Administrator's opinion, a Participant or beneficiary is under a legal disability or is in any way incapacitated so as to be unable to manage his financial affairs, the Plan Administrator may direct that payment be made to a relative or friend of such person for his benefit until claim is made by a conservator or other person legally charged with the care of his person or his estate, and such payment shall be in lieu of any such payment to such Participant or beneficiary. Thereafter, any benefits under the Plan to which such Participant or beneficiary is entitled shall be paid to such conservator or other person legally charged with the care of his person or his estate.

4.6. Benefits May Not be Assigned. Neither the Participant nor any other person shall have any voluntary or involuntary right to commute, sell, assign, pledge, anticipate, mortgage or otherwise encumber, transfer, hypothecate or convey in advance of actual receipt the amounts, if any, payable hereunder, or any part hereof, which are expressly declared to be unassignable and non-transferable. No part of the amounts payable shall be, prior to actual payment, subject to seizure or sequestration for payment of any debts, judgments, alimony or separate maintenance owed by the Participant or any other person, or be transferred by operation of law in the event of the Participant's or any other person's bankruptcy or insolvency.

4.7. Withholding for Tax Liability. The Exchange may withhold or cause to be withheld from any payment of benefits made pursuant to the Plan any taxes required to be withheld and such sum as the Exchange may reasonably estimate to be necessary to cover any taxes for which the Exchange may be liable and which may be assessed with regard to such payment.

SECTION 5

Miscellaneous

5.1. Section 409A. This Plan is intended to comply with the requirements of Section 409A of the Code and shall be interpreted in a manner consistent therewith. Accordingly, notwithstanding any provisions of the Plan to the contrary:

(a) The Plan shall be operated at all times in accordance with the requirements of Section 409A of the Code and, in the event of any inconsistency between any provision of the Plan and Section 409A, the provisions of Section 409A shall control.

(b) Any provision in the Plan that is determined to violate the requirements of Section 409A of the Code shall be void and without effect.

(c) Any provision required by Section 409A of the Code to appear in the Plan document that is not expressly set forth herein shall be deemed to be set forth herein, and the Plan shall be administered in all respects as if such provision was expressly set forth herein.

5.2. Limitation of Liability. The Exchange, its parents, subsidiaries, and affiliates, the Board of Directors of any of the foregoing, any officer, employer or agent of any of the foregoing, and the members of the Retirement Committee shall not incur any liability individually or on behalf of any other individuals or on behalf of the Exchange or its parents, subsidiaries, or affiliates for any act, or failure to act, made in good faith in relation to the Plan.

5.3. Recoupment Forfeiture. Notwithstanding anything to the contrary herein, if any bonus subject to a deferral election under Section 3.2 is determined to be subject to a recoupment provision of the Bonus Plans (as defined in Section 3.4) relating to restatement of the Company's financial statements, or a similar provision of a plan pursuant to which such bonus is payable (a "Recoupment"), the portion of a Participant's Account attributable to: (a) the amount of any such bonus that is subject to Recoupment, multiplied by (b) the Participant's deferral percentage in effect with respect to such bonus, shall be forfeited.

SECTION 6

Amendment and Termination

6.1. Amendment and Termination.

(a) The Exchange may amend or terminate the Plan at any time and from time to time, and retroactively if deemed necessary or appropriate.

(b) Any amendment of the Plan shall be effected either (i) by resolution of the Compensation Committee or its successor, or (ii) by resolution of the Retirement Committee; provided, however, that only the Compensation Committee or its successor is authorized to approve an amendment that is anticipated to result in a material impact to the Exchange unless it otherwise acts to delegate this responsibility; and provided further that the Retirement Committee may adopt minor or administrative amendments to the Plan, including amendments to comply with applicable laws.

(c) A Plan termination shall be effected by resolution of the Compensation Committee or its successor. In the event of a termination of the Plan, Participants' vested Account balances shall be distributed in such manner as the Plan Administrator shall determine consistent with the requirements of Section 409A of the Code.

Dated this 20th day of March, 2017.

CHICAGO MERCANTILE EXCHANGE INC.

By/s/ Francie Sisul

Its Managing Director, Compensation & Benefits

Appendix A

LIST OF PARTICIPATING EMPLOYERS

Chicago Mercantile Exchange Inc.
GFX Corporation
New York Mercantile Exchange, Inc.
CME Group Index Services LLC (see Supplement A)
Pivot, Inc.

SUPPLEMENT A
CERTAIN CGIS EMPLOYEES

Any eligible individual who was formerly employed by Dow Jones and Company, Inc. (“Dow Jones”) and who was offered and accepted employment with CME Group Index Services LLC (“CGIS”) as a result of the joint venture transaction between CME Group Inc. and Dow Jones shall be treated for eligibility and vesting service purposes as though his or her service with Dow Jones from his or her most recent date of hire with Dow Jones had been rendered as an employee of an Employer.

SUPPLEMENT B

FROZEN NYMEX ACCOUNTS

Applicability of this Supplement B

The provisions of this Supplement B apply to, and supersede any conflicting provisions of the core plan document (the "Core Plan") with respect to, the Accounts ("Frozen NYMEX Accounts") that were transferred to the Plan from the former New York Mercantile Exchange Deferred Compensation Plan for Key Employees (the "NYMEX Plan") as a result of the merger of the NYMEX Plan into the Plan. Except as otherwise provided in this Supplement B, Frozen NYMEX Accounts shall be subject to the provisions of the Core Plan. Section references in this Supplement B are to the Core Plan except as otherwise specified.

A. Adjustment of Accounts.

1. The deemed investment of each Frozen NYMEX Account as of the Transfer Date shall correspond to the deemed investment of such account immediately before the Transfer Date, as determined by applying the investment mapping rule adopted by the Plan Administrator. The "Transfer Date" is the date on which the assets from the NYMEX Plan's rabbi trust are transferred to the rabbi trust for this Plan.

2. In all other respects the Frozen NYMEX Accounts shall be subject to the provisions of Section 3.5.

B. Payment of Plan Benefits

1. Frozen NYMEX Accounts shall be subject to Sections 4.3 through 4.7 of the Core Plan, but, except as provided below, shall not be subject to Section 4.1 or 4.2.

2. All Frozen NYMEX Accounts shall be 100% vested.

3. Payment of a Participant's Frozen NYMEX Account shall be made, or shall commence, on the first day of the month that next follows the six-month anniversary of the Participant's separation from service (the "Distribution Commencement Date"). Payment shall be made in a lump sum unless the election previously made by the Participant under the NYMEX Plan specified an installment payout, in which event payment shall be made in annual installments payable on the Distribution Commencement Date and anniversaries thereof.

4. No changes to a Participant's distribution election shall be permitted; provided, however, that a Participant may make an election under Section 4.2(d) with respect to any Frozen NYMEX Account.

5. Notwithstanding anything to the contrary herein, in the event of a Participant's death before his or her NYMEX Account has been fully distributed, the balance in the Participant's NYMEX Account shall be paid to his or her beneficiary in a lump sum within 90 days after the date of the Participant's death.

Exhibit 31.1

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: August 2, 2017	/s/ Terrence A. Duffy
	Name: Terrence A. Duffy
	Title: Chief Executive Officer

Exhibit 31.2

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: August 2, 2017

/s/ John W. Pietrowicz

Name: John W. Pietrowicz

Title: Chief Financial Officer

Exhibit 32.1

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 June 30, 2017 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), Terrence A. Duffy, as Chief Executive Officer of the Company, and John W. Pietrowicz, as Chief Financial Officer of the Company, each hereby certifies, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that, to the best of his knowledge:

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

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

/s/ Terrence A. Duffy

Name: Terrence A. Duffy
Title: Chief Executive Officer

Dated: August 2, 2017

/s/ John W. Pietrowicz

Name: John W. Pietrowicz
Title: Chief Financial Officer

Dated: August 2, 2017

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

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