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CBOE HOLDINGS, INC.
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CERTAIN DEFINED TERMS

Throughout this document, unless otherwise specified or the context so requires:

• "CBOE Holdings," "we," "us," "our" or "the Company" refers to CBOE Holdings, Inc. and its subsidiaries.

• "CBOE" refers to Chicago Board Options Exchange, Incorporated, a wholly-owned subsidiary of CBOE Holdings, Inc.

• "C2" refers to C2 Options Exchange, Incorporated, a wholly-owned subsidiary of CBOE Holdings, Inc.

• "CFE" refers to CBOE Futures Exchange, LLC, a wholly-owned subsidiary of CBOE Holdings, Inc.

• "CFTC" refers to the U.S. Commodity Futures Trading Commission.

• "Consent Order" refers to the consent order that CBOE and C2 entered into with the SEC on June 11, 2013.

• "FASB" refers to the Financial Accounting Standards Board.

• "GAAP" refers to Generally Accepted Accounting Principles in the United States.

• "OCC" refers to The Options Clearing Corporation, which is the issuer and registered clearing agency for all U.S. exchange-listed options and is the designated clearing organization for futures traded on CFE.

• "OPRA" refers to the Options Price Reporting Authority, which is a limited liability company of member exchanges, including CBOE and C2, and is authorized by the SEC to provide consolidated options information.

• "Our exchanges" refers to CBOE, C2 and CFE.

• "SEC" refers to the U.S. Securities and Exchange Commission.

• "SPX" refers to our S&P 500 Index exchange-traded options products.

• "VIX" refers to the CBOE Volatility Index methodology.

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FORWARD-LOOKING STATEMENTS

This Quarterly Report on Form 10-Q contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 that involve a number of risks and uncertainties. You can identify these statements by forward-looking words such as "may," "might," "should," "expect," "plan," "anticipate," "believe," "estimate," "predict," "potential" or "continue," and the negative of these terms and other comparable terminology. All statements that reflect our expectations, assumptions or projections about the future other than statements of historical fact are forward-looking statements, including statements in the "Management's Discussion and Analysis of Financial Condition and Results of Operations" section of this report. These forward-looking statements, which are subject to known and unknown risks, uncertainties and assumptions about us, may include projections of our future financial performance based on our growth strategies and anticipated trends in our business. These statements are only predictions based on our current expectations and projections about future events. There are important factors that could cause our actual results, level of activity, performance or achievements to differ materially from that expressed or implied by the forward-looking statements. In particular, you should consider the risks and uncertainties described under "Risk Factors" in Part I, Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2015, Part II, Item 1A of this Quarterly Report on Form 10-Q and our other filings with the SEC.

While we believe we have identified the risks that are material to us, these risks and uncertainties are not exhaustive. Moreover, we operate in a very competitive and rapidly changing environment. New risks and uncertainties emerge from time to time, and it is not possible to predict all risks and uncertainties, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements.

Some factors that could cause actual results to differ include:

- the loss of our right to exclusively list and trade certain index options and futures products;
- economic, political and market conditions;
- compliance with legal and regulatory obligations, including our obligations under the Consent Order;
- increasing price competition in our industry;
- decreases in trading volumes or a shift in the mix of products traded on our exchanges;
- legislative or regulatory changes;
- increasing competition by foreign and domestic entities;
- our dependence on third party service providers;
- our index providers' ability to perform under our agreements;
- our ability to operate our business without violating the intellectual property rights of others and the costs associated with protecting our intellectual property rights;
- our ability to accommodate trading volume and transaction traffic, including significant increases, without failure or degradation of performance of our systems;
- our ability to protect our systems and communication networks from security risks, including cyber-attacks;
- the accuracy of our estimates and expectations;
- our ability to maintain access fee revenues;
- our ability to meet our compliance obligations, including managing potential conflicts between our regulatory responsibilities and our for-profit status;
- the ability of our compliance and risk management methods to effectively monitor and manage our risks;
- our ability to attract and retain skilled management and other personnel; and
- our ability to manage our growth and strategic acquisitions or alliances effectively.

We caution you not to place undue reliance on the forward-looking statements, which speak only as of the date of this filing. We undertake no obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

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PART I. FINANCIAL INFORMATION

Item 1. Condensed Consolidated Financial Statements (Unaudited)

CBOE Holdings, Inc. and Subsidiaries

Condensed Consolidated Statements of Income

Three and Six Months Ended June 30, 2016 and 2015

(in thousands, except per share amounts)	Three Months Ended June 30,		Six Months Ended June 30,	
	2016	2015	2016	2015
	(unaudited)			
Operating Revenues:				
Transaction fees	\$117,934	\$101,617	\$235,937	\$200,340
Access fees	13,179	13,371	26,429	27,057
Exchange services and other fees	11,359	9,736	22,750	19,464
Market data fees	8,172	7,557	16,141	15,569
Regulatory fees	9,219	8,746	18,319	17,128
Other revenue	3,466	7,698	6,083	12,006
Total Operating Revenues	163,329	148,725	325,659	291,564
Operating Expenses:				
Compensation and benefits	28,530	24,136	55,636	49,574
Depreciation and amortization	12,260	11,275	24,111	21,677
Technology support services	5,658	4,813	11,336	10,138
Professional fees and outside services	14,745	12,594	28,376	24,544
Royalty fees	19,336	16,755	38,450	30,905
Order routing	(83)	) 627	21	1,414
Travel and promotional expenses	2,492	2,526	5,006	5,027
Facilities costs	1,418	1,293	2,946	2,677
Other expenses	1,006	1,336	2,328	2,684
Total Operating Expenses	85,362	75,355	168,210	148,640
Operating Income	77,967	73,370	157,449	142,924
Other Income/(Expense):				
Investment and other income	5,657	59	6,364	110
Net income/(loss) from investments	218	202	524	(125)
Interest and other borrowing costs	(28)	) —	(55)	) —
Total Other Income/(Expense)	5,847	261	6,833	(15)
Income Before Income Taxes	83,814	73,631	164,282	142,909
Income tax provision	32,883	28,786	64,175	55,804
Net Income	50,931	44,845	100,107	87,105
Net loss attributable to noncontrolling interests	299	—	523	—
Net Income Excluding Noncontrolling Interests	51,230	44,845	100,630	87,105
Change in redemption value of noncontrolling interest	(299)	) —	(523)	) —
Net income allocated to participating securities	(212)	) (199)	(414)	) (379)
Net Income Allocated to Common Stockholders	\$50,719	\$44,646	\$99,693	\$86,726
Net Income Per Share Allocated to Common Stockholders:				
Basic	\$0.62	\$0.54	\$1.22	\$1.04
Diluted	0.62	0.54	1.22	1.04
Weighted average shares used in computing income per share:				
Basic	81,343	83,290	81,580	83,621
Diluted	81,343	83,290	81,580	83,621

See notes to condensed consolidated financial statements

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CBOE Holdings, Inc. and Subsidiaries
Condensed Consolidated Statements of Comprehensive Income
Three and Six Months Ended June 30, 2016 and 2015

(in thousands)	Three Months Ended June 30,		Six Months Ended June 30,	
	2016	2015	2016	2015
	(unaudited)			
Net Income	\$50,931	\$44,845	\$100,107	\$87,105
Comprehensive Income (Loss) - net of tax:				
Post-retirement benefit obligation	11	18	40	(163)
Comprehensive Income	50,942	44,863	100,147	86,942
Comprehensive loss attributable to noncontrolling interests	299	—	523	—
Comprehensive Income Excluding Noncontrolling Interests	51,241	44,863	100,670	86,942
Change in redemption value of noncontrolling interests	(299)	—	(523)	—
Comprehensive income allocated to participating securities	(212)	(199)	(414)	(379)
Comprehensive Income Allocated to Common Stockholders	\$50,730	\$44,664	\$99,733	\$86,563

See notes to condensed consolidated financial statements

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CBOE Holdings, Inc. and Subsidiaries
Condensed Consolidated Balance Sheets
June 30, 2016 and December 31, 2015

	June 30, 2016 (unaudited)	December 31, 2015
(in thousands, except share amounts)		
Assets		
Current Assets:		
Cash and cash equivalents	\$52,193	\$ 102,253
Accounts receivable—net allowances of 2016 - \$87 and 2015 - \$150	71,129	62,535
Marketing fee receivable	7,052	5,682
Income taxes receivable	32,489	27,901
Other prepaid expenses	10,577	5,122
Other current assets	432	625
Total Current Assets	173,872	204,118
Investments	72,698	48,430
Land	4,914	4,914
Property and Equipment:		
Construction in progress	4,083	885
Building	71,158	70,531
Furniture and equipment	152,384	144,597
Less accumulated depreciation and amortization	(166,495)	(155,653)
Total Property and Equipment—Net	61,130	60,360
Goodwill	26,468	7,655
Other Assets:		
Intangible assets (less accumulated amortization—2016 - \$1,038 and 2015 - \$182)	9,522	2,378
Software development work in progress	19,876	13,836
Data processing software and other assets (less accumulated amortization—2016 - \$173,108 and 2015 - \$164,152)	38,164	43,097
Total Other Assets—Net	67,562	59,311
Total	\$406,644	\$ 384,788
Liabilities, Redeemable Noncontrolling Interests and Stockholders' Equity		
Current Liabilities:		
Accounts payable and accrued liabilities	\$54,721	\$ 60,104
Marketing fee payable	7,532	6,141
Deferred revenue and other liabilities	10,876	4,019
Post-retirement benefit obligation - current	54	100
Contingent consideration - current	3,434	2,000
Income tax payable	15	1,633
Total Current Liabilities	76,632	73,997
Long-term Liabilities:		
Post-retirement benefit obligation - long-term	1,902	1,896
Contingent consideration - long-term	—	1,379
Income tax liability	42,175	39,679
Other long-term liabilities	2,605	2,883
Deferred income taxes	4,967	5,309
Total Long-term Liabilities	51,649	51,146
Commitments and Contingencies		
Total Liabilities	128,281	125,143

Redeemable Noncontrolling Interests	12,600	—
Stockholders' Equity:		
Preferred stock, \$0.01 par value: 20,000,000 shares authorized, no shares issued and outstanding at June 30, 2016 or December 31, 2015	—	—
Common stock, \$0.01 par value: 325,000,000 shares authorized; 92,950,065 issued and 81,285,307 outstanding at June 30, 2016; 92,738,803 issued and 82,088,549 outstanding at December 31, 2015	929	927
Additional paid-in-capital	131,851	123,577
Retained earnings	666,016	603,597
Treasury stock at cost – 11,664,758 shares at June 30, 2016 and 10,650,254 shares at December 31, 2015	(532,249)	(467,632)
Accumulated other comprehensive loss	(784)	(824)
Total Stockholders' Equity	265,763	259,645
Total	\$406,644	\$ 384,788
See notes to condensed consolidated financial statements		

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CBOE Holdings, Inc. and Subsidiaries

Condensed Consolidated Statement of Stockholders' Equity and Redeemable Noncontrolling Interests

Six Months Ended June 30, 2016

(Unaudited)

(in thousands)	Preferred Stock	Common Stock	Additional Paid-In Capital	Retained Earnings	Treasury Stock	Accumulated Other Comprehensive Loss	Total Stockholders' Equity	Redeemable Noncontrolling Interests
Balance—January 1, 2016	\$ —	\$ 927	\$ 123,577	\$ 603,597	\$(467,632)	\$ (824)	\$ 259,645	\$ —
Cash dividends on common stock				(37,688)			(37,688)	
Stock-based compensation			7,105				7,105	
Excess tax benefits from stock-based compensation plan			1,171				1,171	
Issuance of vested restricted stock granted to employees	2	(2)					—	
Purchase of common stock					(64,617)		(64,617)	
Net Income excluding noncontrolling interests				100,630			100,630	
Increase due to acquiring majority of outstanding equity of Vest								12,600
Net loss attributable to redeemable noncontrolling interest								(523)
Redemption value adjustment				(523)			(523)	523
Post-retirement benefit obligation adjustment—net of tax expense \$27						40	40	
Balance—June 30, 2016	\$ —	\$ 929	\$ 131,851	\$ 666,016	\$(532,249)	\$ (784)	\$ 265,763	\$ 12,600

See notes to condensed consolidated financial statements

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CBOE Holdings, Inc. and Subsidiaries
Condensed Consolidated Statements of Cash Flows
Six Months Ended June 30, 2016 and 2015

	Six Months Ended	
	June 30,	June 30,
	2016	2015
(in thousands)	(unaudited)	
Cash Flows from Operating Activities:		
Net income	\$ 100,107	\$ 87,105
Adjustments to reconcile net income to net cash flows from operating activities:		
Depreciation and amortization	24,111	21,677
Other amortization	40	36
Provision for deferred income taxes	(369)	) 536
Stock-based compensation	7,105	5,801
Loss on disposition of property	2	392
Equity (gain) in investment	(524)	) (239)
Impairment of investment and other assets	—	118
Change in assets and liabilities:		
Accounts receivable	(8,594)	) (5,246)
Marketing fee receivable	(1,370)	) 3,051
Income taxes receivable	(4,588)	) (1,713)
Prepaid expenses	(5,430)	) (5,837)
Other current assets	195	695
Accounts payable and accrued expenses	(4,617)	) (7,636)
Marketing fee payable	1,391	(2,882)
Deferred revenue and other liabilities	6,579	8,183
Post-retirement benefit obligations	(13)	) (10)
Income tax liability	2,496	2,449
Income tax payable	(1,618)	) (655)
Net Cash Flows provided by Operating Activities	114,903	105,825
Cash Flows from Investing Activities:		
Capital and other assets expenditures	(25,430)	) (17,636)
Acquisition of a majority interest in a business, net of cash received	(14,257)	) —
Investments	(23,744)	) (30,935)
Other	(398)	) 246
Net Cash Flows used in Investing Activities	(63,829)	) (48,325)
Cash Flows from Financing Activities:		
Payment of quarterly dividends	(37,688)	) (35,288)
Excess tax benefit from stock-based compensation	1,171	1,246
Purchase of common stock from employees	(4,119)	) (3,119)
Purchase of common stock under announced program	(60,498)	) (78,632)
Net Cash Flows used in Financing Activities	(101,134)	) (115,793)
Net Decrease in Cash and Cash Equivalents	(50,060)	) (58,293)
Cash and Cash Equivalents at Beginning of Period	102,253	147,927
Cash and Cash Equivalents at End of Period	\$ 52,193	\$ 89,634
Supplemental Disclosure of Cash Flow Information		
Cash paid for income taxes	\$ 67,200	\$ 53,860

See notes to condensed consolidated financial statements

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CBOE HOLDINGS, INC. AND SUBSIDIARIES

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

For the three and six months ended June 30, 2016 and 2015

(Unaudited)

NOTE 1 —DESCRIPTION OF BUSINESS

CBOE Holdings, Inc. is the holding company for Chicago Board Options Exchange, Incorporated, CBOE Futures Exchange, LLC, C2 Options Exchange, Incorporated and other subsidiaries, including our majority ownership in Vest Financial Group Inc. ("Vest").

The Company's principal business is operating markets that offer for trading options on various market indexes (index options), mostly on an exclusive basis, and futures contracts, as well as on non-exclusive "multiply-listed" options, such as options on the stocks of individual corporations (equity options) and options on other exchange-traded products (ETP options), such as exchange-traded funds (ETF options) and exchange-traded notes (ETN options). The Company operates CBOE, CFE and C2 as stand-alone exchanges, but reports the results of its operations in a single reporting segment.

CBOE is our primary options market and offers trading in listed options through a single system that integrates electronic trading and traditional open outcry trading on our trading floor in Chicago. This integration of electronic trading and traditional open outcry trading into a single exchange is known as our Hybrid trading model. CFE, our all-electronic futures exchange, offers trading of futures on the VIX Index and other products. C2 is our all-electronic exchange that also offers trading for listed options, and may operate with a different market model and fee structure than CBOE. All of our exchanges operate on our proprietary technology platform known as CBOE Command.

NOTE 2 — BASIS OF PRESENTATION

These interim unaudited condensed consolidated financial statements have been prepared in accordance with GAAP for interim financial information and with the instructions to Form 10-Q and should be read in conjunction with the consolidated financial statements and notes thereto contained in the Company's Annual Report on Form 10-K for the year ended December 31, 2015.

The preparation of consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosures of contingent assets and liabilities, valuation of redeemable noncontrolling interests and reported amounts of revenues and expenses. On an ongoing basis, management evaluates its estimates based upon historical experience, observance of trends, information available from outside sources and various other assumptions that are believed to be reasonable under the circumstances. Actual results may differ from these estimates under different conditions or assumptions.

In the opinion of management, all adjustments (consisting of normal recurring adjustments) considered necessary for a fair presentation of financial position, results of operations and cash flows at the dates and for the periods presented have been included.

The results of operations for interim periods are not necessarily indicative of the results of operations for the full year.

Recent Accounting Pronouncements

In May 2014, the FASB issued ASU 2014-09, Revenue from Contracts with Customers. This standard outlines a single comprehensive model for entities to use in accounting for revenue arising from contracts with customers and supersedes most current revenue recognition guidance, including industry-specific guidance. In addition, the ASU

provides guidance on accounting for certain revenue-related costs including when to capitalize costs associated with obtaining and fulfilling a contract. ASU 2014-09 provides companies with two implementation methods. Companies can choose to apply the standard retrospectively to each prior reporting period presented (full retrospective application) or retrospectively with the cumulative effect of initially applying the standard as an adjustment to the opening balance of retained earnings of the annual reporting period that includes the date of initial application (modified retrospective application). This guidance is effective for annual reporting periods beginning after December 15, 2016, including interim periods within that reporting period. Early application is not permitted. The FASB deferred the effective date by one year to December 15, 2017 for annual reporting periods beginning after that date. Early adoption of the standard is permitted, but not before the original effective date of December 15,

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2016. The Company is in the process of evaluating this guidance, though we do not expect it will materially impact our consolidated balance sheets, statements of income, comprehensive income or cash flows.

In September 2015, the FASB issued ASU 2015-16, Business Combinations. This standard simplifies the accounting for adjustments made to provisional amounts recognized in a business combination. First, it requires that the acquirer recognize adjustments to provisional amounts that are identified during the measurement period in the reporting period in which the adjustment amount is determined. The acquirer also should record, in the same period's financial statements, the effect on earnings of changes in depreciation, amortization, or other income effects, if any, as a result of the change to the provisional amounts, calculated as if the accounting had been completed at the acquisition date. The amendments should be applied prospectively to adjustments to provisional amounts that are identified after December 15, 2015 and that are within the measurement period. Upon transition, an entity would be required to disclose the nature of, and reason for, the change in accounting principle. An entity would provide that disclosure in the first annual period of adoption and in the interim periods within the first annual period. The Company has adopted this guidance, though we do not expect it will materially impact our consolidated balance sheets, statements of income, comprehensive income or cash flows.

In February 2016, the FASB issued ASU 2016-02, Leases. This update requires a lessee to recognize on the balance sheet a liability to make lease payments and a corresponding right-of-use asset. The guidance also requires certain qualitative and quantitative disclosures about the amount, timing and uncertainty of cash flows arising from leases. This update is effective for annual and interim periods beginning after December 15, 2018. Early adoption is permitted. The Company is in the process of evaluating this guidance, though we do not expect it will materially impact our consolidated balance sheets, statements of income, comprehensive income or cash flows.

In March 2016, the FASB issued ASU 2016-09, Compensation — Stock Compensation. This standard simplifies several aspects of the accounting for stock-based payment transactions, including the recognition of excess tax benefits and deficiencies, the classification of those excess tax benefits on the statement of cash flows, an accounting policy election for forfeitures, the amount an employer can withhold to cover income taxes and still qualify for equity classification and the classification of those taxes paid on the statement of cash flows. This update is effective for annual and interim periods beginning after December 15, 2016 and can be applied either prospectively, retrospectively or using a modified retrospective transition method, depending on the area covered in this update. Early adoption is permitted. The Company is in the process of evaluating this guidance, though we do not expect it will materially impact our consolidated balance sheets, statements of income, comprehensive income or cash flows.

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3. ACQUISITIONS - GOODWILL AND INTANGIBLE ASSETS

Vest Financial Group Inc.

In January 2016, the Company, through its subsidiary CBOE Vest, LLC, acquired a majority of the outstanding equity of Vest, an asset management firm that provides options-based investments through structured protective strategies and innovative technology solutions which allows for enhanced integration of our proprietary products, strategy indexes and options expertise. The purchase price consisted of \$18.9 million in cash, reflecting payments of \$14.9 million to former stockholders and \$4.0 million to Vest for newly issued shares, and represented an ownership interest of 60% resulting in the consolidation of the operations. The purchase price was allocated on a preliminary basis, subject to final allocation, to the assets acquired based on their fair values at the acquisition date.

(amounts in thousands)

Purchase Price	\$ 18,900
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Fair Value of Assets Acquired:

Cash	\$4,700
Intangible assets	8,000
Goodwill	18,800
Total Assets Acquired	\$31,500
Redeemable noncontrolling interests	12,600
Net Assets Acquired	\$ 18,900

The remaining 40% noncontrolling interest is held by the remaining Vest stockholders. The remaining Vest stockholders have a put option that can be exercised to Vest and Vest has a call option that can be exercised to the remaining stockholders. The put and call options can be exercised after five years though they could be accelerated by certain employment-related actions. The combination of the noncontrolling interest and a redemption feature resulted in a redeemable noncontrolling interest, which is classified outside of permanent equity on the condensed consolidated balance sheet.

In addition to the tangible and intangible assets, goodwill totaling \$18.8 million was recorded in connection with the acquisition. Goodwill was calculated as the excess of the consideration transferred over the net assets recognized and represents potential future economic benefits arising from other assets acquired that could not be individually identified and separately recognized. The goodwill is not expected to be deductible for tax purposes.

Pro forma financial information has not been provided as the Vest acquisition is not material to our consolidated balance sheets, statements of income, comprehensive income or cash flows and did not meet the conditions of a significant subsidiary under Rule 1-02 of Regulation S-X.

Vest - Intangible Assets

Intangible assets totaling \$8.0 million were recorded in 2016 in connection with the acquisition of Vest and include: customer relationships, trade names, and technology. Intangible assets and related accumulated amortization consisted of the following as of June 30, 2016 (in thousands):

As of	Estimated Useful Lives
June	

	30,
	2016
Customer relationships	\$3,000 9 years
Trade names	1,000 7 years
Technology	4,000 5 years
Total Intangible Assets Acquired	8,000
Less accumulated amortization	638
Total Intangibles, net	\$7,362

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For the three and six months ended June 30, 2016, amortization of Vest intangible assets was \$0.3 million and \$0.6 million, respectively. The remaining weighted average useful lives of the intangible assets is 5.9 years as of June 30, 2016. The future expected amortization expense from the intangible assets related to the Vest acquisition as of June 30, 2016 is as follows (in thousands):

Year	Amortization expense
2016 (1)	\$ 638
2017	1,276
2018	1,276
2019	1,276
2020	1,276
Total	\$ 5,742

(1) Includes expected amortization for the remaining six months of 2016.

Livevol, Inc.

On August 7, 2015, the Company acquired the market data services and trading analytics platforms of Livevol, Inc. ("Livevol"), which included Livevol Core, Livevol Pro and Livevol X trading analytics platforms, as well as Livevol Enterprise and other market data solutions products. The purchase price consisted of \$7.0 million cash, including \$4.0 million paid to existing Livevol debt holders and \$3.0 million to Livevol owners, upon closing plus contingent consideration based on achievement of certain performance targets, measured at nine and eighteen months from the acquisition date of August 7, 2015. The purchase price was allocated on a preliminary basis, subject to final allocation, to the assets acquired based on their fair values at the acquisition date. The acquisition included tangible and intangible assets totaling \$0.1 million and \$2.6 million, respectively. The tangible assets primarily reflect computer hardware and intangible assets include: customer relationships, trade names, existing technology, non-compete agreements and a leasehold right.

In addition to the assets, goodwill totaling \$7.7 million was recorded in connection with the acquisition. Goodwill was calculated as the excess of the consideration transferred over the net assets recognized and represents potential future economic benefits arising from other assets acquired that could not be individually identified and separately recognized. The goodwill is expected to be fully deductible for tax purposes.

As of June 30, 2016, the company recorded contingent consideration of \$3.4 million, which is based on management's estimate of the performance target achievement by Livevol. If Livevol were to exceed management's estimates it could result in an additional payment in excess of the recorded contingent consideration.

Livevol - Intangible Assets

Intangible assets totaling \$2.6 million were recorded in 2015 in connection with the acquisition of Livevol include: customer relationships, trade names, existing technology, non-compete agreements and leasehold rights. Intangible assets and related accumulated amortization consisted of the following as of June 30, 2016 (in thousands):

As of	
June	Estimated Useful Lives
30,	
2016	

Customer relationships	\$910	13 years
Trade names	370	10 years
Technology	1,130	2-5 years
Other	150	1-4 years
Total	2,560	
Less accumulated amortization	400	
Total Intangibles, net	\$2,160	

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For the three and six months ended June 30, 2016, amortization of Livevol intangible assets was \$0.1 million and \$0.2 million, respectively. The remaining weighted average useful lives of the intangible assets is 7.8 years as of June 30, 2016. The future expected amortization expense from the intangible assets related to the Livevol acquisition as of June 30, 2016 is as follows (in thousands):

Year	Amortization expense
2016 (1)	\$ 217
2017	379
2018	349
2019	309
2020	206
Total	\$ 1,460

(1) Includes expected amortization for the remaining six months of 2016.

NOTE 4 — REDEEMABLE NONCONTROLLING INTEREST

Redeemable noncontrolling interests are reported on the condensed consolidated balance sheets in mezzanine equity in "Redeemable Noncontrolling Interests." We recognize changes to the redemption value of redeemable noncontrolling interests as they occur and adjust the carrying value to equal the redemption value at the end of each reporting period. The resulting increases or decreases in the estimated redemption amount are affected by corresponding charges or credits against retained earnings, or in the absence of retained earnings, additional paid in capital. The redemption amounts have been estimated based on the fair value of the majority-owned subsidiary, determined based on a weighting of the discounted cash flow and other economic factors.

For the six months ended June 30, 2016, the following reflects changes in our redeemable noncontrolling interests (in thousands):

	Redeemable Noncontrolling Interest
Balance as of January 1, 2016	\$ —
Increase due to acquiring majority of outstanding equity of Vest	12,600
Net loss attributable to redeemable noncontrolling interest	(523)
Redemption value adjustment	523
Balance as of June 30, 2016	\$ 12,600

NOTE 5 — NET INCOME PER COMMON SHARE

The computation of basic net income allocated to common stockholders is calculated by reducing net income for the period by dividends paid or declared and undistributed net income for the period that are allocated to participating securities to arrive at net income allocated to common stockholders. Net income allocated to common stockholders is divided by the weighted average number of common shares outstanding during the period to determine net income per share allocated to common stockholders.

The computation of diluted earnings per share is calculated by dividing net income allocated to common stockholders by the sum of the weighted average number of common shares outstanding plus all additional common shares that would have been outstanding if the potentially dilutive common shares had been issued. The dilutive effect is

calculated using the more dilutive of the two-class or treasury stock method.

Additionally, in accordance with accounting guidance, the change in the redemption value for the noncontrolling interest in Vest reduces net income allocated to common shareholders.

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The following table reconciles net income allocated to common stockholders and the number of shares used to calculate the basic and diluted net income per common share for the three and six months ended June 30, 2016 and 2015:

	Three Months Ended June 30,		Six Months Ended June 30,	
(in thousands, except per share amounts)	2016	2015	2016	2015
Basic EPS Numerator:				
Net Income	\$50,931	\$44,845	\$100,107	\$87,105
Loss attributable to noncontrolling interests	299	—	523	—
Net income excluding noncontrolling interests	51,230	44,845	100,630	87,105
Change in redemption value of noncontrolling interest	(299)	—	(523)	—
Earnings allocated to participating securities	(212)	(199)	(414)	(379)
Net Income allocated to common stockholders	\$50,719	\$44,646	\$99,693	\$86,726
Basic EPS Denominator:				
Weighted average shares outstanding	81,343	83,290	81,580	83,621
Basic Net Income Per Common Share	\$0.62	\$0.54	\$1.22	\$1.04
Diluted EPS Numerator:				
Net Income	\$50,931	\$44,845	\$100,107	\$87,105
Loss attributable to noncontrolling interests	299	—	523	—
Net income excluding noncontrolling interests	51,230	44,845	100,630	87,105
Change in redemption value of noncontrolling interest	(299)	—	(523)	—
Earnings allocated to participating securities	(212)	(199)	(414)	(379)
Net Income allocated to common stockholders	\$50,719	\$44,646	\$99,693	\$86,726
Diluted EPS Denominator:				
Weighted average shares outstanding	81,343	83,290	81,580	83,621
Dilutive common shares issued under stock program	—	—	—	—
Diluted Net Income Per Common Share	\$0.62	\$0.54	\$1.22	\$1.04

For the periods presented, the Company did not have shares of restricted stock or restricted stock units that would have an anti-dilutive effect on the computation of diluted net income per common share.

NOTE 6 — STOCK-BASED COMPENSATION

Stock-based compensation is based on the fair value of the award on the date of grant, which is recognized over the related service period, net of estimated forfeitures. The service period is the period over which the related service is performed, which is generally the same as the vesting period.

On February 19, 2016, the Company granted 170,081 restricted stock units ("RSUs"), each of which entitles the holders to one share of common stock upon vesting, to certain officers and employees at a fair value of \$61.80 per share. The RSUs vest ratably over three years, with one-third vesting on each anniversary of the grant date, and vesting accelerates upon the occurrence of a change in control. Unvested RSUs will be forfeited if the officer or employee leaves the Company prior to the applicable vesting date, except in limited circumstances. The RSUs have no voting rights but entitle the holder to receive dividend equivalents.

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In addition, on February 19, 2016, the Company granted 49,238 RSUs contingent on the achievement of performance conditions, including 24,619 RSUs, at a fair value of \$61.80 per RSU, related to earnings per share during the performance period and 24,619 RSUs, at a fair value of \$83.00 per RSU, related to total shareholder return during the performance period. The Company used the Monte Carlo valuation model method to estimate the fair value of the total shareholder return RSUs which incorporated the following assumptions: risk-free interest rate (0.90%), three-year volatility (21.1%) and three-year correlation with S&P 500 Index (0.41). Each of these performance shares has a performance condition under which the number of units ultimately awarded will vary from 0% to 200% of the original grant, with each unit representing the contingent right to receive one share of our common stock. The vesting period for the RSUs contingent on the achievement of performance is three years. For each of the performance awards, the RSUs will be settled in shares of our common stock following vesting of the RSU assuming that the participant has been continuously employed during the vesting period, subject to acceleration in the event of a change in control of the Company or in the event of a participant's earlier death or disability. Participants have no voting rights with respect to RSUs until the issuance of the shares of stock. Dividends are accrued by the Company and will be paid once the RSUs contingent on the achievement of performance conditions vest.

On May 19, 2016, the Company granted 20,553 shares of stock, at a fair value of \$63.29 per share, to the non-employee members of the board of directors. The shares have a one-year vesting period and vesting accelerates upon the occurrence of a change in control of the Company. Unvested portions of the stock will be forfeited if the director leaves the company prior to the applicable vesting date.

For the three and six months ended June 30, 2016 and 2015, the Company recognized \$3.7 million and \$3.1 million and \$7.1 million and \$5.8 million in stock-based compensation expense, respectively. The three and six months ended June 30, 2016 included \$0.3 million and \$0.5 million of accelerated stock-based compensation expense, respectively, for certain officers and employees as a result of attaining certain age and service based requirements in our long-term incentive plan and award agreements. Stock-based compensation expense is included in compensation and benefits in the condensed consolidated statements of income.

As of June 30, 2016, the Company had unrecognized stock-based compensation of \$25.3 million. The remaining unrecognized stock-based compensation is expected to be recognized over a weighted average period of 26.8 months.

The activity in the Company's restricted stock and restricted stock units for the six months ended June 30, 2016 was as follows:

	Number of Shares	Weighted Average Grant Date Fair Value
Unvested at January 1, 2016	456,570	\$ 55.70
Granted	241,681	64.10
Vested	(211,235)	) 48.14
Forfeited	(4,133)	) 59.67
Unvested at June 30, 2016	482,883	\$ 63.34

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NOTE 7 — INVESTMENTS

At June 30, 2016 and December 31, 2015, the Company's investments were comprised of the following (in thousands):

	June 30, 2016	December 31, 2015
Equity Method		
Investment in Signal Trading Systems, LLC	12,183	12,185
Investment in CBOE Stock Exchange, LLC	—	—
Total equity method investments	12,183	12,185
Cost Method		
Investment in OCC	30,333	30,333
Other cost method investments	30,182	5,912
Total cost method investments	60,515	36,245
Total Investments	\$72,698	\$ 48,430

Equity Method

The carrying amount of our equity method investments totaled \$12.2 million as of June 30, 2016 and December 31, 2015, and is included in Investments in our Condensed Consolidated Balance Sheet. Our equity method investments include our investments in Signal Trading Systems, LLC ("Signal") and CBOE Stock Exchange, LLC ("CBSX"). In May 2010, CBOE acquired a 50% interest in Signal from FlexTrade Systems, Inc. ("FlexTrade"). The joint venture develops and markets a multi-asset front-end order entry system, known as "Pulse," which has a particular emphasis on options trading. The Company assists in the development of the terminals and provides marketing services to the joint venture, which is accounted for under the equity method. We account for the investment in Signal under the equity method due to the substantive participating rights provided to the other limited liability company member, FlexTrade. In the six months ended June 30, 2016, the Company recorded contributions to Signal of \$1.0 million and equity earnings in Signal of \$0.5 million. Additionally, the Company received a distribution of \$0.5 million which reduced the carrying value of our investment.

The Company currently holds a 49.96% equity interest in CBSX in return for non-cash property contributions. CBSX ceased trading operations on April 30, 2014. CBOE is responsible for the compliance and regulation of the CBSX marketplace. In addition, the Company has a services agreement under which it provides CBSX with financial, accounting and technology support.

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Cost method

The carrying amount of our cost method investments totaled \$60.5 million and \$36.2 million as of June 30, 2016 and December 31, 2015, respectively, and is included in Investments in our Condensed Consolidated Balance Sheet. We account for investments under the cost-method primarily as a result of our inability to exercise significant influence. As of June 30, 2016, our cost method investments primarily reflect our 20% investment in OCC and minority investments in American Financial Exchange ("AFX"), CurveGlobal and Eris Exchange Holdings, LLC ("Eris").

As previously reported in our Annual Report on Form 10-K for the year ended December 31, 2015, the SEC approved OCC's rule change implementing OCC's new capital plan on February 11, 2016. Certain petitioners subsequently appealed the SEC approval order for the OCC capital plan to the U.S. Court of Appeals for the D.C. Circuit and moved to stay the SEC approval order. On February 23, 2016, the Court denied the petitioners' motion to stay. The appeal of the SEC approval order remains pending.

In 2015, CBOE Holdings, through its subsidiary Loan Markets, LLC, acquired a minority interest in AFX, an electronic marketplace for small and mid-sized banks to lend and borrow short-term funds.

In January 2016, CBOE Holdings, through its subsidiary CBOE III, LLC, acquired a minority interest in CurveGlobal, a new interest rate derivatives venture.

In May 2016, CBOE Holdings, through its subsidiary CBOE III, LLC, acquired a minority interest in Eris, the parent of a U.S. based futures exchange group.

NOTE 8 — ACCOUNTS PAYABLE AND ACCRUED LIABILITIES

As of June 30, 2016 and December 31, 2015, accounts payable and accrued liabilities consisted of the following (in thousands):

	June 30, December 31,	
	2016	2015
Compensation and benefit-related liabilities (1)	\$ 14,459	\$ 23,304
Royalties	17,099	15,409
Contract services	7,550	6,684
Accounts payable	1,939	1,762
Purchase of common stock (2)	—	1,778
Facilities	2,170	2,099
Legal	2,345	1,536
Market linkage	1,672	628
Other	7,487	6,904
Total	\$ 54,721	\$ 60,104

(1) As of June 30, 2016, primarily reflects accrued costs for 2016 incentive compensation expense. At December 31, 2015, primarily reflects 2015 annual accrued incentive compensation, which was paid in the first quarter of 2016.

(2) Reflects shares purchased at the end of the period not settled until three trading days after the trade occurs.

NOTE 9 — MARKETING FEE

CBOE facilitates the collection and payment of marketing fees assessed on certain trades taking place at CBOE. Funds resulting from the marketing fees are made available to Designated Primary Market Makers and Preferred

Market Makers as an economic inducement to route orders to CBOE. Pursuant to ASC 605-45, Revenue Recognition—Principal Agent Considerations, the Company reflects the assessments and payments on a net basis, with no impact on revenues or expenses.

As of June 30, 2016 and December 31, 2015, amounts assessed by the Company on behalf of others included in current assets totaled \$7.1 million and \$5.7 million, respectively, and payments due to others included in current liabilities totaled \$7.5 million and \$6.1 million, respectively.

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NOTE 10 — DEFERRED REVENUE

The following table summarizes the activity in deferred revenue for the six months ended June 30, 2016 (in thousands):

	Balance at December 31, 2015	Cash Additions	Revenue Recognition	Balance at June 30, 2016
Other – net	\$ 4,019	\$ 7,716	\$ (6,859)	\$ 4,876
Liquidity provider sliding scale (1)	—	11,400	(5,400)	6,000
Total deferred revenue	\$ 4,019	\$ 19,116	\$ (12,259)	\$ 10,876

(1) Liquidity providers are eligible to participate in the sliding scale program, which involves prepayment of transaction fees, and receive reduced fees based on the achievement of certain volume thresholds within a calendar month. The prepayment of 2016 transaction fees totaled \$11.4 million. This amount is amortized and recorded ratably, as transaction fees, over the respective twelve month period.

NOTE 11 — EMPLOYEE BENEFITS

Employees are eligible to participate in the Chicago Board Options Exchange SMART Plan (“SMART Plan”). The SMART Plan is a defined contribution plan, which is qualified under Internal Revenue Code Section 401(k). In addition, eligible employees may participate in the Supplemental Employee Retirement Plan, Executive Retirement Plan and Deferred Compensation Plan. Each plan is a defined contribution plan that is non-qualified under Internal Revenue Code. The Company contributed \$2.7 million and \$2.2 million to the defined contribution plans for the six months ended June 30, 2016 and 2015, respectively.

The Company has a post-retirement medical plan for former members of senior management. The Company recorded immaterial post-retirement benefits expense for the six months ended June 30, 2016 and 2015.

NOTE 12 — INCOME TAXES

Income tax provision includes United States federal, state and local taxes and is based on reported pre-tax income. For the three and six months ended June 30, 2016 and 2015, the Company recorded income tax provisions of \$32.9 million and \$64.2 million and \$28.8 million and \$55.8 million, respectively. For the three months ended June 30, 2016 and 2015 the effective tax rate was 39.2% and 39.1%, respectively. The effective tax rate for the six months ended June 30, 2016 and 2015 was 39.1% and 39.0%, respectively.

Income tax expense is provided on an interim basis based upon our estimate of the annual effective income tax rate, adjusted each quarter for discrete items. In determining the estimated annual effective income tax rate, we analyze various factors, including projections of our annual earnings and taxing jurisdictions in which the earnings will be generated, the impact of state and local income taxes, and our ability to use tax credits.

As of June 30, 2016 and December 31, 2015, the Company had \$32.9 million and \$31.9 million, in unrecognized tax benefits, respectively, all of which would favorably impact the effective tax rate if recognized. As of June 30, 2016 and December 31, 2015, the Company has recognized a liability for interest and penalties of \$9.2 million and \$7.7 million, respectively.

We file income tax returns in the U.S. federal jurisdiction and various state jurisdictions. Federal income tax returns are generally not subject to examination by the Internal Revenue Service (“IRS”) for tax years prior to 2008. Tax years open to examination by state and local taxing authorities vary by jurisdiction. We are generally not subject to state or local tax examinations for tax years prior to 2007. The IRS is currently examining tax years 2008 through 2013. The New York State Department of Taxation and Finance is currently examining the returns filed for tax years 2007

through 2012. Tax returns for tax years 2010 through 2012 are currently under examination by the New Jersey Division of Taxation. We have been notified by the Illinois Department of Revenue that it intends to examine our tax returns filed for the 2013 and 2014 tax years.

NOTE 13 — FAIR VALUE MEASUREMENTS

Fair value is the price that would be received upon the sale of an asset or paid upon the transfer of a liability in an orderly transaction between market participants at the measurement date and in the principal or most advantageous market for

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that asset or liability. The fair value should be calculated based on assumptions that market participants would use in pricing the asset or liability, not on assumptions specific to the entity. In addition, the fair value of liabilities should include consideration of non-performance risk, including the Company's own credit risk.

The Company applied FASB ASC 820, Fair Value Measurement and Disclosure, which provides guidance for using fair value to measure assets and liabilities by defining fair value and establishing the framework for measuring fair value. ASC 820 applies to financial and non-financial instruments that are measured and reported on a fair value basis. The three-level hierarchy of fair value measurements is based on whether the inputs to those measurements are observable or unobservable. Observable inputs reflect market data obtained from independent sources, while unobservable inputs reflect the Company's market assumptions. The fair-value hierarchy requires the use of observable market data when available and consists of the following levels:

Level 1—Unadjusted inputs based on quoted markets for identical assets or liabilities.

- Level 2—Observable inputs, either direct or indirect, not including Level 1, corroborated by market data or based upon quoted prices in non-active markets.

Level 3—Unobservable inputs that reflect management's best assumptions of what market participants would use in valuing the asset or liability.

The Company has included a tabular disclosure for financial assets that are measured at fair value on a recurring basis in the condensed consolidated balance sheet as of June 30, 2016 and December 31, 2015. The Company holds no financial liabilities that are measured at fair value on a recurring basis.

(amounts in thousands)	Level 1	Level 2	Level 3	Total
Assets at fair value:				
Money market funds	\$34,500	\$ —	\$ —	—\$34,500
Total assets at fair value at June 30, 2016	\$34,500	\$ —	\$ —	—\$34,500

(amounts in thousands)	Level 1	Level 2	Level 3	Total
Assets at fair value:				
Money market funds	\$84,000	\$ —	\$ —	—\$84,000
Total assets at fair value at December 31, 2015	\$84,000	\$ —	\$ —	—\$84,000

In 2015, CBOE Holdings, through its subsidiary Loan Markets, LLC, acquired a minority interest in AFX. The investment, measured at fair value on a non-recurring basis, is classified as level 3 as the fair value was based on both observable and unobservable inputs.

In January 2016, CBOE Holdings, through its subsidiary CBOE III, LLC, acquired a minority interest in CurveGlobal. The investment, measured at fair value on a non-recurring basis, is classified as level 3 as the fair value was based on both observable and unobservable inputs.

In May 2016, CBOE Holdings, through its subsidiary CBOE III, LLC, acquired a minority interest in Eris. The investment, measured at fair value on a non-recurring basis, is classified as level 3 as the fair value was based on both observable and unobservable inputs.

The Company has recorded contingent consideration of \$3.4 million through June 30, 2016, categorized as level 3, which is based on management's estimate of the achievement by Livevol of certain performance targets at nine and eighteen months from the acquisition date. If Livevol were to exceed management's estimates it could result in an additional payment in excess of the recorded contingent consideration.

NOTE 14 — LEGAL PROCEEDINGS

As of June 30, 2016, the end of the period covered by this report, the Company was subject to various legal proceedings and claims, as well as certain other legal proceedings and claims that have not been fully resolved and that have

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arisen in the ordinary course of business. For a description of each of these proceedings, please see Note 12 to our consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2015.

The Company reviews its legal proceedings and claims, regulatory reviews and inspections and other legal proceedings on an ongoing basis and follows appropriate accounting guidance when making accrual and disclosure decisions. The Company establishes accruals for those contingencies where the incurrence of a loss is probable and can be reasonably estimated, and we disclose the amount accrued and the amount of a reasonably possible loss in excess of the amount accrued, if such disclosure is necessary for our financial statements to not be misleading. The Company does not record liabilities when the likelihood that the liability has been incurred is probable, but the amount cannot be reasonably estimated, or when the liability is believed to be only reasonably possible or remote. The Company's assessment of whether a loss is reasonably possible or probable is based on its assessment of the ultimate outcome of the matter following all appeals.

As of June 30, 2016, the Company does not believe that there is a reasonable possibility that any material loss exceeding the amounts already recognized for these reviews, inspections or other legal proceedings, if any, has been incurred. While the consequences of certain unresolved proceedings are not presently determinable, the outcome of any litigation is inherently uncertain and an adverse outcome from certain matters could have a material effect on our earnings in any given reporting period. However, in the opinion of management, the ultimate liability is not expected to have a material effect on our financial position, liquidity or capital resources.

The following information updates the legal proceedings disclosures in our Annual Report on Form 10-K for the year ended December 31, 2015 and subsequent Quarterly Reports on Form 10-Q.

ISE -- '707

On November 22, 2006, International Securities Exchange, LLC ("ISE") filed an action in the United States District Court for the Southern District of New York claiming that CBOE's Hybrid trading system infringes ISE's U.S. Patent No. 6,618,707 (the "'707 patent"). On January 31, 2007, CBOE filed an action in federal court in the Northern District of Illinois seeking a declaratory judgment that the '707 patent was not infringed, not valid and/or not enforceable against CBOE. The New York case was transferred to the federal court in the Northern District of Illinois on August 9, 2007.

On March 14, 2013, ISE conceded to an adverse judgment in this matter and asked that the federal court in the Northern District of Illinois enter judgment for CBOE. ISE appealed certain court rulings to the Federal Circuit Court of Appeals. The federal court in the Northern District of Illinois on January 14, 2014 issued an opinion and order awarding certain costs associated with the litigation to CBOE. On April 7, 2014, the Federal Circuit Court of Appeals issued a favorable opinion to CBOE. On March 31, 2016, the federal court in the Northern District of Illinois granted CBOE's motion for attorney fees and expenses and CBOE subsequently supplemented such request on April 7, 2016. On May 18, 2016, ISE agreed with CBOE to settle the amount owed for attorney fees and expenses. Pursuant to such agreement, ISE paid CBOE a total of \$5.5 million, recorded in investment and other income, in the second quarter of 2016.

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NOTE 15 — SUBSEQUENT EVENTS

On July 28, 2016, the Company announced that its board of directors declared a quarterly cash dividend of \$0.25 per share. The dividend is payable September 16, 2016 to stockholders of record at the close of business on September 2, 2016.

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CBOE HOLDINGS, INC. AND SUBSIDIARIES

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

The following discussion should be read in conjunction with the accompanying unaudited condensed consolidated financial statements and the notes thereto, included in Item 1 in this Quarterly Report on Form 10-Q, and the audited consolidated financial statements in the Company's Annual Report on Form 10-K for the year ended December 31, 2015, and as contained in that report, the information under the heading "Management's Discussion and Analysis of Financial Condition and Results of Operations." This discussion contains forward-looking information. Please see "Forward-Looking Statements" for a discussion of the uncertainties, risks and assumptions associated with these statements.

RESULTS OF OPERATIONS

Three months ended June 30, 2016 compared to the three months ended June 30, 2015

Overview

The following summarizes our financial performance for the three months ended June 30, 2016 compared to the same period in 2015.

	2016	2015	Inc./(Dec.)	Percent Change
	(in millions, except per share amounts)			
Total Operating Revenues	\$163.3	\$148.7	\$ 14.6	9.8 %
Total Operating Expenses	85.3	75.3	10.0	13.3 %
Operating Income	78.0	73.4	4.6	6.3 %
Total Other Income	5.8	0.3	5.5	2,140.2%
Income Before Income Taxes	83.8	73.7	10.1	13.7 %
Income tax provision	32.9	28.8	4.1	14.2 %
Net Income	\$50.9	\$44.9	\$ 6.0	13.4 %
Net Income Allocated to Common Stockholders	\$50.7	\$44.6	\$ 6.1	13.6 %
Operating Margin	47.7	% 49.3	%	
Net income percentage	31.2	% 30.2	%	
Diluted Net Income Per Share Allocated to Common Stockholders	\$0.62	\$0.54		

• Total operating revenues increased primarily due to higher transaction fees and exchange services and other fees.

• Total operating expenses increased primarily due to higher compensation and benefits, depreciation and amortization, professional fees and outside services and royalty fees.

Operating Revenues

Total operating revenues for the three months ended June 30, 2016 were \$163.3 million, an increase of \$14.6 million, or 9.8%, compared with the same period in 2015. The following summarizes changes in total operating revenues for the three months ended June 30, 2016 compared to the same period in 2015.

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	2016	2015	Inc./ (Dec.)	Percent Change
	(in millions)			
Transaction fees	\$117.9	\$101.6	\$16.3	16.1 %
Access fees	13.2	13.4	(0.2)	(1.4) %
Exchange services and other fees	11.3	9.7	1.6	16.7 %
Market data fees	8.2	7.6	0.6	8.1 %
Regulatory fees	9.2	8.7	0.5	5.4 %
Other revenue	3.5	7.7	(4.2)	(55.0) %
Total Operating Revenues	\$163.3	\$148.7	\$14.6	9.8 %

Transaction Fees

Transaction fees totaled \$117.9 million for the three months ended June 30, 2016, compared with \$101.6 million for the same period in 2015, an increase of \$16.3 million, or 16.1%. The increase in transaction fees was primarily due to an increase in average revenue per contract of 9.9% and a 5.6% increase in total trading volume. The increase in average revenue per contract resulted primarily from a shift in the mix of products traded. As a percentage of total trading volume, index options and futures contracts, which generate our highest options and overall average revenue per contract, respectively, accounted for 42.9% of trading volume during the second quarter of 2016 up from 37.2% in the second quarter of 2015.

Average revenue per contract, discussed in more detail below, is impacted by our fee structures, which includes volume based incentive programs, mix of products traded, the account type (customer, firm, market-maker, etc.) and the manner in which a trade is executed. The implementation of fee changes, which may increase or decrease our average revenue per contract, is primarily to ensure that we are competitive in the options marketplace and to ultimately improve and continue to drive order flow to our exchanges. We cannot predict the trading patterns of exchange participants, which may be based on factors outside our control, but we can attempt to price our products at levels that are competitive in our market.

Trading volume is impacted by many factors, including: macroeconomic events, market volatility, regulatory actions or considerations, availability of capital, competition and pricing.

The following summarizes transaction fees by product category for the three months ended June 30, 2016 compared to the same period in 2015.

	2016	2015	Inc./ (Dec.)	Percent Change
	(in millions)			
Equities	\$6.1	\$8.9	\$(2.8)	(31.3) %
Indexes	75.9	63.4	12.5	19.6 %
Exchange-traded products	8.1	9.0	(0.9)	(9.2) %
Total options transaction fees	90.1	81.3	8.8	10.8 %
Futures	27.8	20.3	7.5	37.1 %
Total transaction fees	\$117.9	\$101.6	\$16.3	16.1 %

Trading Volume

Our average daily volume ("ADV") for the three months ended June 30, 2016 and 2015 was 4.55 million contracts, up 3.9% compared with 4.38 million contracts for the same period in 2015. Total trading days for the three months ended June 30, 2016 and 2015 were sixty-four and sixty-three, respectively.

The following summarizes changes in total trading volume and ADV by product category for the three months ended June 30, 2016 compared to the same period in 2015.

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	2016	2015		Volume	ADV			
	Volume	ADV	Volume	ADV	Percent	Percent		
					Change	Change		
	(in millions)							
Equities	87.2	1.36	96.4	1.53	(9.5)%	(10.9)%		
Indexes	108.2	1.69	91.1	1.45	18.8 %	17.0 %		
Exchange-traded products	79.3	1.24	76.9	1.22	3.1 %	1.5 %		
Total options contracts	274.7	4.29	264.4	4.20	3.9 %	2.3 %		
Futures	16.5	0.26	11.5	0.18	43.3 %	41.0 %		
Total contracts	291.2	4.55	275.9	4.38	5.6 %	3.9 %		

The following provides the percentage of volume by product category for the three months ended June 30, 2016 and 2015.

	2016	2015
Equities	29.9 %	34.9 %
Indexes	37.2 %	33.0 %
Exchange-traded products	27.2 %	27.9 %
Futures	5.7 %	4.2 %
Total	100.0%	100.0%

Average Revenue Per Contract

Average revenue per contract was \$0.405 for the three months ended June 30, 2016, an increase of 9.9% compared with \$0.368 for the same period in 2015. Average revenue per contract represents transaction fees divided by total contracts cleared.

The following summarizes average revenue per contract by product category for the three months ended June 30, 2016 compared to the same period in 2015.

	2016	2015	Percent	
			Change	
Equities	\$0.070	\$0.093	(24.0)%	
Indexes	0.701	0.697	0.6 %	
Exchange-traded products	0.103	0.117	(11.9)%	
Total options average revenue per contract	0.328	0.308	6.6 %	
Futures	1.682	1.758	(4.4)%	
Total average revenue per contract	\$0.405	\$0.368	9.9 %	

Factors contributing to the change in total average revenue per contract for the three months ended June 30, 2016 compared to the same period in 2015 include:

Volume Mix — We experienced a shift in the mix of products traded. As a percentage of total volume, index options and futures contracts accounted for 42.9% of total trading volume, up from 37.2% in the prior year period. Index options and futures contracts represent our highest options average revenue per contract and highest average revenue per contract, respectively.

Rate structure — Our rate structure includes sliding scales, volume discounts, volume incentive programs and caps on fees as part of our effort to increase liquidity and market share in multiply-listed options (equities and exchange-traded products). The decrease in average revenue per contract in multiply-listed options was primarily a result of higher volume discounts and incentives.

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Exchange Services and Other Fees

Exchange services and other fees for the three months ended June 30, 2016 increased \$1.6 million to \$11.3 million from \$9.7 million for the same period in 2015. The increase was primarily a result of revenue generated from Livevol technology services, which was acquired on August 7, 2015 and higher fees for technology services.

Market Data Fees

Market data fees for the three months ended June 30, 2016 increased to \$8.2 million from \$7.6 million for the same period in 2015. For the three months ended June 30, 2016 and 2015, income derived from our market data services, which provide current and historical options and futures data, totaled \$4.4 million and \$4.0 million, respectively. OPRA income, which is allocated based on each exchange's share of total cleared options transactions, totaled \$3.8 million and \$3.6 million, respectively. The Company's share of total cleared options transactions increased to 25.9% from 23.9% for the same period in 2015.

Other Revenue

Other revenue for the three months ended June 30, 2016 and 2015 was \$3.5 million and \$7.7 million, respectively. The decrease of \$4.2 million was primarily due to lower revenue from fines assessed for rule violations.

Concentration of Revenue

All contracts traded on our exchanges must be cleared through clearing members of OCC. At June 30, 2016, there were one hundred six Trading Permit Holders that are clearing members of the OCC. Two clearing members accounted for 41% of transaction and other fees collected through the OCC for the three months ended June 30, 2016. The next largest clearing member accounted for approximately 14% of transaction and other fees collected through the OCC. No one Trading Permit Holder using the services of the top two clearing members represented more than 26% of transaction and other fees collected through the OCC, for the respective clearing member, in the three months ended June 30, 2016. Should a clearing member withdraw from CBOE, we believe the Trading Permit Holder portion of that clearing member's trading activity would likely transfer to another clearing member.

The two largest clearing members mentioned above clear the majority of the market-maker sides of transactions at CBOE, C2 and at all of the U.S. options exchanges. If either of these clearing members were to withdraw from the business of market-maker clearing and market-makers were unable to transfer to another clearing member, this could create significant disruption to the U.S. options markets, including ours.

Operating Expenses

Total operating expenses increased \$10.0 million, or 13.3%, to \$85.3 million for the three months ended June 30, 2016 from \$75.3 million for the same period in 2015. This increase was primarily due to higher compensation and benefits, depreciation and amortization, professional fees and outside services and royalty fees.

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The following summarizes changes in operating expenses for the three months ended June 30, 2016 compared to the same period in 2015.

	2016	2015	Inc./ (Dec.)	Percent Change	
		(in millions)			
Compensation and benefits	\$28.5	\$ 24.1	\$ 4.4	18.2	%
Depreciation and amortization	12.3	11.3	1.0	8.7	%
Technology support services	5.7	4.8	0.9	17.6	%
Professional fees and outside services	14.7	12.6	2.1	17.1	%
Royalty fees	19.3	16.8	2.5	15.4	%
Order routing	(0.1)	0.6	(0.7)	(113.2)	%
Travel and promotional expenses	2.5	2.5	—	—	%
Facilities costs	1.4	1.3	0.1	9.7	%
Other expenses	1.0	1.3	(0.3)	(23.1)	%
Total Operating Expenses	\$85.3	\$ 75.3	\$ 10.0	13.3	%

Compensation and Benefits

For the three months ended June 30, 2016, compensation and benefits were \$28.5 million, or 17.5% of total operating revenues, compared with \$24.1 million, or 16.2% of total operating revenues, for the same period in 2015. This represented an increase of \$4.4 million, or 18.2%, from the prior period, which primarily resulted from increased staffing levels and higher annual incentive compensation, which is aligned with our financial performance relative to our targets.

Depreciation and Amortization

For the three months ended June 30, 2016, depreciation and amortization costs were \$12.3 million compared with \$11.3 million for the same period in 2015. This represented an increase of \$1.0 million, which primarily resulted from increased capital spending for systems, the acceleration of depreciation for certain assets that have a shorter than expected useful life and amortization of intangible assets related to the acquisitions of Livevol and Vest.

Professional Fees and Outside Services

Professional fees and outside services for the three months ended June 30, 2016 were \$14.7 million compared with \$12.6 million for the same period in 2015, an increase of \$2.1 million, which primarily resulted from higher legal fees, including acquisition-related costs, and higher contract services related to certain regulatory services provided by FINRA for CBOE and C2.

Royalty Fees

Royalty fees for the three months ended June 30, 2016 were \$19.3 million compared with \$16.8 million for the same period in 2015. This represented an increase of \$2.5 million, which primarily resulted from higher trading volume in licensed products.

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Operating Income

As a result of the items above, operating income for the three months ended June 30, 2016 was \$78.0 million compared to \$73.4 million for the same period in 2015, an increase of \$4.6 million.

Other Income

Other income reflected income of \$5.8 million for the three months ended June 30, 2016 compared with income of \$0.3 million for the same period in 2015. The increase in other income resulted from \$5.5 million of proceeds received from the settlement of litigation.

Income before Income Taxes

Income before income taxes for the three months ended June 30, 2016 was \$83.8 million compared to \$73.7 million for the same period in 2015, an increase of \$10.1 million.

Income Tax Provision

For the three months ended June 30, 2016, the income tax provision was \$32.9 million compared to \$28.8 million for the same period in 2015. The effective tax rate was 39.2% and 39.1% for the three months ended June 30, 2016 and 2015, respectively.

Net Income

As a result of the items above, net income allocated to common stockholders for the three months ended June 30, 2016 was \$50.7 million compared to \$44.6 million for the same period in 2015, an increase of \$6.1 million. Basic and diluted net income per share allocated to common stockholders were \$0.62 and \$0.54 for the three months ended June 30, 2016 and 2015, respectively.

Six months ended June 30, 2016 compared to the six months ended June 30, 2015

Overview

The following summarizes changes in financial performance for the six months ended June 30, 2016 compared to the same period in 2015.

	2016	2015	Inc./ (Dec.)	Percent Change
	(in millions, except per share amounts)			
Total Operating Revenues	\$325.7	\$291.5	\$ 34.2	11.7 %
Total Operating Expenses	168.2	148.6	19.6	13.2 %
Operating Income	157.5	142.9	14.6	10.2 %
Total Other Income/(Expense)	6.8	—	6.8	100%
Income Before Income Taxes	164.3	142.9	21.4	15.0 %
Income tax provision	64.2	55.8	8.4	15.0 %
Net Income	\$100.1	\$87.1	\$ 13.0	14.9 %
Net Income Allocated to Common Stockholders	\$99.7	\$86.7	\$ 13.0	15.0 %
Operating Margin	48.4	% 49.0	%	
Net income percentage	30.7	% 29.9	%	

Diluted Net Income Per Share Allocated to Common Stockholders \$1.22 \$1.04

Total operating revenues increased primarily due to higher transaction fees, exchange fees and other services, and regulatory fees, partially offset by lower other revenue.

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Total operating expenses increased primarily due to higher compensation and benefits, depreciation and amortization, professional fees and outside services and royalty fees.

Operating Revenues

Total operating revenues for the six months ended June 30, 2016 were \$325.7 million, an increase of \$34.2 million, or 11.7%, compared with the same period in 2015. The following summarizes changes in total operating revenues for the six months ended June 30, 2016 compared to the same period in 2015.

	2016	2015	Inc./ (Dec.)	Percent Change
	(in millions)			
Transaction fees	\$235.9	\$200.3	\$35.6	17.8 %
Access fees	26.5	27.0	(0.5)	(2.3)%
Exchange services and other fees	22.8	19.5	3.3	16.9 %
Market data fees	16.1	15.6	0.5	3.7 %
Regulatory fees	18.3	17.1	1.2	7.0 %
Other revenue	6.1	12.0	(5.9)	(49.3)%
Total Operating Revenues	\$325.7	\$291.5	\$34.2	11.7 %

Transaction Fees

Transaction fees totaled \$235.9 million for the six months ended June 30, 2016, compared with \$200.3 million for the same period in 2015, an increase of \$35.6 million, or 17.8%. This increase was primarily due to a 14.6% increase in average revenue per contract and a 2.8% increase in total trading volume. The increase in average revenue per contract resulted primarily from a shift in volume mix of products traded. As a percent of total trading volume, index options and futures contracts, which generates our highest options and overall average revenue per contract, respectively, accounted for 42.6% of trading volume during the six months ended June 30, 2016 up from 35.2% during the same period in 2015.

The following summarizes transaction fees by product category for the six months ended June 30, 2016 and 2015.

	2016	2015	Inc./ (Dec.)	Percent Change
	(in millions)			
Equities	\$13.7	\$17.5	\$ (3.8)	(21.9)%
Indexes	155.4	124.2	31.2	25.1 %
Exchange-traded products	17.4	18.9	(1.5)	(7.7)%
Total options transaction fees	186.5	160.6	25.9	16.1 %
Futures	49.4	39.7	9.7	24.5 %
Total transaction fees	\$235.9	\$200.3	\$35.6	17.8 %

Trading Volume

Our ADV for the six months ended June 30, 2016 was 4.66 million contracts, up 2.0% compared with 4.57 million for the same period in 2015. Total trading days for the six months ended June 30, 2016 and 2015 were one hundred twenty-five, and one hundred twenty-four, respectively.

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The following summarizes changes in total trading volume and ADV by product category for the six months ended June 30, 2016 compared to the same period in 2015.

	2016	2015	Volume	ADV	Volume	ADV	Percent	Percent
	Volume	ADV	Volume	ADV	Change	Change	Change	Change
	(in millions)							
Equities	175.6	1.40	206.7	1.67	(15.0)%	(15.7)%		
Indexes	218.7	1.75	176.4	1.42	24.0 %	23.0 %		
Exchange-traded products	158.4	1.27	160.5	1.29	(1.3)%	(2.1)%		
Total options contracts	552.7	4.42	543.6	4.38	1.7 %	1.7 %		
Futures	29.7	0.24	23.0	0.19	29.5 %	28.4 %		
Total contracts	582.4	4.66	566.6	4.57	2.8 %	2.0 %		

The following provides the percentage of volume by product category for the six months ended June 30, 2016 and 2015.

	2016	2015
Equities	30.2 %	36.5 %
Indexes	37.5 %	31.1 %
Exchange-traded products	27.2 %	28.3 %
Futures	5.1 %	4.1 %
Total	100.0%	100.0%

Average Revenue Per Contract

Average revenue per contract was \$0.405 for the six months ended June 30, 2016, an increase of 14.6% compared with \$0.354 for the same period in 2015. The following summarizes average revenue per contract by product category for the six months ended June 30, 2016 compared to the same period in 2015.

	2016	2015	Percent
			Change
Equities	\$0.078	\$0.085	(8.1)%
Indexes	0.711	0.704	0.9 %
Exchange-traded products	0.110	0.117	(6.5)%
Total options average revenue per contract	0.337	0.295	14.2 %
Futures	1.664	1.732	(3.9)%
Total average revenue per contract	\$0.405	\$0.354	14.6 %

Factors contributing to the change in total average revenue per contract for the six months ended June 30, 2016 compared to the same period in 2015, include:

• **Product mix** — Average revenue per contract reflects a shift in the mix of products traded. Index options and futures accounted for 42.6% of total trading volume as compared to 35.2% in the prior year period.

• **Rate structure** — The decrease in average revenue per contract in multiply-listed options was primarily the result of higher volume discounts and incentives.

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Exchange Services and Other Fees

Exchange services and other fees for the six months ended June 30, 2016 increased to \$22.8 million from \$19.5 million for the same period in 2015. The increase was primarily a result of revenue generated from Livevol technology services, which was acquired in August 2015, and higher fees for technology services.

Market Data Fees

Market data fees for the six months ended June 30, 2016 and 2015 totaled \$16.1 million and \$15.6 million, respectively. Income derived from our market data services totaled \$8.7 million and \$8.2 million, respectively. The increase of \$0.5 million resulted primarily from increases in subscribers and fees for certain market data services. OPRA income totaled \$7.4 million for the periods ended June 30, 2016 and 2015. The Company's share of income derived from OPRA decreased to 23.3% from 24.6% for the same period in 2015. The decrease in share was offset by an increase in total OPRA distributable income resulting from a membership fee from a new exchange that joined OPRA and fee increases implemented by OPRA resulting in comparable income in the periods presented.

Regulatory Fees

Regulatory fees for the six months ended June 30, 2016 increased to \$18.3 million from \$17.1 million for the same period in 2015. The increase in regulatory fees is primarily the result of an increase in our options regulatory fees resulting from increased costs associated with the regulation of CBOE and C2, partially offset by a decrease in regulatory fees received for other regulatory services.

Other Revenue

Other revenue for the six months ended June 30, 2016 and 2015 were \$6.1 million and \$12.0 million, respectively. The decrease of \$5.9 million was primarily due to lower revenue from fines assessed for rule violations.

Operating Expenses

Total operating expenses were \$168.2 million and \$148.6 million for the six months ended June 30, 2016 and 2015, respectively. This increase was primarily due to higher compensation and benefits, depreciation and amortization, professional fees and outside services and royalty fees. As a percentage of operating revenues for the six months ended June 30, 2016 and 2015, operating expenses were 51.7% and 51.0%, respectively.

The following summarizes changes in operating expenses for the six months ended June 30, 2016 compared to the same period in 2015.

	2016	2015	Inc./ (Dec.)	Percent Change	
		(in millions)			
Compensation and benefits	\$55.6	\$ 49.6	\$ 6.0	12.2	%
Depreciation and amortization	24.1	21.7	2.4	11.2	%
Technology support services	11.3	10.1	1.2	11.8	%
Professional fees and outside services	28.4	24.5	3.9	15.6	%
Royalty fees	38.5	30.9	7.6	24.4	%
Order routing	—	1.4	(1.4	) (100.0)	%
Travel and promotional expenses	5.0	5.0	—	—	%
Facilities costs	3.0	2.7	0.3	10.0	%

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Other expenses	2.3	2.7	(0.4	)	(13.3	)%
Total Operating Expenses	\$168.2	\$ 148.6	\$ 19.6		13.2	%

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Compensation and Benefits

For the six months ended June 30, 2016, compensation and benefits were \$55.6 million, or 17.1% of total operating revenues, compared with \$49.6 million, or 17.0% of total operating revenues, for the same period in 2015. This represented an increase of \$6.0 million, which primarily resulted from increased staffing levels, higher stock-based compensation, including accelerated stock-based compensation expense, and higher annual incentive compensation, which is aligned with our financial performance relative to our targets. These amounts were partially offset by lower medical insurance expenses.

Depreciation and Amortization

For the six months ended June 30, 2016, depreciation and amortization costs were \$24.1 million compared with \$21.7 million for the same period in 2015. This represented an increase of \$2.4 million, which primarily resulted from increased capital spending for systems, the acceleration of depreciation for certain assets that have a shorter than expected useful life and amortization of intangible assets related to the acquisitions of Livevol and Vest.

Professional Fees and Outside Services

Expenses related to professional fees and outside services increased to \$28.4 million for the six months ended June 30, 2016 from \$24.5 million in the prior-year period. This represented an increase of \$3.9 million, which primarily resulted from higher legal fees, including acquisition related costs, contract services related to certain regulatory services provided by FINRA and other professional fees.

Royalty Fees

Royalty fees for the six months ended June 30, 2016 were \$38.5 million compared with \$30.9 million in the prior-year period. This represented an increase of \$7.6 million which primarily resulted from higher trading volume in licensed products.

Operating Income

As a result of the items above, operating income for the six months ended June 30, 2016 was \$157.5 million compared to \$142.9 million for the same period in 2015, an increase of \$14.6 million.

Other Income/(Expense)

Other income/(expense) reflected income of \$6.8 million for the six months ended June 30, 2016 compared with an immaterial expense for the same period in 2015. The income primarily included proceeds from the settlement of litigation, the Company's share of equity earnings of Signal and the receipt of dividend income in the first quarter of 2016 in excess of the amount originally declared by the OCC in December 2015.

Income before Income Taxes

Income before income taxes for the six months ended June 30, 2016 and 2015 was \$164.3 million and \$142.9 million, respectively, an increase of \$21.4 million.

Income Tax Provision

For the six months ended June 30, 2016, the income tax provision was \$64.2 million compared to \$55.8 million for the same period in 2015. The effective tax rate was 39.1% and 39.0% for the six months ended June 30, 2016 and 2015, respectively.

Net Income

As a result of the items above, net income allocated to common stockholders for the six months ended June 30, 2016 was \$99.7 million compared to \$86.7 million for the same period in 2015, an increase of \$13.0 million. Basic and diluted net income per share allocated to common stockholders were \$1.22 and \$1.04 for the six months ended June 30, 2016 and 2015, respectively.

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LIQUIDITY AND CAPITAL RESOURCES

As of June 30, 2016, the Company had \$52.2 million of cash and cash equivalents, a decrease from \$102.3 million as of December 31, 2015. Historically, we have financed our operations, capital expenditures and other cash needs through cash generated from operations. Cash requirements principally consist of funding operating expenses, capital expenditures, actual and anticipated quarterly dividends and, based on availability of cash, common stock repurchases under the announced program. We expect our cash on hand at June 30, 2016 and funds generated from operations to be sufficient to continue to meet our 2016 cash requirements. From time to time, we consider the possibility of acquisitions, dispositions and strategic alliances that we believe would strengthen our business in the long-term; however, if consummated these transactions may negatively impact our liquidity in the short-term.

Cash Flows

Operating Activities

Net cash flows provided by operating activities totaled \$114.9 million and \$105.8 million for the six months ended June 30, 2016 and 2015, respectively. The increase in net cash flows provided by operating activities was primarily due to higher net income.

Investing Activities

Net cash flows used in investing activities totaled \$63.8 million and \$48.3 million for the six months ended June 30, 2016 and 2015, respectively. The net cash flows used in investing activities primarily represented our majority investment in Vest which totaled \$14.3 million and other investments totaling \$23.7 million, which includes our investments in CurveGlobal and Eris. Expenditures for capital and other assets totaled \$25.4 million and \$17.6 million for the six months ended June 30, 2016 and 2015, respectively, primarily representing costs associated with systems hardware and software development.

Financing Activities

Net cash flows used in financing activities totaled \$101.1 million and \$115.8 million for the six months ended June 30, 2016 and 2015, respectively. The \$14.7 million decrease in net cash flows used in financing activities was primarily due to lower stock repurchases.

Dividends

The Company's expectation is to continue to pay dividends. The decision to pay a dividend, however, remains within the discretion of our board of directors and may be affected by various factors, including our earnings, financial condition, capital requirements, level of indebtedness and other considerations our board of directors deems relevant. Future debt obligations and statutory provisions, among other things, may limit, or in some cases prohibit, our ability to pay dividends.

Share Repurchase Program

In 2011, the board of directors approved an initial authorization for the Company to repurchase shares of its outstanding common stock of \$100 million and approved additional authorizations of \$100 million in each of 2012, 2013, 2014, 2015, and February 2016 for a total authorization of \$600 million. The program permits the Company to purchase shares through a variety of methods, including in the open market or through privately negotiated transactions, in accordance with applicable securities laws. It does not obligate the Company to make any repurchases

at any specific time or situation.

Under the program, for the six months ended June 30, 2016, the Company repurchased 947,786 shares of common stock at an average cost per share of \$63.83, totaling \$60.5 million.

Since inception of the program through June 30, 2016, the Company has repurchased 10,947,401 shares of common stock at an average cost per share of \$45.95, totaling \$503.0 million.

As of June 30, 2016, the Company had \$97.0 million of availability remaining under its existing share repurchase authorizations.

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Contractual Obligations

As of June 30, 2016, there have been no material changes to our lease and contractual obligations presented in our Annual Report on Form 10-K for the year ended December 31, 2015.

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Item 3. Quantitative and Qualitative Disclosures about Market Risk

We are subject to certain market risks, including changes in interest rates and inflation. There have been no material changes in our market risk from those disclosed in our Annual Report on Form 10-K for the year ended December 31, 2015.

Item 4. Controls and Procedures

Disclosure Controls and Procedures

The Company's management, with the participation of its Chief Executive Officer and Chief Financial Officer, has evaluated the effectiveness of the Company's disclosure controls and procedures (as defined in Rule 13a-15(e) and Rule 15d-15(e) under the Securities Exchange Act of 1934 (the "Exchange Act")) as of the end of the period covered by this report. Based upon that evaluation, the Company's Chief Executive Officer and Chief Financial Officer have concluded that, as of the end of such period, the Company's disclosure controls and procedures are effective.

Changes in Internal Control Over Financial Reporting

There were no changes in the Company's internal control over financial reporting that occurred during the three months ended June 30, 2016 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

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PART II. OTHER INFORMATION

Item 1. Legal Proceedings

The following information updates the legal proceedings disclosures in our Annual Report on Form 10-K for the year ended December 31, 2015 and subsequent Quarterly Reports on Form 10-Q.

ISE -- '707

On November 22, 2006, International Securities Exchange, LLC ("ISE") filed an action in the United States District Court for the Southern District of New York claiming that CBOE's Hybrid trading system infringes ISE's U.S. Patent No. 6,618,707 (the "'707 patent"). On January 31, 2007, CBOE filed an action in federal court in the Northern District of Illinois seeking a declaratory judgment that the '707 patent was not infringed, not valid and/or not enforceable against CBOE. The New York case was transferred to the federal court in the Northern District of Illinois on August 9, 2007.

On March 14, 2013, ISE conceded to an adverse judgment in this matter and asked that the federal court in the Northern District of Illinois enter judgment for CBOE. ISE appealed certain court rulings to the Federal Circuit Court of Appeals. The federal court in the Northern District of Illinois on January 14, 2014 issued an opinion and order awarding certain costs associated with the litigation to CBOE. On April 7, 2014, the Federal Circuit Court of Appeals issued a favorable opinion to CBOE. On March 31, 2016, the federal court in the Northern District of Illinois granted CBOE's motion for attorney fees and expenses and CBOE subsequently supplemented such request on April 7, 2016. On May 18, 2016, ISE agreed with CBOE to settle the amount owed for attorney fees and expenses. Pursuant to such agreement, ISE paid CBOE a total of \$5.5 million, recorded in investment and other income, in the second quarter of 2016.

Item 1A. Risk Factors

Other than the risk factor listed below, there have been no material updates to the Risk Factors as set forth in Item 1A. of our Annual Report on Form 10-K for the year ended December 31, 2015 and subsequent Quarterly Reports on Form 10-Q.

Legislative or regulatory changes affecting the listed options or futures markets could have a material adverse effect on our business.

Changes in regulation by the SEC, CFTC, foreign regulators or other government action, including SEC approval of rule filings by other SROs or entities, including OCC, could materially affect our markets. In recent years, the securities and futures industries have been subject to significant regulatory changes as a result of regulatory reforms in response to the global economic crisis.

In 2010, Congress passed the Dodd-Frank Act and other legislation. While many of its requirements have been implemented or are in the process of being implemented, some of the provisions in Dodd-Frank that impact our markets require additional action by the SEC or the CFTC. Depending on how the SEC and CFTC interpret and implement these laws, exchanges like ours could be subject to increased competition and additional costs. We could also see reduced trading by our customers due to increased margin or other requirements.

Under the Collins Amendment to the Dodd-Frank Act, starting in 2015, U.S. banks were required to use a new approach in order to compute their risk weighted assets, which include exchange-traded options and futures. This, and other rulemaking, may lead to further increases in capital requirements for U.S. bank holding companies, and bank subsidiaries involved in the trading and clearing of derivatives. These increased capital requirements may reduce trading in options and futures due to bank-affiliated broker-dealers reducing their own trading, charging their customers more to trade or reducing the number of certain customers.

In 2016, the SEC published a proposed plan by self-regulatory organizations ("SROs") responding to a 2012 SEC directive that SROs submit a plan to create, implement and maintain a consolidated audit trail, which would serve as a comprehensive audit trail of orders that will allow regulators to efficiently and accurately track all activity in Regulation NMS securities in the U.S. market. In addition to increased regulatory obligations, implementation of a consolidated audit trail could result in significant additional expenditures, including to implement any new technology to meet any plan's requirements.

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Under European Union ("EU") regulations, European banks and other European financial institutions become subject to punitive capital charges if they transact options or futures through a non-qualifying clearinghouse. OCC, our clearinghouse for options and futures, is not currently recognized as a qualified clearinghouse by the EU. The current deadline for the EU to qualify foreign clearinghouses as equivalent is December 15, 2016. If the EU does not recognize OCC as a qualified clearinghouse by such date (or by a subsequent date in the event that the current deadline is extended), then European market participants that clear through OCC would become subject to punitive capital charges. As a result, we could experience the loss of a significant number of European market participants and a significant reduction in trading activity on our markets, which could have a material adverse effect on our business.

It is also possible that there will be additional legislative and regulatory changes or efforts in the environment in which we operate our businesses, although we cannot predict the nature of these potential changes or their impact on our business at this time. Actions on any of the specific regulatory issues currently under review in the U.S. and other proposals could have a material impact on our business. For a discussion of the regulatory environment in which we operate and proposed regulatory changes, see "Business—Regulatory Environment and Compliance" in Item 1A. of our Annual Report on Form 10-K for the year ended December 31, 2015.

In addition, Congress, the SEC, foreign regulators and other regulatory authorities could impose legislative or regulatory changes that could adversely impact the ability of our market participants to use our markets. Any such changes could result in the loss of a significant number of market participants or a reduction in trading activity on our markets, either of which could have a material adverse effect on our business. Changes or proposed changes in regulation may also result in additional costs of compliance and modification of market participants' trading activity on our exchanges.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

(c) The table below shows the purchases of equity securities by the Company in the three months ended June 30, 2016, reflecting the purchase of common stock under the Company's share repurchase program:

Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs (1)	Approximate Dollar Value of Shares that May Yet Be Purchased Under the Plans or Programs
April 1, 2016 – April 30, 2016	206,600	\$ 64.79	206,600	\$ 101,682,162
May 1, 2016 – May 31, 2016	74,300	63.26	74,300	96,982,060
June 1, 2016 – June 30, 2016	—	—	—	96,982,060
Totals	280,900	\$ 64.39	280,900	

(1) In 2011, the board of directors approved an initial authorization for the Company to repurchase shares of its outstanding common stock of \$100 million and approved additional authorizations of \$100 million in each of 2012, 2013, 2014, 2015, and February 2016 for a total authorization of \$600 million. The program permits the Company to purchase shares through a variety of methods, including in the open market or through privately negotiated transactions, in accordance with applicable securities laws. It does not obligate the Company to make any repurchases at any specific time or situation.

Item 3. Defaults Upon Senior Securities

None.

Item 4. Mine Safety Disclosures

None.

Item 5. Other Information

None.

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Item 6. Exhibits

The exhibits to this Report are listed in the Exhibit Index included elsewhere herein.

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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.

CBOE HOLDINGS, INC.
Registrant

By: /s/ Edward T. Tilly
Edward T. Tilly
Chief Executive Officer (Principal Executive Officer)

Date: August 2, 2016

By: /s/ Alan J. Dean
Alan J. Dean
Executive Vice President and Chief Financial Officer (Principal Financial Officer)

Date: August 2, 2016

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CBOE Holdings, Inc.
Form 10-Q
Exhibit Index

Exhibit No.	Description
10.1	Second Amended and Restated CBOE Holdings, Inc. Long-Term Incentive Plan, incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K (File No. 001-34774), filed on May 24, 2016.*
31.1	Certification of Chief Executive Officer pursuant to Rule 13a-14 (Filed herewith).
31.2	Certification of Chief Financial Officer pursuant to Rule 13a-14 (Filed herewith).
32.1	Certificate of Chief Executive Officer pursuant to Rule 13a-14(b) and Section 1350 of Chapter 63 of Title 18 of the United States Code (Filed herewith).
32.2	Certificate of Chief Financial Officer pursuant to Rule 13a-14(b) and Section 1350 of Chapter 63 of Title 18 of the United States Code (Filed herewith).
101.INS	XBRL Instance Document (Filed herewith).
101.SCH	XBRL Taxonomy Extension Schema Document (Filed herewith).
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document (Filed herewith).
101.DEF	XBRL Taxonomy Extension Definition Linkbase (Filed herewith).
101.LAB	XBRL Taxonomy Extension Label Linkbase Document (Filed herewith).
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document (Filed herewith).

*Indicates Management Compensatory Plan, Contract or Arrangement.