
**Fourth Quarter 2016
Earnings Presentation**

February 6, 2017

Cautionary Statements Regarding Forward-Looking Information

This presentation contains certain statements regarding intentions, beliefs and expectations or predictions, which are forward-looking statements as that term is defined in the Private Securities Litigation Reform Act of 1995, including statements with respect to anticipated expenses, expected tax rate, future share repurchases, planned capital expenditures, the timing of the completion of the transactions contemplated by the Agreement and Plan of Merger, dated as of September 25, 2016, by and among CBOE Holdings, two wholly-owned subsidiaries of CBOE Holdings and Bats, and the anticipated effects of the transaction. The actual timing of the completion of the proposed transaction could differ materially from those projected or forecast in the forward-looking statements. Words such as “believes,” “expects,” “anticipates,” “estimates,” “intends,” “plans,” “seeks,” “projects” or words of similar meaning, or future or conditional verbs, such as “will,” “should,” “would,” “could,” “may” or variations of such words and similar expressions are intended to identify such forward-looking statements, which are not statements of historical fact or guarantees or assurances of future performance. However, the absence of these words or similar expressions does not mean that a statement is not forward-looking.

Actual results could differ materially from those projected or forecast in the forward-looking statements. The factors that could cause actual results to differ materially include, without limitation, the following risks, uncertainties or assumptions: the satisfaction of the conditions precedent to the consummation of the proposed transaction, including, without limitation, the receipt of regulatory approvals on the terms desired or anticipated; unanticipated difficulties or expenditures relating to the proposed transaction, including, without limitation, difficulties that result in the failure to realize expected synergies, efficiencies and cost savings from the proposed transaction within the expected time period (if at all), whether in connection with integration, combining trading platforms, broadening distribution of offerings or otherwise; CBOE Holdings’ ability to maintain an investment grade credit rating; risks relating to the value of CBOE Holdings’ shares to be issued in the transaction; disruptions of CBOE Holdings’ and Bats’ current plans, operations and relationships with market participants caused by the announcement and pendency of the proposed transaction; potential difficulties in CBOE Holdings’ and Bats’ ability to retain employees as a result of the announcement and pendency of the proposed transaction; legal proceedings that may be instituted against CBOE Holdings and Bats; and other factors described in the Risk Factors sections of (i) the definitive joint proxy statement/prospectus dated December 9, 2016, which was filed with the Securities and Exchange Commission (the “SEC”) on December 12, 2016, (ii) CBOE Holdings’ annual report on Form 10-K for the fiscal year ended December 31, 2015, which was filed with the SEC on February 19, 2016, (iii) CBOE Holdings’ quarterly report on Form 10-Q for the quarter ended June 30, 2016, which was filed with the SEC on August 2, 2016, (iv) CBOE Holdings’ quarterly report on Form 10-Q for the quarter ended September 30, 2016, which was filed with the SEC on November 8, 2016, and in other filings made by CBOE Holdings and Bats from time to time with the SEC.

The factors described in such SEC filings include, without limitation: CBOE Holdings’ ability to retain its right to exclusively list and trade certain index options and futures products; economic, political and market conditions; compliance with legal and regulatory obligations (and changes thereto), including obligations under agreements with regulatory agencies; increasing competition in the industries in which CBOE Holdings and Bats operate; CBOE Holdings’ and Bats’ ability to operate their respective businesses without violating the intellectual property rights of others and the costs associated with protecting their respective intellectual property rights; decreases in trading volumes or a shift in the mix of products traded on CBOE Holdings’ or Bats’ exchanges; each of CBOE Holdings’ and Bats’ ability to accommodate trading volume and transaction traffic, including significant increases, without failure or degradation of performance of their respective systems; CBOE Holdings’ and Bats’ ability to protect their respective systems and communication networks from security risks, including cyber-attacks; the ability to manage CBOE Holdings’ and Bats’ growth and strategic acquisitions or alliances effectively, including the ability to realize the anticipated benefits of past acquisitions; the ability to adapt successfully to technological changes to meet customers’ needs and developments in the marketplace; and the impact of legal and regulatory changes and proceedings, whether or not related to the proposed transaction.

Neither CBOE Holdings nor Bats undertakes, and each of them expressly disclaims, any duty to update any forward-looking statement whether as a result of new information, future events or otherwise, except as required by law. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date hereof.

Additional Information

Additional Information Regarding the Transaction and Where to Find It

This presentation does not constitute an offer to sell or the solicitation of an offer to buy any securities. This presentation relates to the proposed merger transaction involving CBOE Holdings, Bats, CBOE Corporation and CBOE V, LLC. In connection therewith, CBOE Holdings filed with the SEC on December 12, 2016 a definitive joint proxy statement/prospectus dated December 9, 2016, and each of the companies may be filing with the SEC other documents regarding the proposed transaction. CBOE Holdings and Bats commenced mailing of the definitive joint proxy statement/prospectus to CBOE Holdings stockholders and Bats stockholders on December 12, 2016. BEFORE MAKING ANY INVESTMENT DECISION, INVESTORS AND SECURITY HOLDERS OF BATS ARE URGED TO READ THE DEFINITIVE JOINT PROXY STATEMENT/PROSPECTUS REGARDING THE PROPOSED TRANSACTION AND ANY OTHER RELEVANT DOCUMENTS FILED OR TO BE FILED WITH THE SEC CAREFULLY AND IN THEIR ENTIRETY WHEN THEY BECOME AVAILABLE BECAUSE THEY WILL CONTAIN IMPORTANT INFORMATION ABOUT THE PROPOSED TRANSACTION. Investors and security holders may obtain free copies of the definitive joint proxy statement/prospectus, any amendments or supplements thereto and other documents containing important information about each of CBOE Holdings and Bats, as such documents are filed with the SEC, through the website maintained by the SEC at www.sec.gov. Copies of the documents filed with the SEC by CBOE Holdings will be available free of charge on CBOE Holdings' website at <http://ir.cboe.com/financial-information/sec-filings.aspx> under the heading "SEC Filings" or by contacting CBOE Holdings' Investor Relations Department at (312) 786-7136. Copies of the documents filed with the SEC by Bats will be available free of charge on Bats' website at http://www.bats.com/investor_relations/financials/ under the heading "SEC Filings" or by contacting Bats' Investor Relations Department at (913) 815-7132.

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Agenda

Strategic Review

Edward Tilly

Chief Executive Officer

Financial Review

Alan Dean

*Executive Vice President,
CFO and Treasurer*

Questions and Answers

Edward Tilly

Alan Dean

Edward Provost

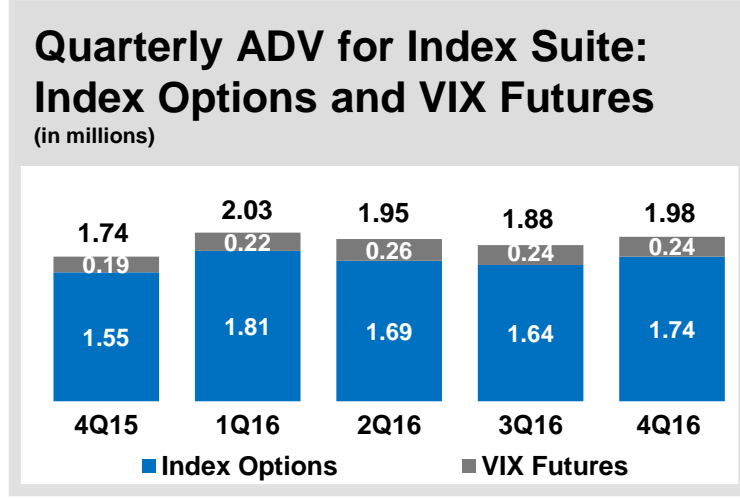
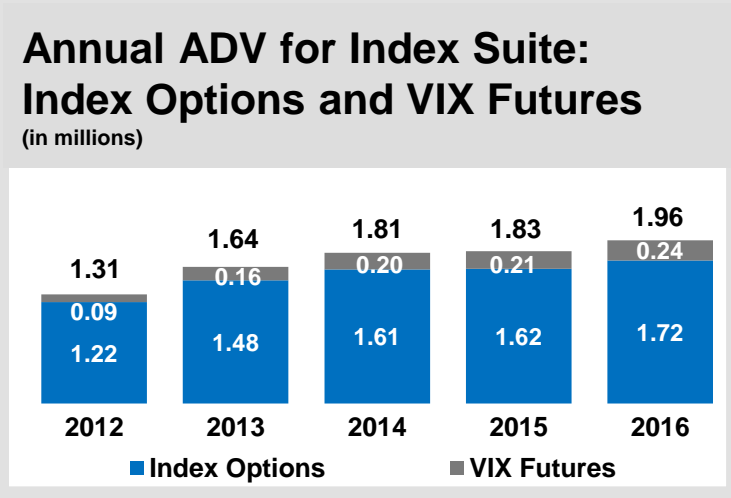
President and Chief Operating Officer

➤ **Strategic Review**
Edward Tilly
CEO

Growth in Proprietary Index Suite Continues to Drive Revenue and Earnings

Trading in our proprietary index suite up 14% in 4Q16 vs 4Q15

- 4Q16 adjusted diluted EPS of \$0.63 on revenue of \$163 million
- Fourth consecutive year of record index trading with new highs in SPX options and VIX futures
- Total ADV up 14% in 4Q16 vs 4Q15
 - Index options up 13%; VIX futures up 26%



Strengthening CBOE's Global Position in Innovative, Tradable Products and Services

Bats acquisition expected to:

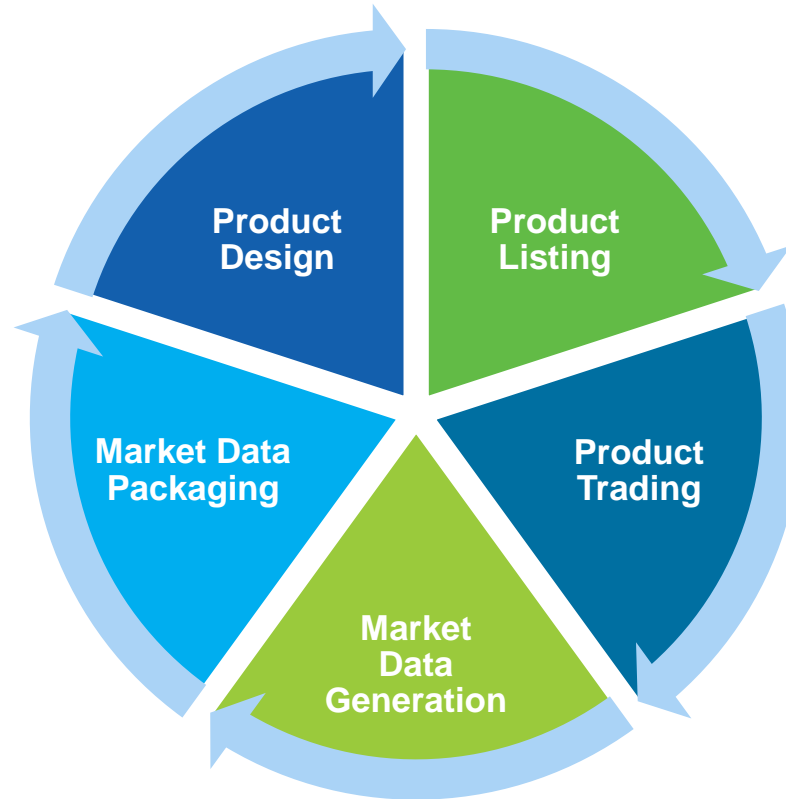
- **Expand and diversify CBOE's product line across new asset classes - cash equities, ETPs and foreign exchange**
- **Broaden CBOE's global reach with Bats' market-leading pan-European presence**
- **Diversify revenue stream**
- **Leverage Bats' proven technology**
- **Enhance strong growth and margin profile**

Key Events in Roadmap to Completion

- *Sept. 26:* Execution of merger agreement announced
- *Nov. 18:* Notice of early termination of waiting period under HSR received
- *Dec. 12:* Definitive joint proxy statement/prospectus filed with the SEC
- *Jan. 17:* CBOE and Bats shareholder approval
- CBOE and Bats continue to work on other required regulatory clearances and approvals
- Transaction expected to close by end of first quarter 2017

Positioning to Better Meet Needs of Growing Index-Based Investing Market

CBOE and Bats combination expected to influence entire value chain throughout the product development and trading cycle



Better Positioned to Capitalize on Major Industry Trends

Industry-Defining Trends

- Potential to Develop Ongoing Value-Added Relationships

Sophisticated strategies packaged into simple and cost-effective listed products

- ETPs account for 30% of total dollar-value traded in U.S. cash equity markets¹
- ETP assets stand at \$2.5 trillion, 10% of U.S. stock market capitalization¹

Index-based listed products, driving demand for indexing services

- Volume in “alternative” ETPs, including volatility products, has doubled in the past 3 years¹
- ETP options trading increased 7% in 2016; 10% decline in U.S. equity options volume

Global-macro themed trading strategies

- Extending our reach via Bats’ global platform
- Leveraging our multi-asset class product line

¹Source: Third-party report

Expanding Options and Volatility Trading

CBOE Vest Financial provides access to innovative Target Outcome Investment strategies

- **CBOE VEST Financial continues to expand its product offering**
 - Launched three mutual funds, each focusing on unique targeted investment outcomes
 - Downside protection
 - Enhanced growth
 - Income generation
- **Uniquely positioned to lead the options space in target-based outcome investing with combined expertise of Vest and CBOE**

Expanding Our Global Customer Base and Product Line

Investor education and collaboration with end-users goes hand-in-hand with successful product development

- **Hosted second RMC Asia in Hong Kong in November 2016**
 - Attendance nearly doubled from previous year
- **33rd annual CBOE RMC U.S. to start March 8th in Dana Point, CA**
- **6th annual CBOE RMC Europe will be held September 11-13, outside of London**



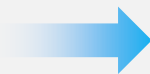
Enhancing CBOE's Growth Opportunities

CBOE's Strategic Initiatives

Transaction Aligns With Strategy



Develop unique products



Strengthens CBOE's global position in innovative, tradable products and services



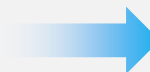
Expand our customer base



Broadens geographic reach and enables company to build on relationships with market participants



Form strategic partnerships that enhance and complement our core business



Enhances CBOE's position as the go-to partner to execute on innovative products and services

➤ Financial Review
Alan Dean
EVP, CFO and Treasurer

4Q16 Financial Overview

(in millions, except EPS and RPC)	4Q16	4Q15	\$ Change	% Change
Adjusted Operating Revenues ¹	\$163.2	\$154.0	\$9.2	6%
Adjusted Operating Expenses ¹	83.4	80.1	3.3	4%
Adjusted Operating Income ¹	\$ 79.8	\$ 73.9	\$5.9	8%
<i>Adjusted Operating Margin %¹</i>	<i>48.9%</i>	<i>48.0%</i>		90 bps
Adjusted Net Income Allocated to Common Stockholders ¹	\$ 51.5	\$ 48.9	\$2.6	5%
Adjusted Diluted EPS ¹	\$ 0.63	\$ 0.59	\$0.04	7%
Total ADV	4.85	4.25		14%
Revenue per Contract	\$0.377	\$0.408	\$0.031	-8%

¹Adjusted to reflect the impact of certain items. See Appendix for "Non-GAAP Information."

Operating Revenue Increase Driven by Higher Trading Volume

Key drivers:

➤ Transaction fees up \$4.6MM

- 13% increase in trading volume
- 8% decrease in RPC
 - Higher volume discounts and incentives

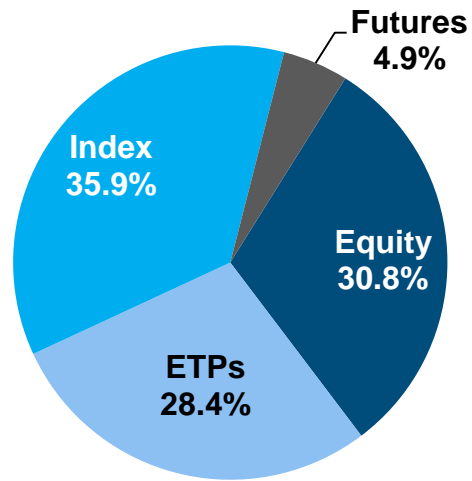
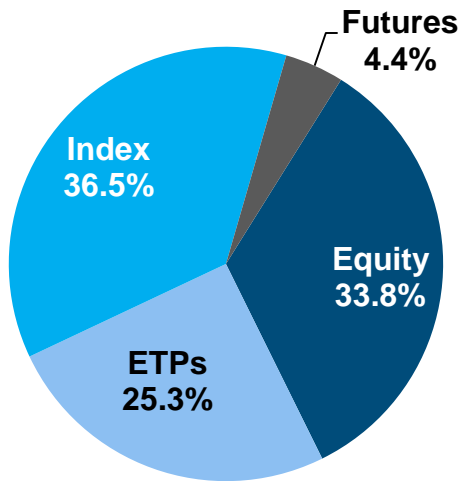
Adjusted Operating Revenue ¹ (in millions)	4Q16	4Q15	% Chg
Transaction fees	\$115.4	\$110.8	4%
Access fees	12.9	13.2	-2%
Exchange services and other fees	12.0	11.8	2%
Market data fees	8.8	7.3	21%
Regulatory fees ²	9.0	8.2	10%
Other revenue ¹	5.1	2.7	89%
Total Adjusted Operating Revenue¹	\$163.2	\$154.0	6%

¹Adjusted to reflect the impact of certain items. See Appendix for “Non-GAAP Information.”

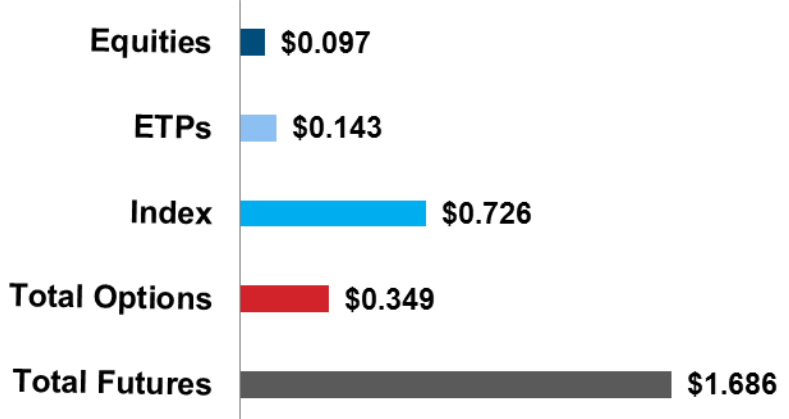
²Regulatory fees can only be used to cover expenses for the company’s regulatory functions

RPC Decrease Primarily Reflects Higher Volume Discounts and Incentives

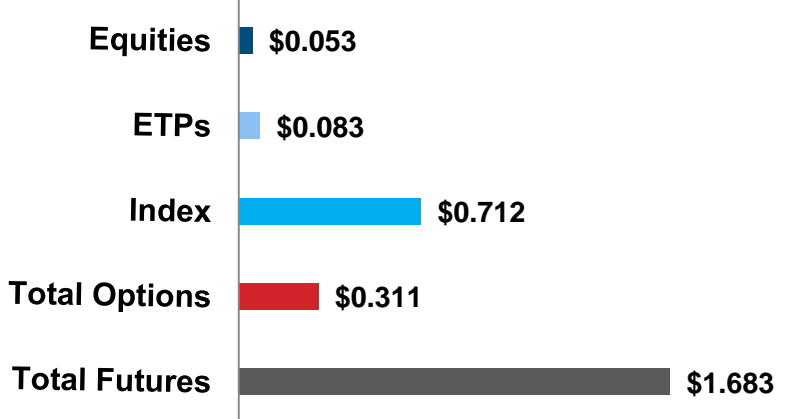
Trading volume mix and RPC 4Q15 versus 4Q16



4Q15 RPC \$0.408

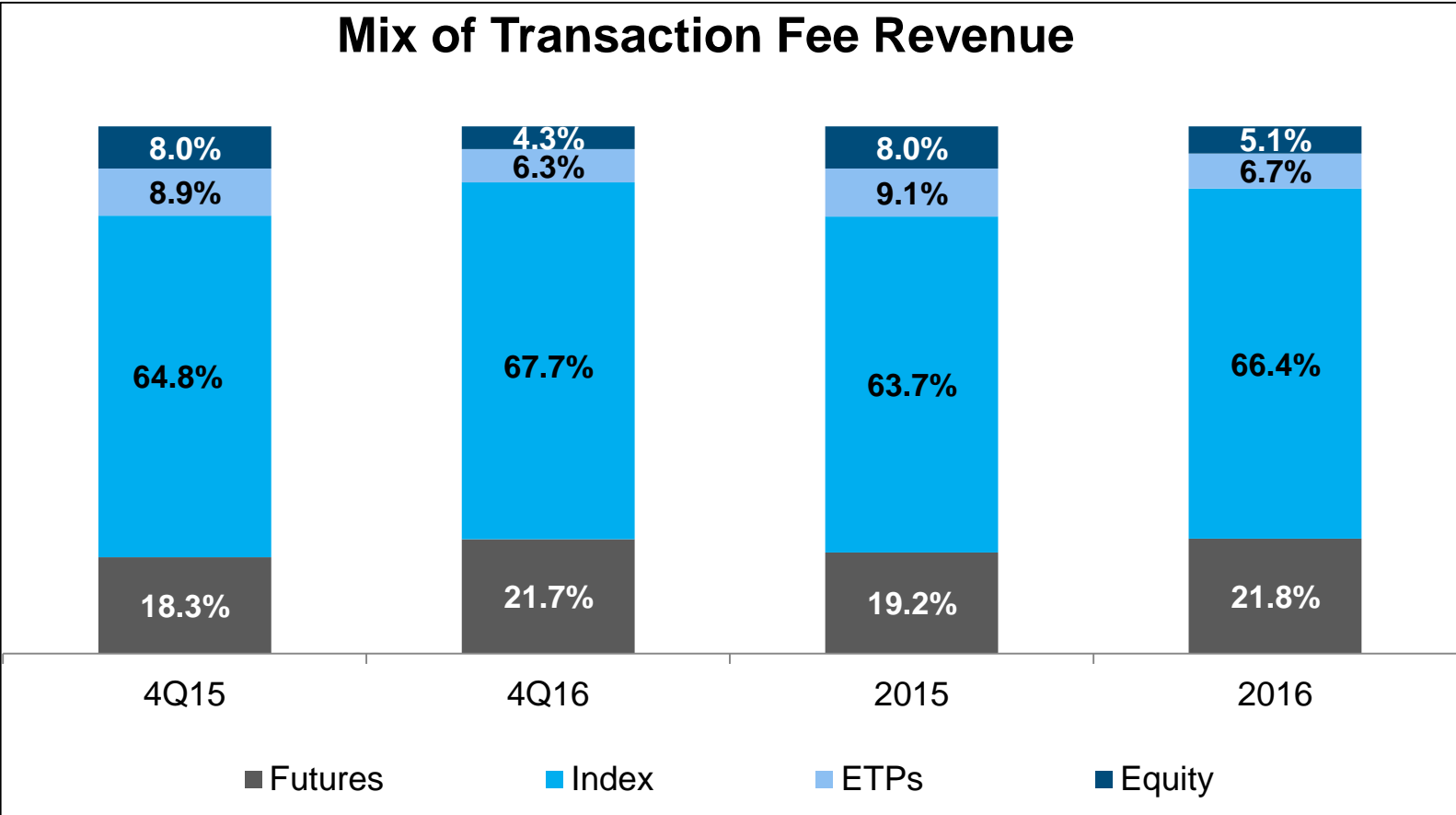


4Q16 RPC \$0.377



Proprietary Products Account for Growing Percentage of Transaction Fee Revenue

Index options and futures contracts accounted for 89.4% of transaction fees in 4Q16 vs 83.1% in 4Q15



Other Operating Revenue Drivers

➤ Market data fees up \$1.5MM

- Increase in OPRA revenue allocated to CBOE
- Increase in revenue derived from CBOE's proprietary index values

➤ Other revenue up \$2.4MM

- Higher fines assessed

Adjusted Operating Revenue ¹ (in millions)	4Q16	4Q15	% Chg
Transaction fees	\$115.4	\$110.8	4%
Access fees	12.9	13.2	-2%
Exchange services and other fees	12.0	11.8	2%
Market data fees	8.8	7.3	21%
Regulatory fees ²	9.0	8.2	10%
Other revenue ¹	5.1	2.7	89%
Total Adjusted Operating Revenue¹	\$163.2	\$154.0	6%

¹Adjusted to reflect the impact of certain items. See Appendix for "Non-GAAP Information."

²Regulatory fees can only be used to cover expenses for the company's regulatory functions

Ongoing Focus on Expense Management

Key drivers:

- Compensation and benefits up \$2.2MM
- Royalty fees up \$2.3MM
- Travel and promotional expenses up \$0.8MM
- Depreciation and amortization down \$2.4MM

Adjusted Operating Expenses ¹ (in millions)	4Q16	4Q15	% Chg
Compensation and benefits ¹	\$29.0	\$26.8	8%
Depreciation and amortization ¹	9.8	12.2	-20%
Technology support services	5.5	5.2	6%
Professional fees and outside services ¹	12.7	12.9	-2%
Royalty fees	20.1	17.8	13%
Order routing	0.3	0.3	--
Travel and promotional	3.4	2.5	36%
Facilities costs	1.4	1.4	--
Other expenses	1.2	0.9	33%
Total Adjusted Operating Expenses¹	\$83.4	\$80.1	4%

¹Adjusted to reflect the impact of certain items. See appendix for "Non-GAAP Information."
Total may not foot due to rounding.

Core Operating Expenses Up 7% in 4Q16 vs 4Q15

Key drivers:

➤ Compensation and benefits up \$2.2MM

- Increase in incentive-based compensation, aligned with financial performance

➤ Travel and promotional expenses up \$0.8MM

- Higher costs for advertising and special events

Core Operating Expenses ¹ (in millions)	4Q16	4Q15	% Chg
Compensation and benefits ¹	\$29.0	\$26.8	8%
Technology support services	5.5	5.2	6%
Professional fees and outside services ¹	12.7	12.9	-2%
Travel and promotional	3.4	2.5	36%
Facilities costs	1.4	1.4	--
Other expenses	1.2	0.9	33%
Total	\$53.2	\$49.7	7%

¹Adjusted to reflect the impact of certain items. See appendix for "Non-GAAP Information."
Total may not foot due to rounding.

Volume-Based Expenses

➤ Royalty fees up \$2.3MM

- Higher trading volume in licensed products in 4Q16 versus 4Q15
 - Index complex volume up 12%
 - Index options volume up 11%
 - VIX futures volume up 24%

- Average royalty fee per licensed contract traded \$0.161 for 4Q16 and 4Q15

Volume-Based Expenses (in millions)	4Q16	4Q15	% Chg
Royalty fees	\$ 20.1	\$ 17.8	13%
Order routing	0.3	0.3	--
Total	\$ 20.4	\$ 18.1	13%

4Q16 Financial Review

➤ Investment and other income

- Investment and other income of \$5.1 million in 4Q16, up \$1.6 million versus 4Q15
 - Increase in dividend recognized from the Options Clearing Corporation (OCC)

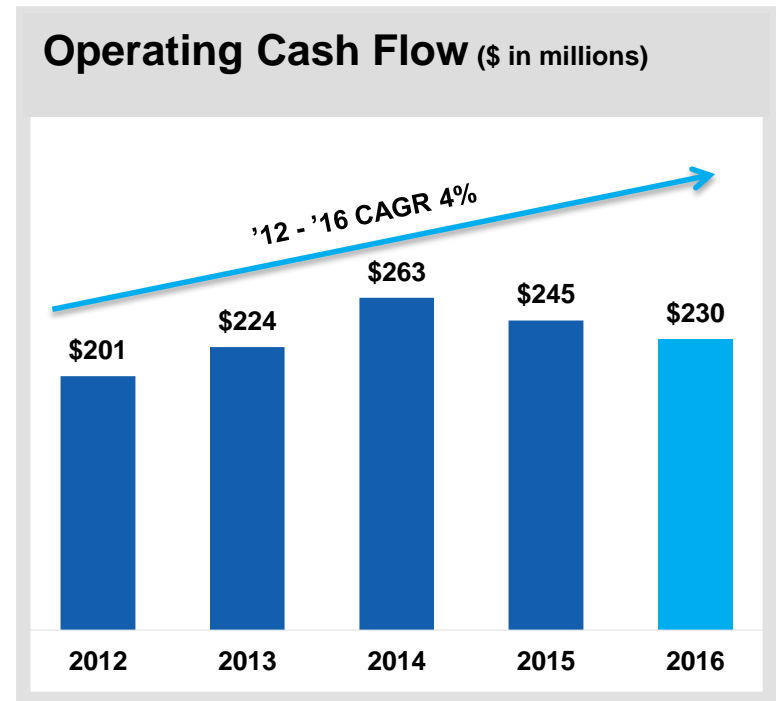
➤ Tax rate

- 4Q16 effective tax rate of 39.8%
- 4Q15 effective tax rate of 36.7%
 - Increase in uncertain tax positions in 2016
 - Decrease in uncertain tax positions in 2015

Enhancing Shareholder Value

Strong cash flow generation and disciplined approach to managing cash

- **Generated \$230 million in operating cash flow**
 - Net income includes \$19.3 million pre-tax in acquisition-related costs
- **Cash of \$97 million at Dec. 31, 2016**
- **Capital outlays:**
 - \$44 million for capital expenditures
 - \$79 million to pay dividends
 - \$65 million to repurchase shares¹
- **\$97 million available under share repurchase program at Dec. 31, 2016**



¹Includes stock purchased under repurchase plan and from employees

2017 Full-Year Guidance

As of February 6, 2017 (\$ in millions)	2017 Full-Year Guidance	2016 Actual
Core operating expenses	\$214 to \$218	\$208
Stock-based compensation, including \$13.0 in accelerated stock-based compensation ¹	\$27.5 ¹	\$14.5 ²
Depreciation and amortization	\$40 to \$42	\$44
Capital expenditures	\$46 to \$48	\$44
Effective tax rate	38.5% to 39.5%	39.4%

¹Stock-based compensation expense, included in compensation and benefits expense, includes \$13.0 of accelerated stock-based compensation, which CBOE Holdings plans to include in its non-GAAP reconciliation. Approximately \$12.0 of the accelerated stock-based compensation is expected to be recognized in the first quarter of 2017. The increase in accelerated stock based compensation versus 2016, is due to a planned change in the retirement vesting schedule for equity award grants.

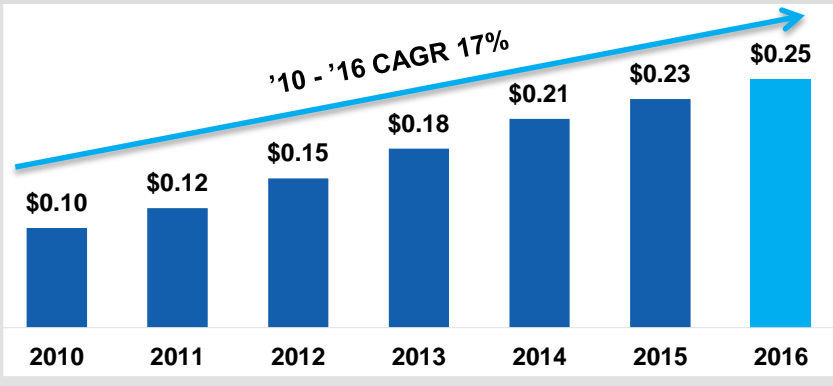
²Includes \$0.9 in accelerated stock-based compensation.

Committed to Long-Term Value Creation for Shareholders

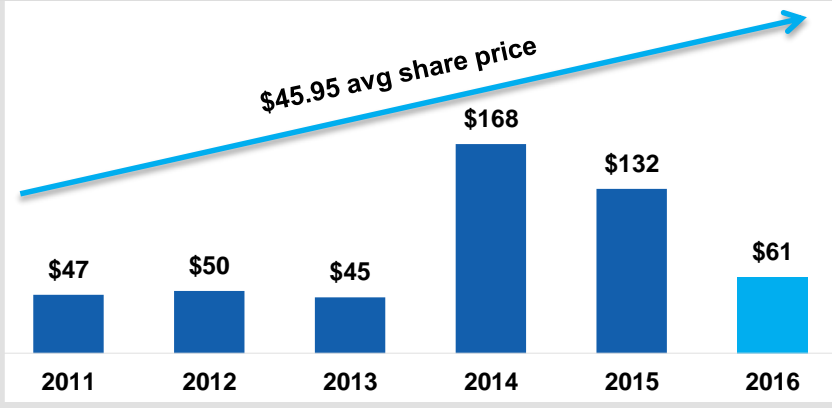
➤ **Expect to maintain a strong balance sheet and flexibility for:**

- Capital expenditures
- Dividend payments
- Opportunistic share repurchases
- Other strategic initiatives

Change in Quarterly Dividend Rate Per Share



Cash Used Under Share Repurchase Plan (\$ in millions)

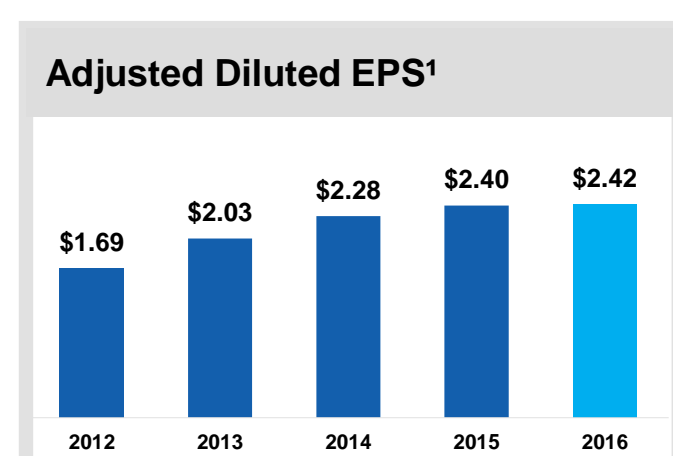
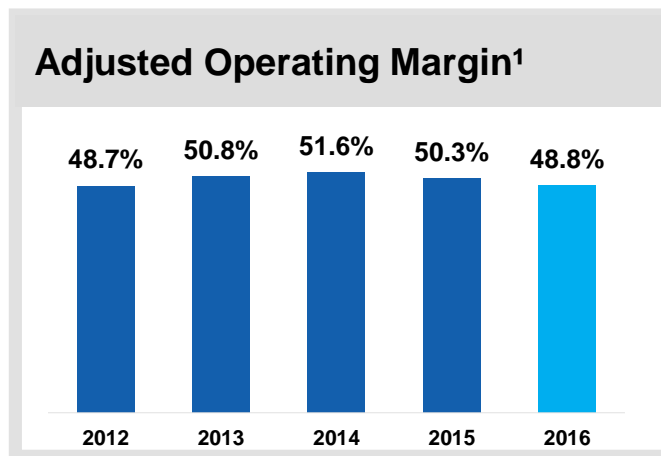
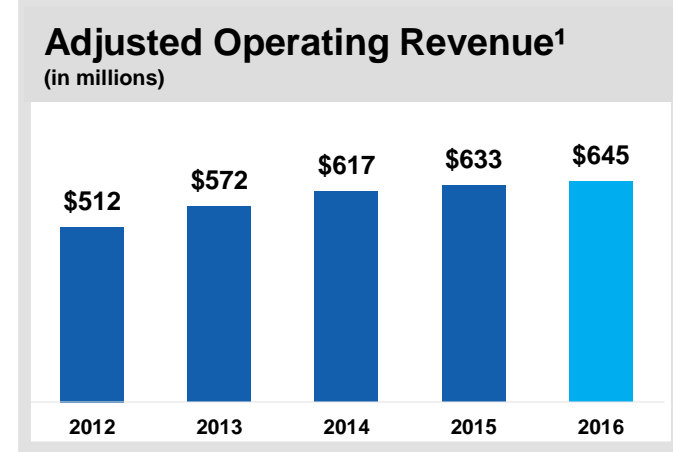
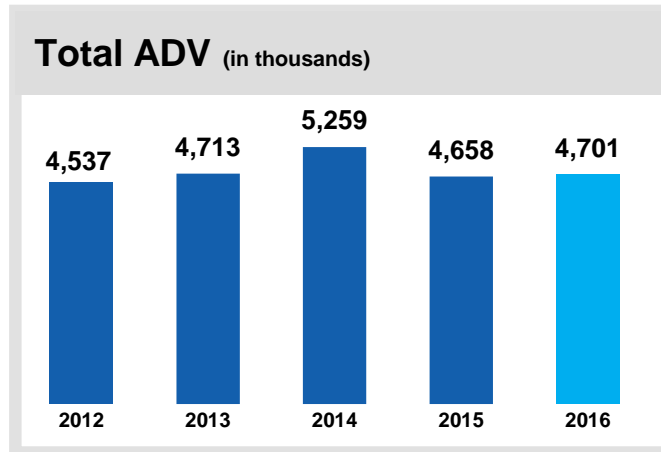


➤ Questions & Answers

> Appendix Materials

Strong Track Record of Organic Growth

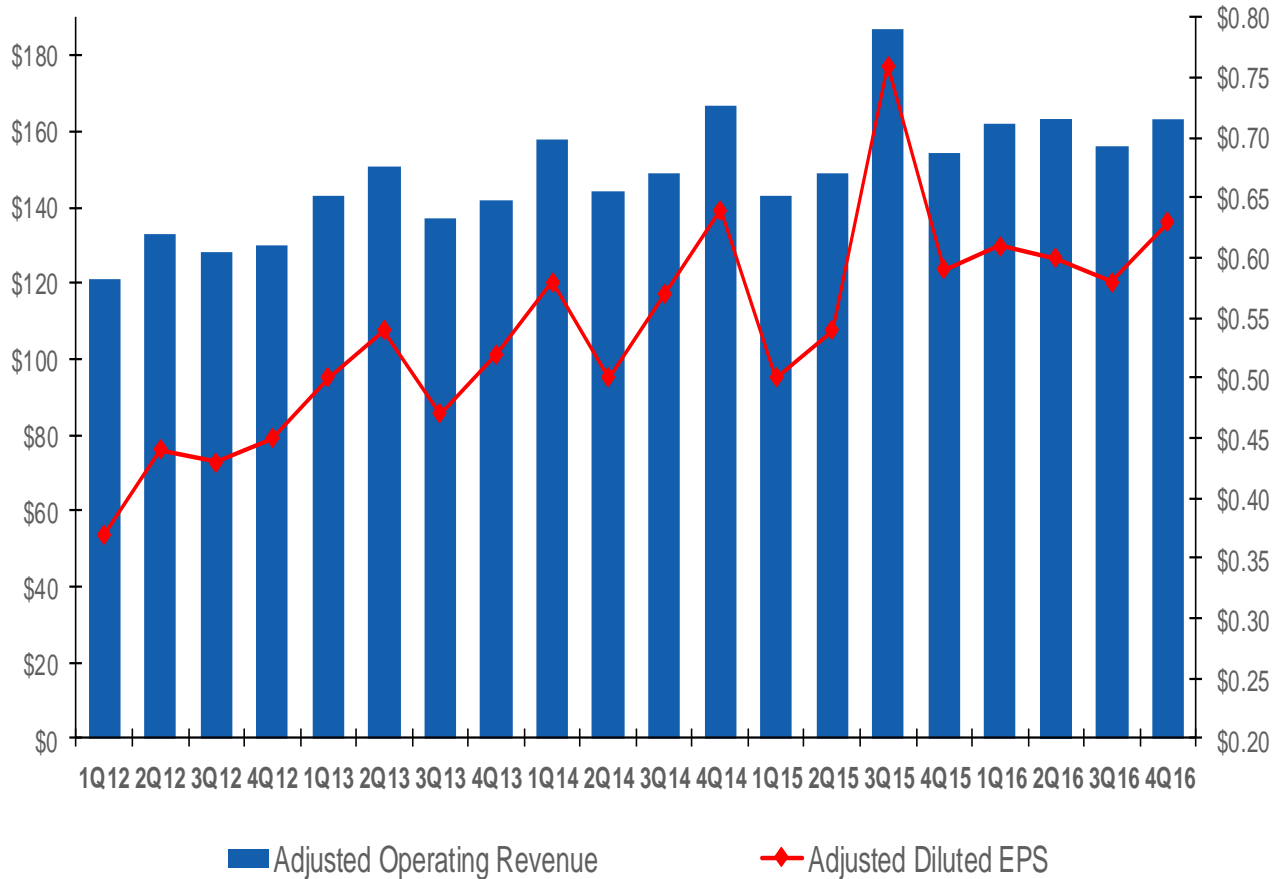
Focused on executing strategic initiatives while effectively managing expenses and deploying capital



¹Adjusted to reflect the impact of certain items. See appendix for "Non-GAAP Information."

Optimistic About Long-Term Growth Prospects

Adjusted Operating Revenue and Adjusted Diluted EPS¹
 (\$ in millions, except EPS)



¹Adjusted to reflect the impact of certain items. See Appendix for "Non-GAAP Information."

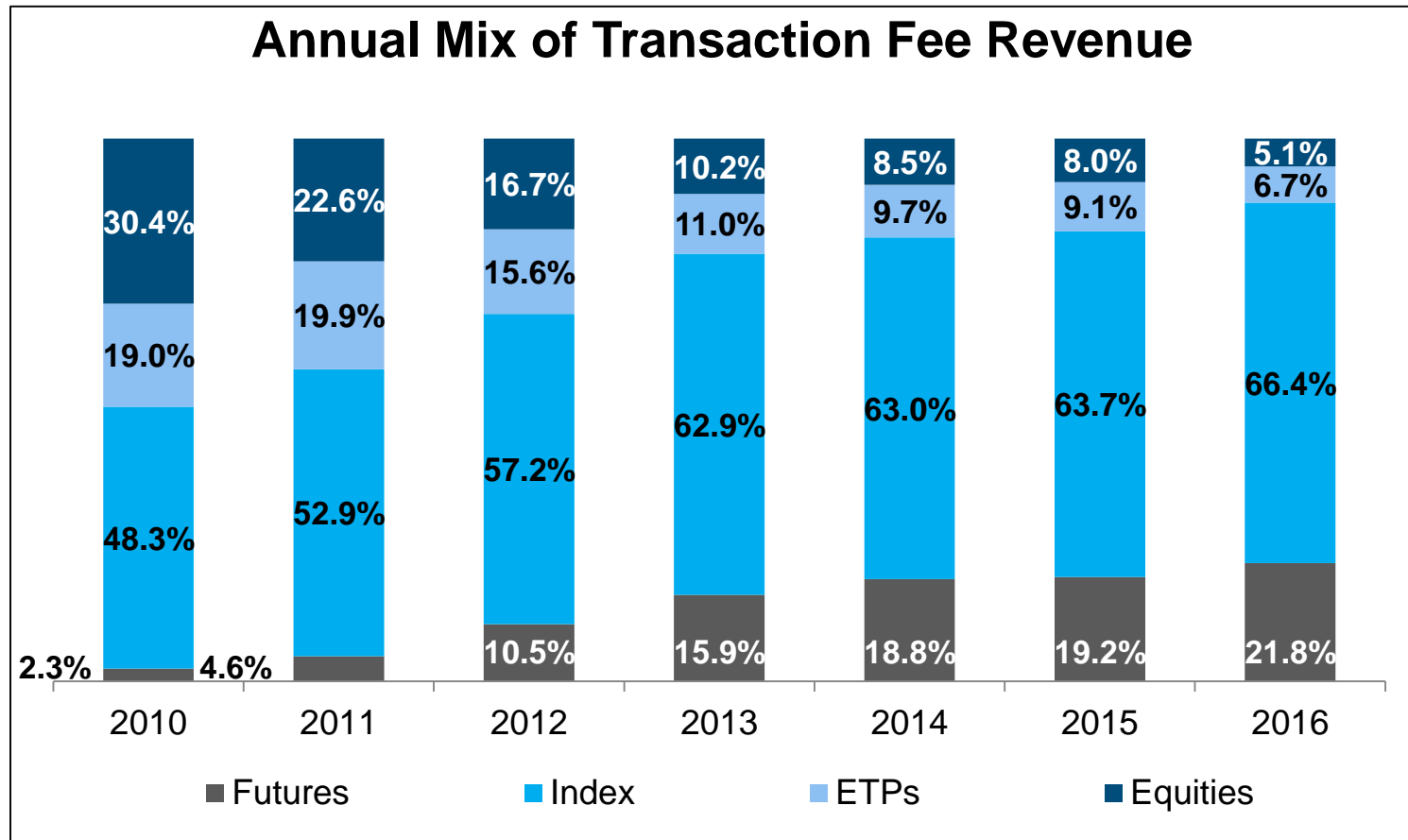
2016 Financial Overview

(in millions, except EPS and RPC)	Year Ended 12/31/16	Year Ended 12/31/15	\$ Change	% Change
Adjusted Operating Revenue ¹	\$645.1	\$632.5	\$12.6	2%
Adjusted Operating Expenses ¹	330.4	314.6	15.8	5%
Adjusted Operating Income ¹	\$314.7	\$317.9	-\$3.2	-1%
<i>Adjusted Operating Margin %¹</i>	<i>48.8%</i>	<i>50.3%</i>		<i>-150 bps</i>
Adjusted Net Income Allocated to Common Stockholders ¹	\$197.3	\$198.9	-\$1.6	-1%
Adjusted Diluted EPS ¹	\$2.42	\$2.40	\$0.02	1%
Total ADV	4.70	4.66		1%
Revenue per Contract	\$0.391	\$0.388	\$0.003	1%

¹Adjusted to reflect the impact of certain items. See Appendix for "Non-GAAP Information."

Proprietary Products Account for Growing Percentage of Transaction Fee Revenue

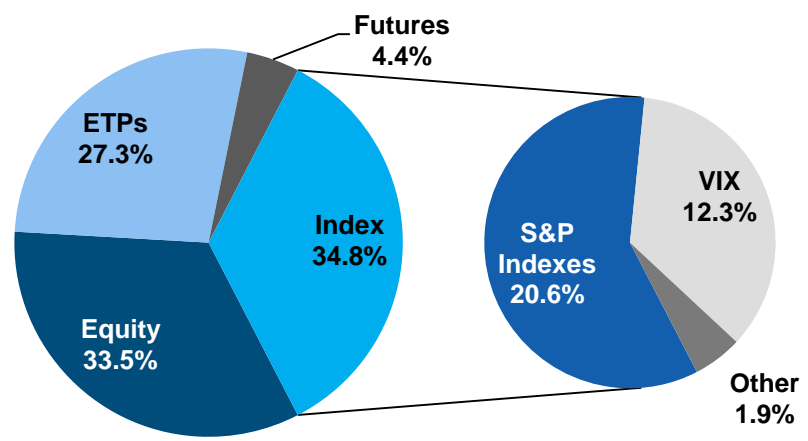
Index options and futures contracts accounted for 88.2% of transaction fees in 2016, up from 50.6% in 2010



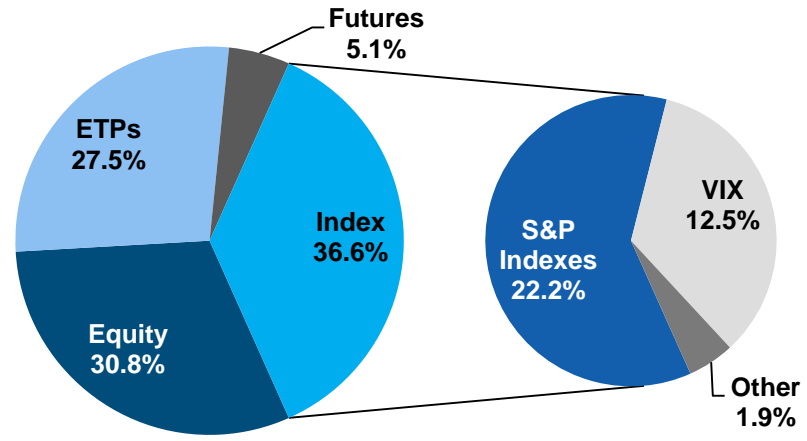
RPC Increase Primarily Due to Shift in Product Mix

Trading Volume Mix & RPC 2015 vs 2016

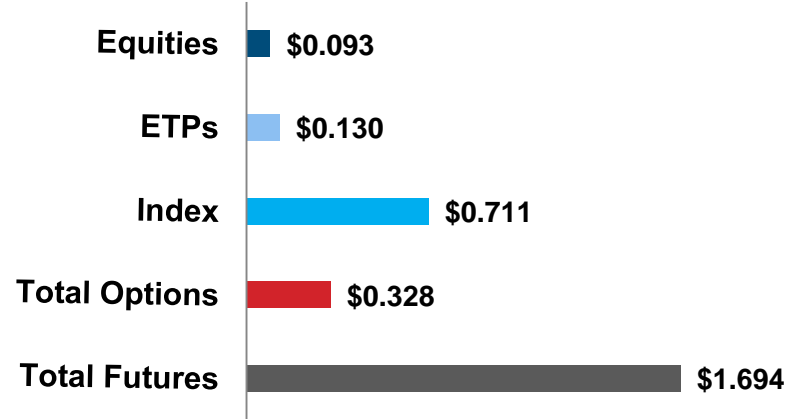
2015 Trading Volume Mix



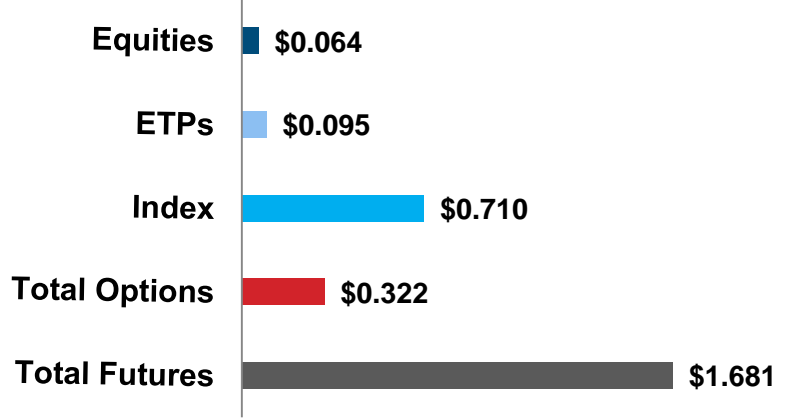
2016 Trading Volume Mix



2015 RPC \$0.388

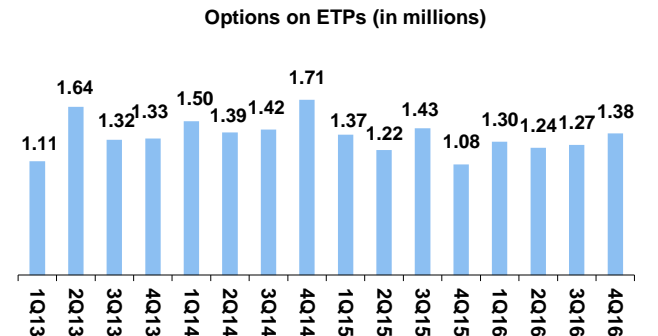
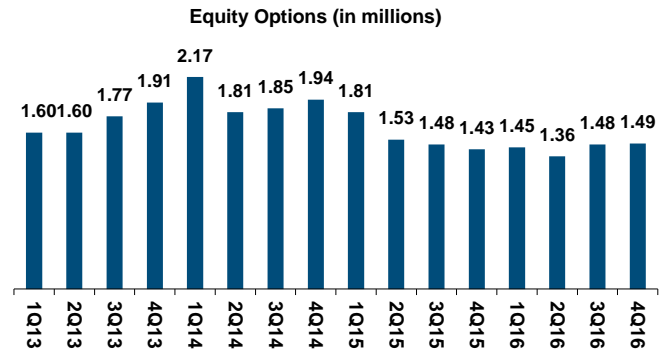
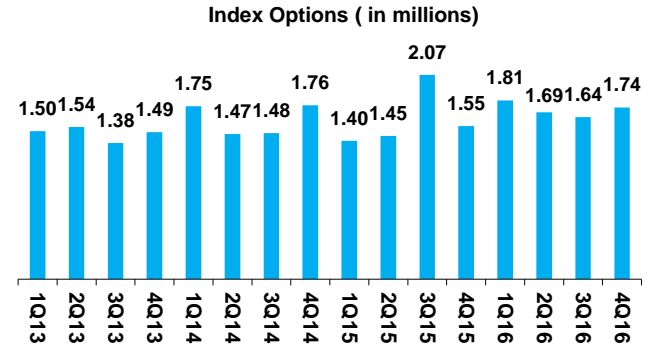
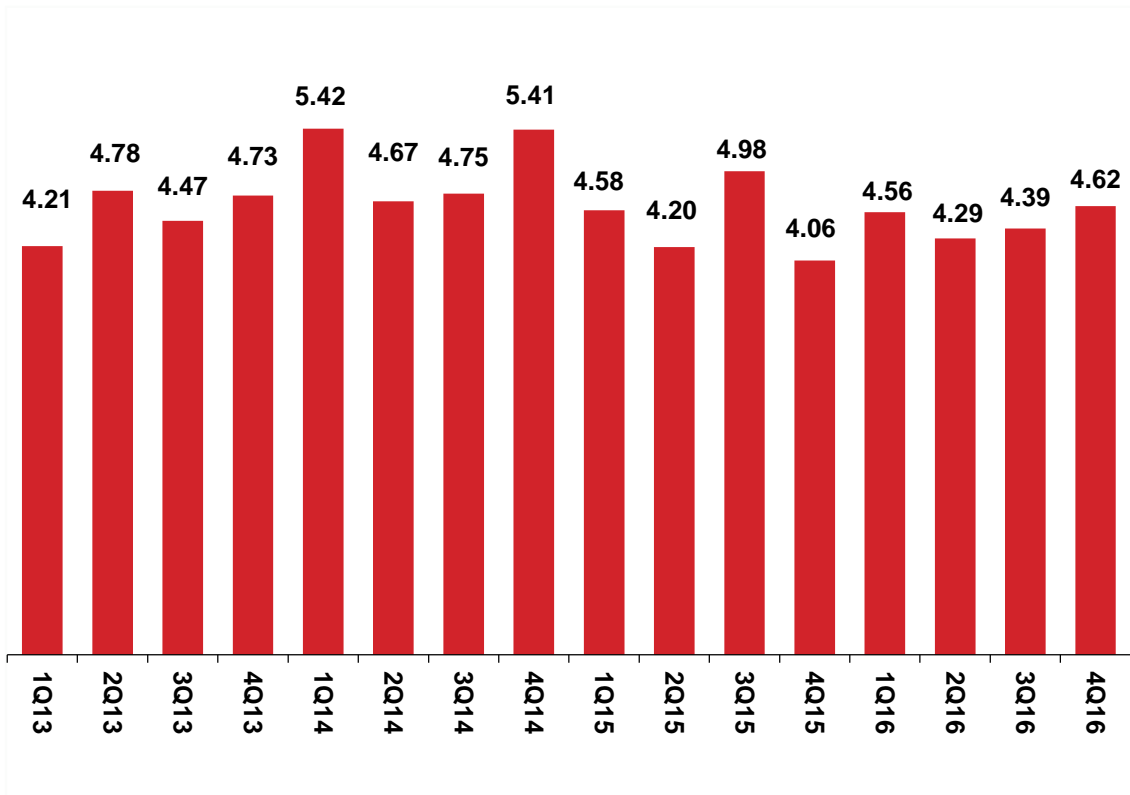


2016 RPC \$0.391



Quarterly Options ADV

CBOE and C2 Quarterly Options ADV (in millions)



Growing Index Product Line

S&P 500 Index (SPX) options, the most actively traded U.S. index options

➤ SPX ADV up 9% in 2016

- Fourth consecutive year of record volume

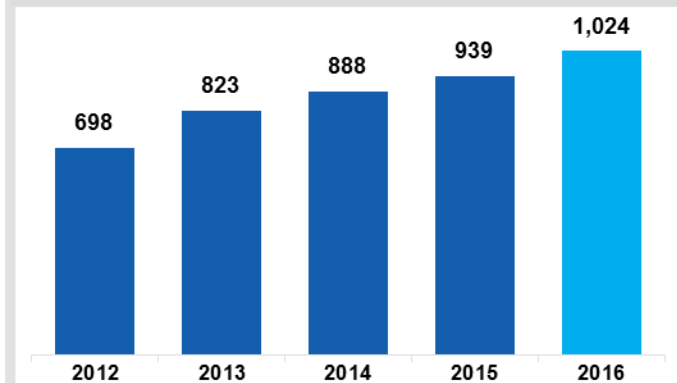
➤ Added Wednesday- and Monday-expiring SPX Weeklys in 2016

- Increases opportunities to trade SPX
- Wednesday expirations had ADV of 91,000 and Mondays had ADV of 61,000 in 2016

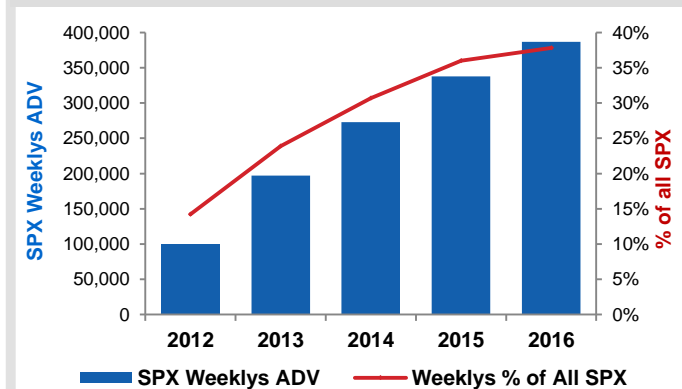
➤ SPX Weeklys ADV up 14% in 2016

- 11th consecutive year of record volume

SPX ADV* by Year (in thousands)



SPX Weeklys by Year



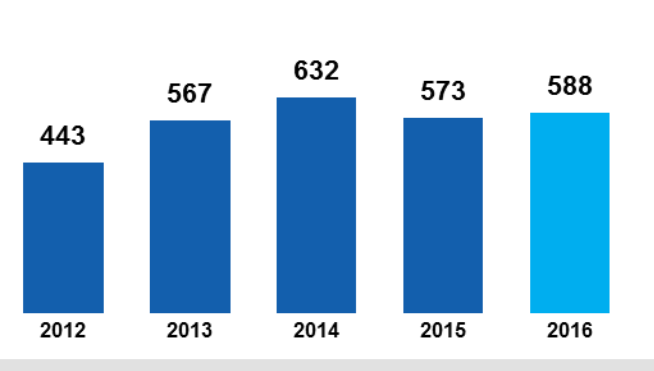
*Includes SPX Weeklys

Further Developing Current Products to Grow Index Complex

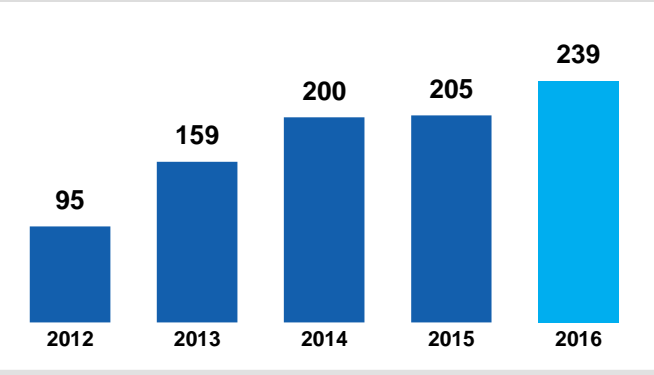
CBOE Volatility Index (VIX) options and futures anchor volatility products

- **VIX options ADV was up 3% from last year's ADV**
- **VIX futures ADV was up 16% over 2015**
 - 12th consecutive ADV record
- **Began overnight dissemination of VIX Index in 2016**
 - Allows overseas investors to reference VIX during their regular trading hours

VIX Options ADV
(in thousands)



VIX Futures ADV
(in thousands)

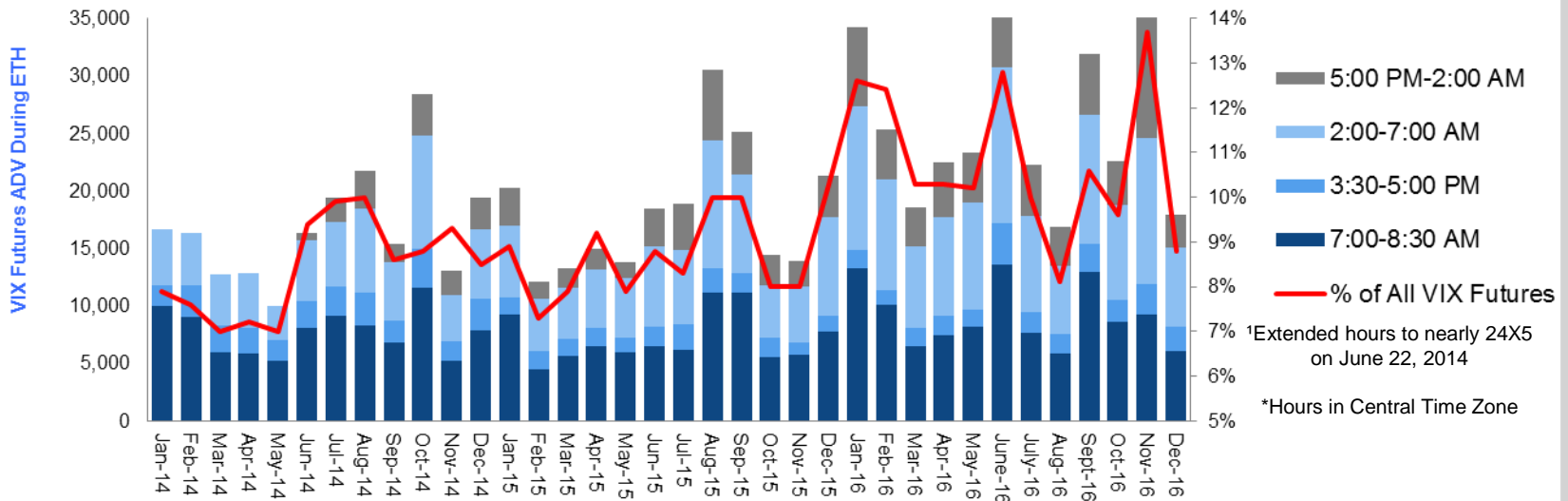


Broadening Access to Proprietary Products

Over 11% of VIX futures traded during non-U.S. hours in 2016, up from 9% for 2015

- **Generally, on days when volatility spikes, overnight volume increases and accounts for a higher percentage of total VIX futures volume**
 - Traded record overnight volume of more than 264 thousand contracts on night of U.S. Presidential Election (Nov. 8, 2016)

VIX Futures ADV During Non-U.S. Trading Hours (ETH)¹ - By Time Period*



¹Extended hours to nearly 24x5 on June 22, 2014

*Hours in Central Time Zone

CBOE Holdings Rolling 3-Month RPC

2016	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Equities*	\$0.095	\$0.092	\$0.085	\$0.081	\$0.075	\$0.070	\$0.063	\$0.057	\$0.050	\$0.048	\$0.051	\$0.053
Exchange-traded products*	0.138	0.131	0.117	0.111	0.104	0.103	0.096	0.089	0.079	0.075	0.082	0.083
Indexes	0.738	0.733	0.720	0.706	0.698	0.701	0.704	0.706	0.707	0.709	0.711	0.712
Total options RPC	0.351	0.351	0.346	0.335	0.326	0.328	0.326	0.320	0.304	0.297	0.304	0.311
Futures	1.636	1.623	1.643	1.697	1.721	1.682	1.677	1.702	1.709	1.718	1.679	1.683
Total RPC	0.412	0.413	0.405	0.397	0.394	0.405	0.401	0.395	0.378	0.374	0.378	0.377
*Multiply-listed options (Equities and ETPs)	\$0.115	\$0.110	\$0.100	\$0.095	\$0.088	\$0.086	\$0.079	\$0.072	\$0.064	\$0.061	\$0.066	\$0.068

2015	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Equities	\$0.069	\$0.070	\$0.077	\$0.077	\$0.087	\$0.093	\$0.098	\$0.104	\$0.106	\$0.105	\$0.098	\$0.097
Exchange-traded products	0.111	0.115	0.118	0.115	0.114	0.117	0.123	0.133	0.143	0.146	0.144	0.143
Indexes	0.702	0.704	0.712	0.707	0.701	0.697	0.702	0.703	0.709	0.706	0.718	0.726
Total options RPC	0.279	0.283	0.284	0.280	0.290	0.308	0.328	0.352	0.368	0.370	0.357	0.349
Futures	1.647	1.649	1.705	1.762	1.775	1.758	1.712	1.661	1.647	1.662	1.686	1.686
Total RPC	\$0.333	\$0.340	\$0.340	\$0.336	\$0.348	\$0.368	\$0.391	\$0.416	\$0.431	\$0.432	\$0.417	\$0.408

2014	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Equities	\$0.079	\$0.079	\$0.081	\$0.082	\$0.081	\$0.079	\$0.074	\$0.076	\$0.077	\$0.078	\$0.074	\$0.068
Exchange-traded products	0.124	0.119	0.117	0.113	0.113	0.111	0.112	0.114	0.115	0.112	0.107	0.105
Indexes	0.664	0.667	0.669	0.674	0.674	0.670	0.671	0.677	0.680	0.690	0.692	0.696
Total options RPC	0.273	0.281	0.281	0.277	0.275	0.275	0.275	0.281	0.275	0.288	0.279	0.284
Futures	1.602	1.614	1.617	1.610	1.616	1.639	1.651	1.631	1.625	1.598	1.628	1.616
Total RPC	\$0.317	\$0.329	\$0.329	\$0.325	\$0.321	\$0.322	\$0.324	\$0.336	\$0.329	\$0.344	\$0.331	\$0.340

2013	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Equities	\$0.149	\$0.153	\$0.140	\$0.114	\$0.094	\$0.090	\$0.082	\$0.081	\$0.077	\$0.076	\$0.076	\$0.075
Exchange-traded products	0.194	0.181	0.155	0.127	0.119	0.119	0.121	0.122	0.123	0.124	0.126	0.125
Indexes	0.665	0.670	0.671	0.679	0.674	0.675	0.670	0.671	0.669	0.666	0.666	0.666
Total options RPC	0.340	0.341	0.333	0.308	0.295	0.289	0.282	0.278	0.273	0.278	0.275	0.275
Futures	1.484	1.560	1.618	1.598	1.594	1.544	1.544	1.533	1.559	1.548	1.556	1.565
Total RPC	\$0.376	\$0.382	\$0.378	\$0.357	\$0.341	\$0.334	\$0.324	\$0.321	\$0.315	\$0.320	\$0.315	\$0.316

Quarterly Core Operating Expenses¹

(\$ in thousands)

	4Q 2016	% rev	3Q 2016	% rev	2Q 2016	% rev	1Q 2016	% rev	4Q 2015	% rev
Total Operating Expenses	\$88,139	54%	\$90,557	58%	\$85,361	53%	\$82,849	51%	\$80,052	52%
Less:										
Depreciation and amortization	10,066	6%	10,200	7%	12,259	8%	11,851	7%	12,202	8%
Compensation and benefits ²	182	-	212	-	892	-	200	-	-	-
Assessment of computer-based lease taxes for prior years ³							298	-	-	-
Acquisition related expenses ⁴	4,234	-	8,635	-	300	-	368	-	-	-
Volume-based expenses:										
Royalty fees	20,103	12%	19,399	12%	19,336	12%	19,114	12%	17,830	12%
Order routing	343		536		(83)		104		299	
Core Operating Expenses (non-GAAP)¹:	\$53,211	33%	\$51,575	33%	\$52,657	32%	\$50,914	31%	\$49,721	32%
Less: Continuing stock-based compensation	3,449	2%	3,554	2%	3,472	2%	3,163	2%	3,194	2%
Core Operating Expenses excluding continuing stock-based compensation (non-GAAP)¹:	\$49,762	30%	\$48,021	31%	\$49,185	30%	\$47,751	29%	\$46,527	30%
Core Operating Expense Detail:										
Compensation and benefits	\$28,990	18%	\$28,132	18%	\$27,638	17%	\$26,906	17%	\$26,768	17%
Technology support services	5,521	3%	5,608	4%	5,658	3%	5,380	3%	5,182	3%
Profession fees and outside services	12,712	8%	12,746	8%	14,445	9%	13,263	8%	12,897	8%
Travel and promotional expenses	3,355	2%	2,610	2%	2,492	2%	2,515	2%	2,548	2%
Facilities costs	1,426	1%	1,322	1%	1,418	1%	1,528	1%	1,446	1%
Other expenses	1,207	1%	1,157	1%	1,006	1%	1,322	1%	880	1%
Total	\$53,211	33%	\$51,575	33%	\$52,657	32%	\$50,914	31%	\$49,721	32%
Number of full-time employees at quarter end	553		570		569		561		564	

¹Please see our disclaimer regarding non-GAAP financial measures.

²Represents accelerated stock-based compensation each quarter, except second quarter of 2016, which includes \$622 in additional bonus accrual resulting from legal settlement income.

³Represents assessment of computer-based lease taxes for prior period use, reported in technology support services.

⁴For the fourth and third quarters of 2016, represents professional fees and outside services related to CBOE Holdings' planned acquisition of Bats. For other quarters, represents professional fees and outside services related to CBOE Holdings' investments in CBOE Vest Financial and CurveGlobal.

Total may not foot due to rounding

Annual Core Operating Expenses¹

(\$ in thousands)

	2016	% rev	2015	% rev	2014	% rev	2013	% rev	2012	% rev
Total Operating Expenses	\$346,906	54%	\$314,617	50%	\$303,424	49%	\$286,236	50%	\$268,241	52%
Less:										
Depreciation and amortization	44,377	7%	46,274	7%	39,913	6%	34,488	6%	31,485	6%
Acquisitions related expenses	13,536	2%								
Accelerated stock-based compensation	1,487	-	-	-	2,530	-	3,996	1%	343	-
Assessment of computer-based lease taxes for prior period use	296	-								
Severance	-	-	-	-	1,863	-	-	-	-	-
Estimated liability/expense related to SEC investigation	-	-	-	-	-	-	1,000	-	5,000	1%
Volume-based expenses:										
Royalty fees	77,953	12%	70,574	11%	66,110	11%	56,576	10%	46,135	9%
Order routing	900	-	2,293	-	4,080	1%	4,355	1%	6,275	1%
Core Operating Expenses (non-GAAP)¹:	\$208,357	32%	\$195,476	31%	\$188,928	31%	\$185,821	32%	\$179,003	35%
Less: Continuing stock-based compensation	13,638	2%	12,181	2%	13,047	2%	16,828	3%	12,005	2%
Core Operating Expenses excluding continuing stock-based compensation (non-GAAP)¹:	\$194,719	30%	\$183,295	29%	\$175,881	28%	\$168,993	30%	\$166,998	33%
Core Operating Expense Detail:										
Compensation and benefits	\$111,665	17%	\$105,925	17%	\$117,341	19%	\$114,087	20%	\$103,853	20%
Technology support services	22,169	3%	20,662	3%	19,189	3%	17,898	3%	19,603	4%
Professional fees and outside services	53,167	8%	50,060	8%	31,976	5%	34,473	6%	36,300	7%
Travel and promotion expenses	10,971	2%	8,982	1%	9,046	1%	9,806	2%	10,006	2%
Facilities costs	5,693	1%	4,998	1%	5,721	1%	5,053	1%	5,066	1%
Other expenses	4,692	-	4,849	1%	5,655	1%	4,504	1%	4,175	1%
Total	\$208,357	32%	\$195,476	31%	\$188,928	31%	\$185,821	32%	\$179,003	35%
Number of Full Time Employees at year end	553		564		520		650		605	

¹Please see our disclaimer regarding non-GAAP financial measures.

Total may not foot due to rounding.

GAAP to Non-GAAP Reconciliation For 2012 and 2013

GAAP to Non-GAAP Reconciliation

(in thousands, except per share amounts)

	1Q12	2Q12	3Q12	4Q12	FY2012	1Q13	2Q13	3Q13	4Q13	FY2013
Reconciliation of GAAP Net Income Allocated to Common Stockholder to Non-GAAP										
GAAP net income allocated to common stockholders	\$ 32,863	\$ 37,903	\$ 45,243	\$ 39,246	\$ 155,254	\$ 41,789	\$ 45,477	\$ 40,955	\$ 45,649	\$ 173,863
Add: Accelerated stock-based compensation	194			149	343	3,180	816			3,996
Add: Estimated liability related to SEC investigation				5,000	5,000		1,000			1,000
Add: Impairment charge						245				245
Income tax benefit/(expense) related to the items above	(80)			(63)	(139)	(1,311)	(313)			(1,611)
Add: Income tax provision adjustment			(7,654)	(5,415)	(13,054)					
Net income allocated to participating securities - effect on reconciling items	(2)		86	4	106	(29)	(22)			(46)
Adjusted net income allocated to common stockholders	\$ 32,975	\$ 37,903	\$ 37,675	\$ 38,921	\$ 147,510	\$ 43,874	\$ 46,958	\$ 40,955	\$ 45,649	\$ 177,447
Reconciliation of GAAP Diluted EPS to Non-GAAP										
GAAP diluted earnings per common share	\$ 0.37	\$ 0.44	\$ 0.52	\$ 0.45	\$ 1.78	\$ 0.48	\$ 0.52	\$ 0.47	\$ 0.52	\$ 1.99
Per share impact of items above			(0.09)		(0.09)	0.02	0.02			0.04
Non-GAAP diluted earnings per common share	\$ 0.37	\$ 0.44	\$ 0.43	\$ 0.45	\$ 1.69	\$ 0.50	\$ 0.54	\$ 0.47	\$ 0.52	\$ 2.03
Reconciliation of GAAP Operating Margin to Non-GAAP										
GAAP operating revenue	\$ 121,392	\$ 132,549	\$ 128,319	\$ 130,077	\$ 512,338	\$ 142,705	\$ 150,772	\$ 136,743	\$ 141,830	\$ 572,050
Non-GAAP adjustments noted above										
Adjusted operating revenue	\$ 121,392	\$ 132,549	\$ 128,319	\$ 130,077	\$ 512,338	\$ 142,705	\$ 150,772	\$ 136,743	\$ 141,830	\$ 572,050
GAAP operating income	\$ 57,415	\$ 66,069	\$ 60,861	\$ 59,752	\$ 244,097	\$ 69,430	\$ 75,358	\$ 68,427	\$ 72,599	\$ 285,814
Non-GAAP adjustments noted above	194			5,149	5,343	3,180	1,816			4,996
Adjusted operating income	\$ 57,609	\$ 66,069	\$ 60,861	\$ 64,901	\$ 249,440	\$ 72,610	\$ 77,174	\$ 68,427	\$ 72,599	\$ 290,810
Adjusted operating margin	47.5%	49.8%	47.4%	49.9%	48.7%	50.9%	51.2%	50.0%	51.2%	50.8%

May not foot due to rounding and/or change in shares outstanding

GAAP to Non-GAAP Reconciliation

For 2014 and 2015

GAAP to Non-GAAP Reconciliation

(in thousands, except per share amounts)

	1Q14	2Q14	3Q14	4Q14	FY2014	1Q15	2Q15	3Q15	4Q15	FY2015
Reconciliation of GAAP Net Income Allocated to Common Stockholder to Non-GAAP										
GAAP net income allocated to common stockholders	\$ 48,528	\$ 42,598	\$ 48,146	\$ 49,119	\$ 188,392	\$ 42,079	\$ 44,646	\$ 67,219	\$ 50,180	204,125
Less: Revenue recognized from prior years									\$ (1,995)	(1,995)
Add: Accelerated stock-based compensation	2,530				2,530					-
Add: Sevice expense related to outsourcing certain regulatory services				1,863	1,863					-
Add: Impairment charge				3,000	3,000	364				364
Add: Tax adjustment related to prior year				1,600	1,600			(4,286)		(4,286)
Income tax benefit/(expense) related to the items above	(1,009)			(2,005)	(2,861)	(142)			732	634
Net income allocated to participating securities - effect on reconciling items	(15)			(20)	(43)	(3)		19	6	26
Adjusted net income allocated to common stockholders	\$ 50,034	\$ 42,598	\$ 48,146	\$ 53,557	\$ 194,481	\$ 42,299	\$ 44,646	\$ 62,952	\$ 48,923	\$ 198,868
Reconciliation of GAAP Diluted EPS to Non-GAAP										
GAAP diluted earnings per common share	\$ 0.56	\$ 0.50	\$ 0.57	\$ 0.58	\$ 2.21	\$ 0.50	\$ 0.54	\$ 0.81	\$ 0.61	\$ 2.46
Per share impact of items above	0.02			0.06	0.07			(0.05)	(0.02)	(0.06)
Non-GAAP diluted earnings per common share	\$ 0.58	\$ 0.50	\$ 0.57	\$ 0.64	\$ 2.28	\$ 0.50	\$ 0.54	\$ 0.76	\$ 0.59	\$ 2.40
Reconciliation of GAAP Operating Margin to Non-GAAP										
GAAP operating revenue	\$ 157,885	\$ 143,942	\$ 148,910	\$ 166,487	\$ 617,225	\$ 142,839	\$ 148,725	\$ 187,035	\$ 155,946	\$ 634,545
Non-GAAP adjustments noted above									(1,995)	(1,995)
Adjusted operating revenue	\$ 157,885	\$ 143,942	\$ 148,910	\$ 166,487	\$ 617,225	\$ 142,839	\$ 148,725	\$ 187,035	\$ 153,951	\$ 632,550
GAAP operating income	\$ 82,038	\$ 69,716	\$ 75,084	\$ 86,962	\$ 313,801	\$ 69,553	\$ 73,370	\$ 101,110	\$ 75,894	\$ 319,928
Non-GAAP adjustments noted above	2,530			1,863	4,393				(1,995)	(1,995)
Adjusted operating income	\$ 84,568	\$ 69,716	\$ 75,084	\$ 88,825	\$ 318,194	\$ 69,553	\$ 73,370	\$ 101,110	\$ 73,899	\$ 317,933
Adjusted operating margin	53.6%	48.4%	50.4%	53.4%	51.6%	48.7%	49.3%	54.1%	48.0%	50.3%
Free Cash Flow Reconciliation										
Net cash flows provided by operating activities										\$ 245,278
Capital expenditures										(39,340)
Free Cash Flow										\$ 205,938

Total may not foot due to rounding and/or change in shares outstanding.

GAAP to Non-GAAP Reconciliation For 2016

(in thousands, except per share amounts)

Reconciliation of GAAP Net Income Allocated to Common Stockholder to Non-GAAP

	1Q16	2Q16	3Q16	4Q16	FY2016
GAAP net income allocated to common stockholders*	\$ 49,198	\$ 50,719	\$ 40,280	\$ 44,748	\$ 184,946
Add: Compensation and benefits (1)	200	892	212	182	1,487
Add: Acquisition related expenses reported in professional fees and outside services (2)	368	300	8,635	4,234	13,536
Add: Amortization of intangible assets reported in depreciation and amortization - Vest (3)	152	231	191	191	765
Add: Amortization of intangible assets reported in depreciation and amortization - Other	109	109	109	109	436
Add: Change in redemption value of noncontrolling interest*		299	270	532	1,100
Add: Assessment of computer-based lease taxes for prior period use, reported in technology support services	296				296
Less: Gain on settlement of contingent consideration			(1,399)		(1,399)
Add: Interest and other financing costs related to pending Bats acquisition			232	5,515	5,747
Less: Revenue recognized from legal settlement (3)		(5,500)			(5,500)
Income tax expense related to the items above (4)	(378)	1,614	(2,993)	(3,996)	(5,681)
Uncertain tax position related to research and development credits (5)			1,661		1,661
Net income allocated to participating securities - effect on reconciling items	(3)	10	29	(28)	(52)
Adjusted net income allocated to common stockholders	\$ 49,942	\$ 48,674	\$ 47,227	\$ 51,487	\$ 197,342

Reconciliation of GAAP Diluted EPS to Non-GAAP

GAAP diluted earnings per common share	\$ 0.60	\$ 0.62	\$ 0.50	\$ 0.55	\$ 2.27
Per share impact of non-GAAP adjustments noted above	0.01	(0.02)	0.08	0.08	0.15
Non-GAAP diluted earnings per common share	\$ 0.61	\$ 0.60	\$ 0.58	\$ 0.63	\$ 2.42

Reconciliation of GAAP Operating Margin to Non-GAAP

GAAP operating revenue	\$ 162,330	\$ 163,329	\$ 156,207	\$ 163,241	\$ 645,106
Non-GAAP adjustments noted above	-	-	-	-	-
Adjusted operating revenue	\$ 162,330	\$ 163,329	\$ 156,207	\$ 163,241	\$ 645,106
GAAP operating expenses	\$ 82,849	\$ 85,362	\$ 90,557	\$ 88,139	\$ 346,906
Non-GAAP adjustments noted above	(1,125)	(1,532)	(9,147)	(4,716)	(16,520)
Adjusted operating expenses	\$ 81,724	\$ 83,830	\$ 81,410	\$ 83,423	\$ 330,386
GAAP operating income	\$ 79,481	\$ 77,967	\$ 65,650	\$ 75,102	\$ 298,200
Non-GAAP adjustments noted above	1,125	1,532	9,147	4,716	16,520
Adjusted operating income	\$ 80,606	\$ 79,499	\$ 74,797	\$ 79,818	\$ 314,720
Adjusted operating margin	49.7%	48.7%	47.9%	48.9%	48.8%

¹For the fourth quarter of 2016, represents \$185 for accelerated stock-based compensation expenses. For the year, this amount represents \$865 for accelerated stock-based compensation expenses and \$622 in additional bonus accrual resulting from legal settlement income.

²For the fourth quarter of 2016, this amount represents professional fees and outside services related to CBOE Holdings' planned acquisition of Bats. For the year, this amount includes professional fees and outside services related to CBOE Holdings' investments in CBOE Vest Financial and CurveGlobal, and its planned acquisition of Bats.

³Settlement received for attorney fees and expenses relating to a litigation matter, reported in investment and other income.

⁴GAAP to Non-GAAP reconciling items that are associated with our controlling interest in Vest Financial Group Inc. are not tax effected.

⁵For the third quarter of 2015, the company recorded a benefit from the release of an uncertain tax position related to research and development credits, which were effectively settled. For the third quarter of 2016, the company no longer considers certain positions to be effectively settled and therefore recorded a related increase in unrecognized tax benefits.

Total may not foot due to rounding and/or change in shares outstanding.

Non-GAAP Information

- In addition to disclosing results determined in accordance with Generally Accepted Accounting Principles (GAAP), CBOE Holdings has disclosed certain non-GAAP measures of operating performance. These measures are not in accordance with, or a substitute for, GAAP measures, and may be different from or inconsistent with non-GAAP financial measures used by other companies. The non-GAAP measures provided in this presentation include core operating expenses, core operating expenses excluding continuing stock-based compensation, adjusted operating revenues, adjusted operating expenses, adjusted operating income, adjusted operating margin, adjusted net income allocated to common stockholders and adjusted diluted earnings per share.
- Management believes that the non-GAAP financial measures in this presentation provide useful and comparative information to assess trends in our core operations and a means to evaluate period-to-period comparisons. Non-GAAP financial measures disclosed by management are provided as additional information to investors in order to provide them with an alternative method for assessing our financial condition and operating results.
- Core operating expenses is the company's operating expenses after excluding (i) depreciation and amortization expense, (ii) accelerated stock-based compensation expense, (iii) volume-based expenses and (iv) other unusual or one-time expenses.
- Specific quantifications of the amounts that would be required to reconcile the company's core operating expenses guidance are not available. The company believes that there is a degree of volatility with respect to certain of its GAAP measures, primarily related to volume-based expenses, which include royalty fees and order routing fees, the items that would be required to reconcile to GAAP operating expenses, which preclude the company from providing accurate guidance on certain forward-looking GAAP to non-GAAP reconciliations. The company believes that providing estimates of the amounts that would be required to reconcile the range of the company's core operating expenses would imply a degree of precision that would be confusing or misleading to investors for the reasons identified above.

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