
Second Quarter 2017 Earnings Presentation

August 4, 2017



Agenda

Strategic Review

Edward Tilly

Chairman and Chief Executive Officer

Financial Review

Alan Dean

Executive Vice President, CFO and Treasurer

Brian Schell

Deputy CFO

Questions and Answers

Edward Tilly

Alan Dean

Brian Schell

Chris Concannon

President and Chief Operating Officer

John Deters

Chief Strategy Officer, Head of Corp. Initiatives

Cautionary Statements Regarding Forward-Looking Information

This presentation 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. 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 those expressed or implied by the forward-looking statements.

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; price competition and consolidation in our industry; decreases in trading volumes, market data fees 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 and exposure to risk from third parties; our index providers’ ability to maintain the quality and integrity of their indexes and 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 attract and retain skilled management and other personnel, including those experienced with post-acquisition integration; 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 and unauthorized disclosure of confidential information; challenges to our use of open source software code; our ability to meet our compliance obligations, including managing potential conflicts between our regulatory responsibilities and our for-profit status; damage to our reputation; the ability of our compliance and risk management methods to effectively monitor and manage our risks; our ability to manage our growth and strategic acquisitions or alliances effectively; unanticipated difficulties or expenditures relating to the acquisition of Bats Global Markets, Inc., including, without limitation, difficulties that result in the failure to realize expected synergies, accretion, efficiencies and cost savings from the acquisition within the expected time period (if at all), whether in connection with integration, migrating trading platforms, broadening distribution of product offerings or otherwise; restrictions imposed by our debt obligations; our ability to maintain an investment grade credit rating; potential difficulties in our migration of trading platforms and our ability to retain employees as a result of the acquisition; and the accuracy of our estimates and expectations. More detailed information about factors that may affect our actual results to differ may be found in our filings with the SEC, including in our Annual Report on Form 10-K for the year ended December 31, 2016 and other filings made from time to time with the SEC.

We do not undertake, and we expressly disclaim, 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.

Trademarks:

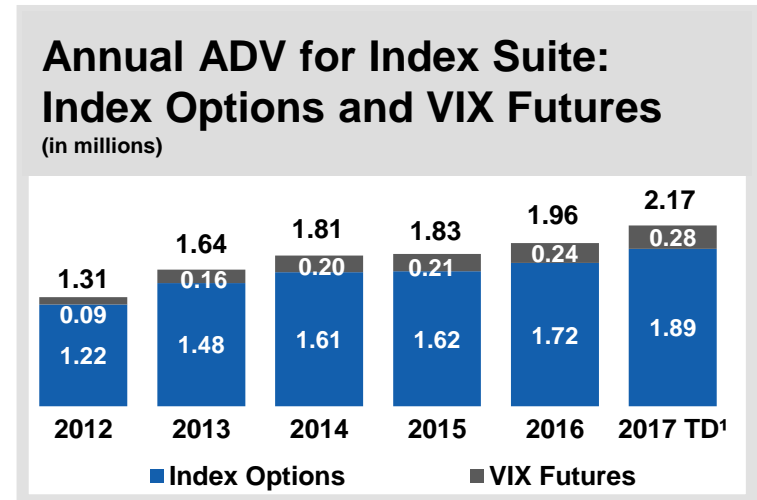
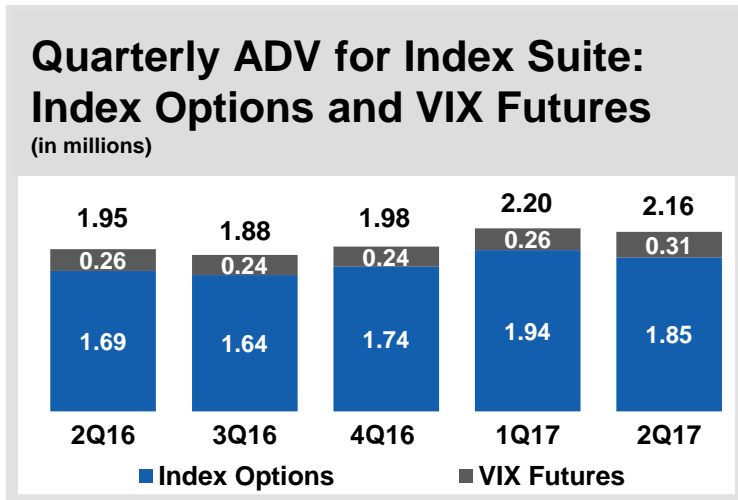
CBOE®, Chicago Board Options Exchange®, CFE®, BATS®, CBOE Volatility Index® and VIX® are US registered trademarks, and CBOE Futures ExchangeSM and CBOE Options InstituteSM are service marks of CBOE Holdings, Inc. and its subsidiaries. S&P® and S&P 500® are registered trademarks of Standard & Poor’s Financial Services, LLC and have been licensed for use by CBOE. All other trademarks and service marks are the property of their respective owners. © 2017 Chicago Board Options Exchange, Inc. All rights reserved.

**➤ Strategic Review
Edward Tilly
Chairman and CEO**

Growth in Proprietary Index Suite Continued to Drive Revenue and Earnings

Users find utility trading VIX futures and options, regardless of the VIX level

- 2Q17 adjusted diluted EPS of \$0.87 on net revenue of \$267 million
- Total options ADV up 15% year-over-year
 - SPX and VIX index options up 9% and 15%, respectively
 - VIX futures had highest quarter ever; ADV up 19%



¹2017 TD through June 30, 2017

Strengthening our Position as a Global Exchange Operator

Diversified Product Offering

Options

- 15% increase in ADV for 2Q17 versus 2Q16
- 9% increase in ADV for Index options

U.S. Equities

- 2Q17 market share of 19.2% vs 20.4% in 2Q16
- Lower volatility; tougher comparisons

Futures

- 19% increase in ADV for 2Q17 versus 2Q16
- Record quarterly ADV in VIX futures

European Equities

- 2Q17 market share of 21.3% vs 22.9% in 2Q16¹
- Net capture up 7%

Global FX

- 2Q17 volume up 8% versus prior year
- Record market share of 12.9% vs 11.5% in 2Q16²

¹Market share based on notional value traded.

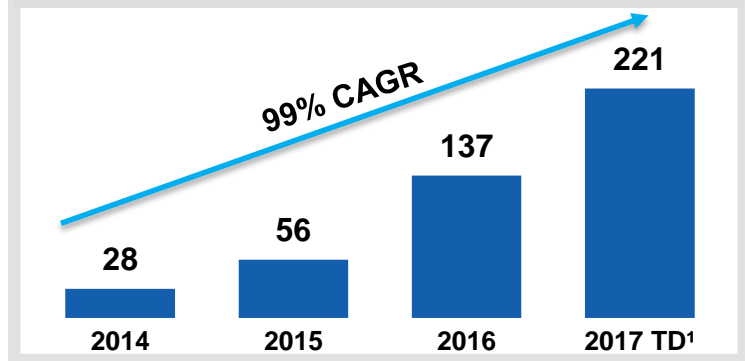
²Market share represents Hotspot volume divided by total volume of publicly reporting spot FX venues (Hotspot, EBS, Thomson Reuters and FastMatch), which reflects readily available data from publicly reporting venues.

U.S. Equities: Growing ETF Market Listings

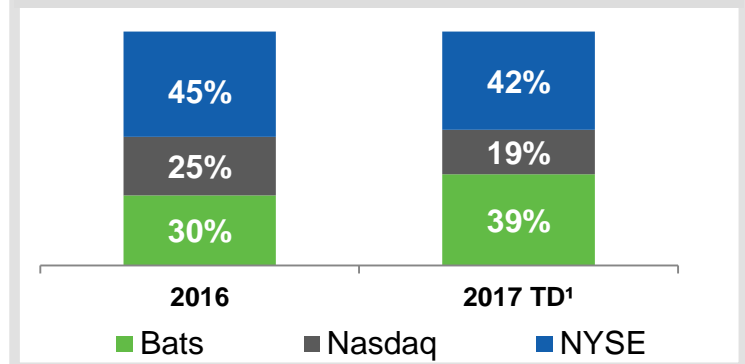
Growing ETF listings market share enhances benefits for issuing firms and provides deep liquidity to market participants

- **Captured 39% of new listings YTD¹**
 - 5 of top 10 new ETF launches in terms of AUM² listed on Bats this year
- **Listed first exchange traded notes**
- **iShares transferred 50 ETFs from NYSE Arca**
 - 30 transferred to Bats on Aug. 2, 2017
- **Optimistic about growth prospects**

Number of Bats U.S. ETPs



Share of New ETF Launches



¹YTD and 2017 TD through Aug. 3, 2017
²AUM = assets under management

Expanding Our Product Lines

Entered into an agreement with Gemini Trust Company

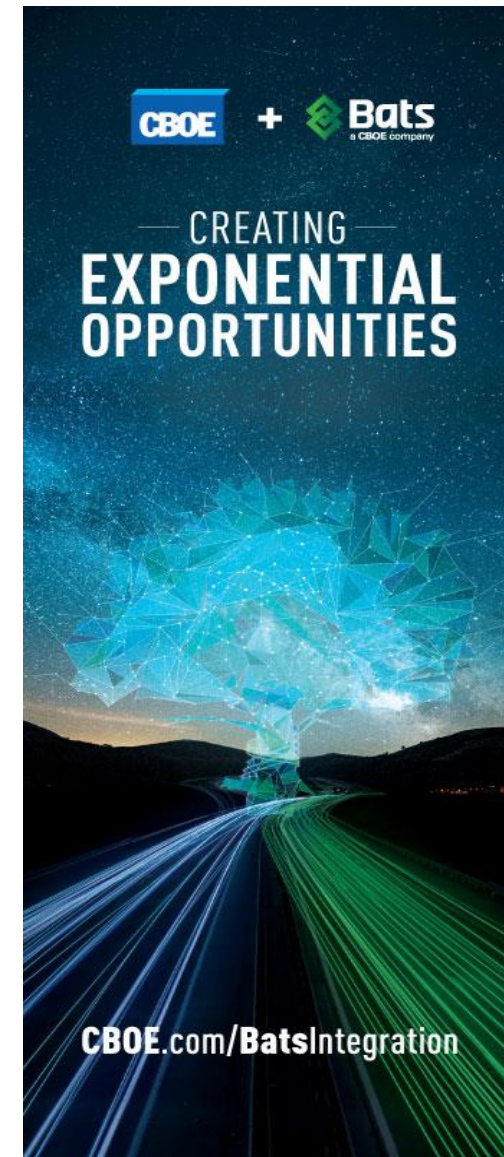
- **Provides CBOE with exclusive global license to use Gemini's market data to:**
 - Create bitcoin derivatives products
 - Create new indexes
 - Distribute Gemini market data over CBOE's market data feeds
- **Subject to regulatory review, expect to launch cash-settled bitcoin futures on CFE**
- **Look to leverage our experience in product innovation to develop and offer trading in bitcoin futures**



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

Opportunity to cross-sell additional products and services to more customers

- Focus on core index business
- Target OTC space with quality listed products
- Extending global reach to promote expanded products
 - Plan to open a Hong Kong/APAC office in 3Q17
 - Leverage presence in London and Singapore offices



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

Preparing for sixth annual CBOE Risk Management Conference (RMC) Europe 2017

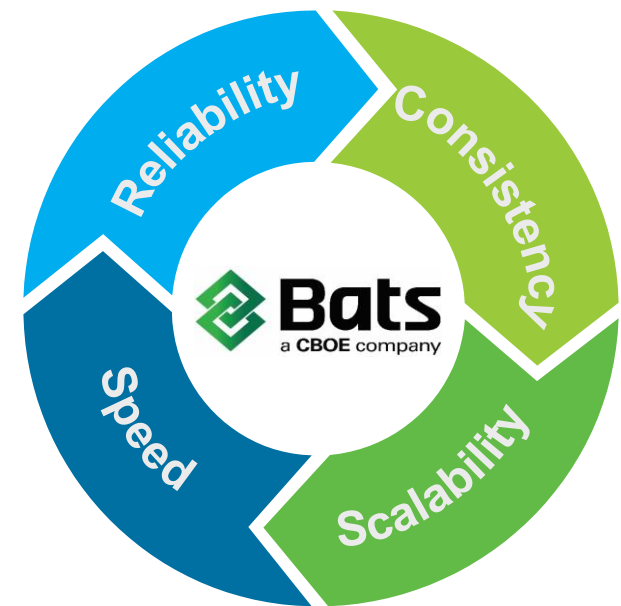
- To be held just outside of London from September 11-13
- Attracts sophisticated traders who are early adopters of our new products
 - Will feature our expanded products and services



Leveraging Bats' Leading Proprietary Trading Technology

Migrating trading technology onto Bats' proven platform to gain scale and efficiency; Launching new index platform

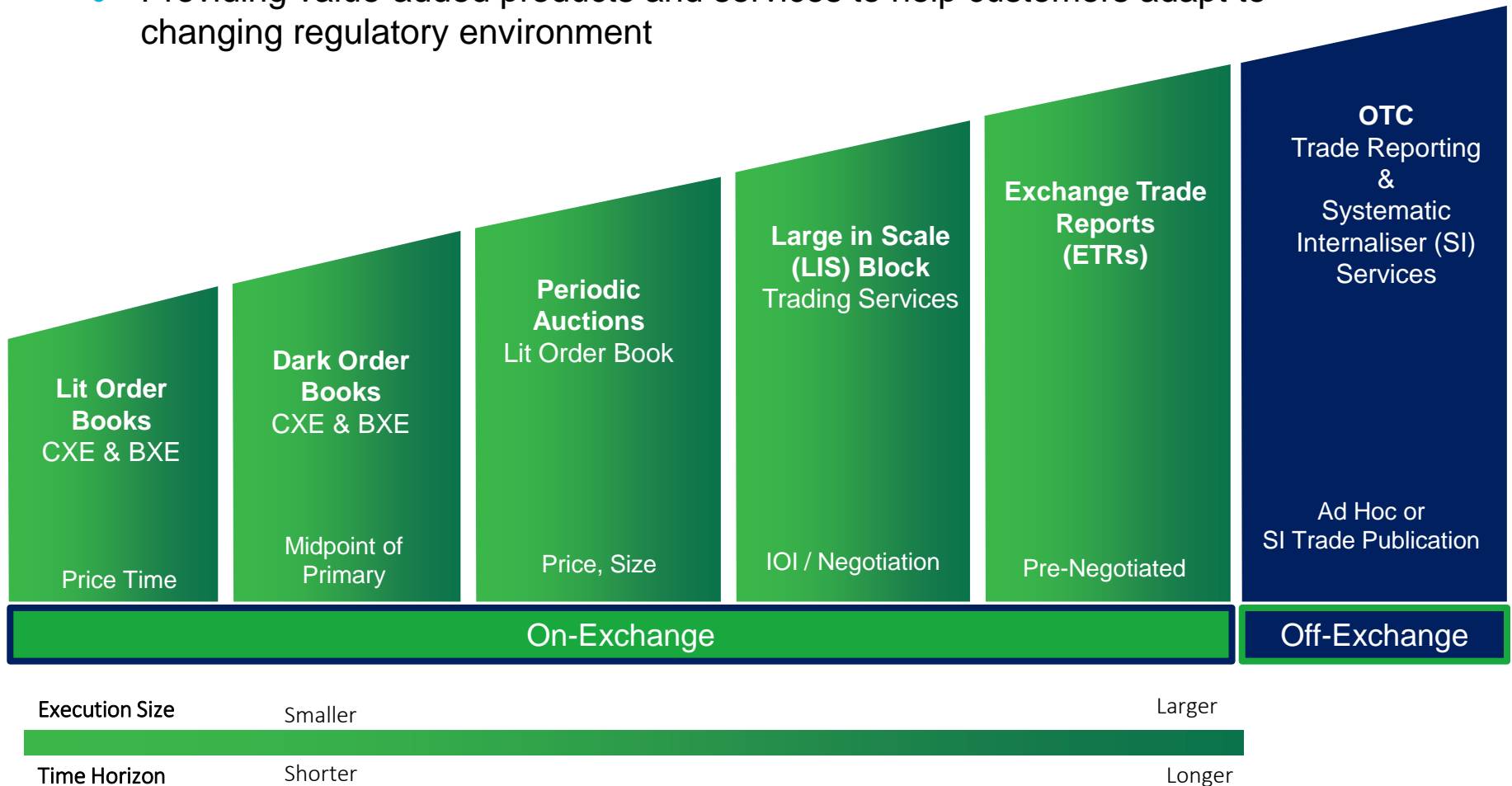
- **Multi-year technology migration underway**
- **Plan to complete migration of CFE in February 2018 and C2 in May 2018**
 - CBOE to follow
- **Implementing a new index technology platform**
 - Foundation for our growing index business
 - Better calculate and disseminate data for new and existing indices
 - Expected in first half of 2018



European Equities – Leveraging Opportunities Presented by MiFID II

➤ Completed significant software release needed for MiFID II compliance

- Providing value-added products and services to help customers adapt to changing regulatory environment



U.S. Equities Market

Bats Market Close (BMC)¹

- **Near end-of-day match process for non-Bats listed securities**
 - Created in response to customer demand
 - Provides a means to secure primary market closing print prices without disrupting the primary market closing auctions
- **On July 6, the SEC extended their BMC review period 45-days, August 20th next action date**
 - SEC may either approve or institute a proceeding to disapproval, which would give them another 180 days to act

¹Subject to SEC approval

Excited About Opportunities Ahead

CBOE + **Bats**
a CBOE company

CREATING
**EXPONENTIAL
OPPORTUNITIES**

[CBOE.com/BatsIntegration](https://www.cboe.com/BatsIntegration)

➤ Financial Review
Alan Dean
EVP, CFO and Treasurer

2Q17 Financial Overview

Adjusted Combined Financial Results ¹ (\$ in millions, except per share)	2Q17	2Q16	\$ Change	% Change
Net Revenue ^{1,2}	\$266.9	\$254.0	\$12.9	5.1%
Adjusted Operating Expenses ¹	101.3	107.0	-5.7	-5.3%
Adjusted Operating Income ¹	\$165.6	\$147.0	\$18.6	12.7%
<i>Adjusted Operating Margin¹</i>	<i>62.0%</i>	<i>57.9%</i>		<i>410 bps</i>
Adjusted Net Income Allocated to Common Stockholders ¹	\$ 98.0	\$84.7	\$13.3	15.7%
Adjusted Diluted EPS ¹	\$ 0.87	\$ 0.75	\$0.12	16.0%
Adjusted EBITDA ¹	\$178.9	\$163.3	\$15.6	9.6%
<i>Adjusted EBITDA Margin¹</i>	<i>67.0%</i>	<i>64.3%</i>		<i>270 bps</i>

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

²Net revenue referenced in this presentation represents revenue less cost of revenue.

Net Revenue Growth Supported by Both Transaction and Non-Transaction Revenue

Non-transaction revenue accounted for 42.1% of net revenue; up 10 bps versus 2Q16

➤ **Net transaction fees up \$8.6MM**

- Primarily driven by growth in proprietary index products

➤ **Exchange services up \$2.8MM**

- Primarily due to fee adjustments implemented January 1

➤ **Market data fees up \$3.2MM**

- Mainly due to higher options market data revenue

Adjusted Combined Net Revenue ¹ (in millions)	2Q17	2Q16	% Chg
Net transaction fees	\$175.2	\$166.6	5%
Access fees	29.7	29.9	-1%
Exchange services and other fees	19.9	17.1	16%
Market data fees	48.0	44.8	7%
Regulatory fees	8.7	9.7	-10%
Royalty fees	(20.6)	(19.3)	7%
Other revenue ¹	6.0	5.2	15%
Total Adjusted Combined Net Revenue¹	\$266.9	\$254.0	5%

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

Strengthening our Position as a Global Exchange Operator

Diversified Product Offering

Options

- 2% increase in net revenue
- Increase in ADV offset somewhat by decline in RPC

U.S. Equities

- 3% increase in net revenue
- Lower net transaction fees offset by growth in non-transaction fees

Futures

- 20% increase in net revenue
- Record ADV; 19% increase in ADV and 5% increase in RPC

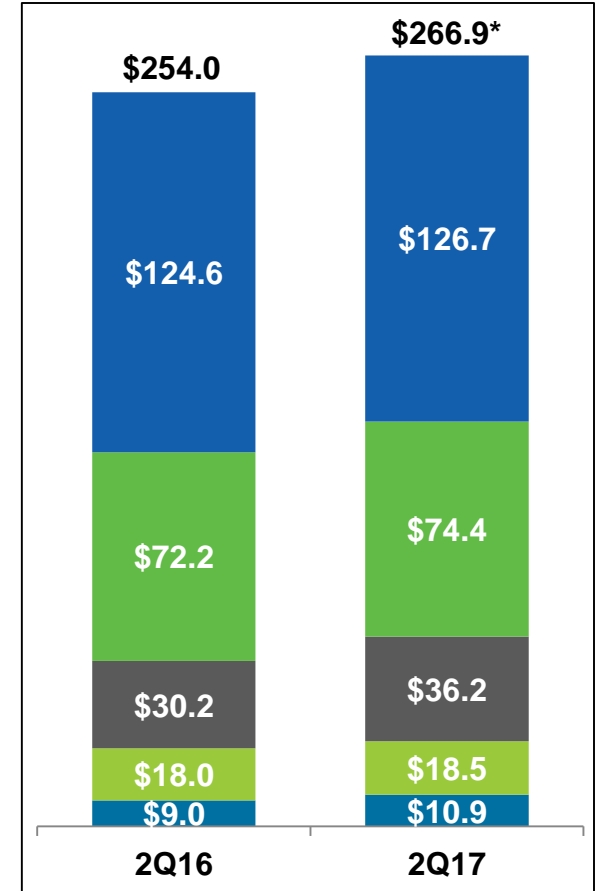
European Equities

- 3% increase in net revenue
- Up 16% in local currency

Global FX

- 21% increase in net revenue driven by higher transaction and non-transaction revenue

Adjusted Combined Net Revenue¹



¹Adjusted to reflect the impact of certain items. See Appendix for "Non-GAAP Information."
* Segment detail excludes Corporate net revenue of \$0.2 million

Options Combined Net Revenue Up 2%

Record quarterly ADV in SPX options key growth driver

- Increase in index options net transaction fees offset somewhat by revenue decline in multiply-listed options
- Growth in market data revenue due to strong market share gains across each exchange

Options Combined Statistics (\$ in millions, except RPC)	2Q17 Actual	2Q16 Actual	Change
Options Combined Net Revenue (in millions)	\$126.7	\$124.6	2%
Options Key Operating Statistics:			
Total market share	42.2%	38.7%	+3.5% pts
Total ADV (in thousands)	7,035	6,110	15%
Index options	1,847	1,691	9%
Multiply-listed options	5,188	4,419	17%
Total RPC	\$0.225	\$0.245	-8%
Index options	\$0.694	\$0.701	-1%
Multiply-listed options	\$0.058	\$0.071	-18%

Futures Net Revenue Up 20%

2Q17 ADV for VIX futures hit a record high

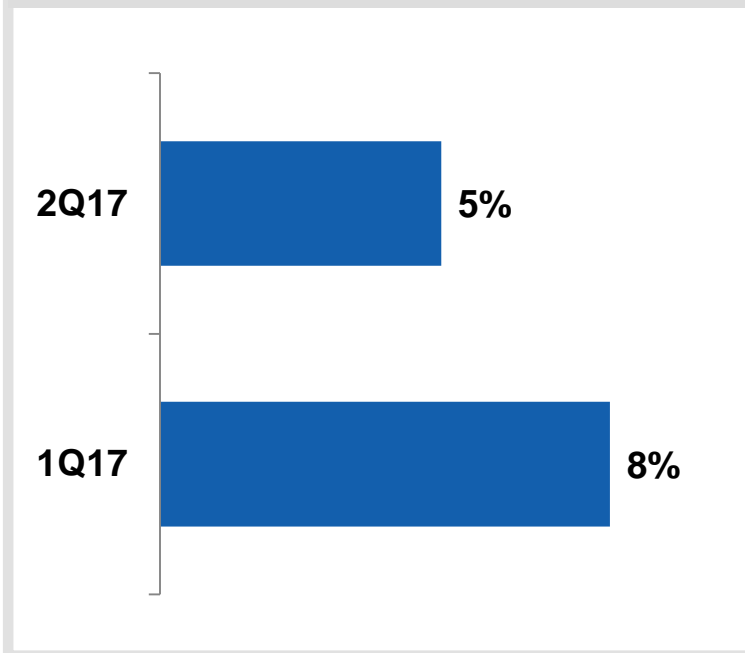
- ▶ 19% increase in ADV in 2Q17 vs 2Q16
- ▶ 5% increase in RPC in 2Q17 vs 2Q16

Futures Statistics	2Q17 Actual	2Q16 Actual	Change
Futures Net Revenue (in millions)	\$36.2	\$30.2	20%
Futures Key Operating Statistics:			
Total ADV (in thousands)	307	258	19%
Total RPC	\$1.762	\$1.682	5%

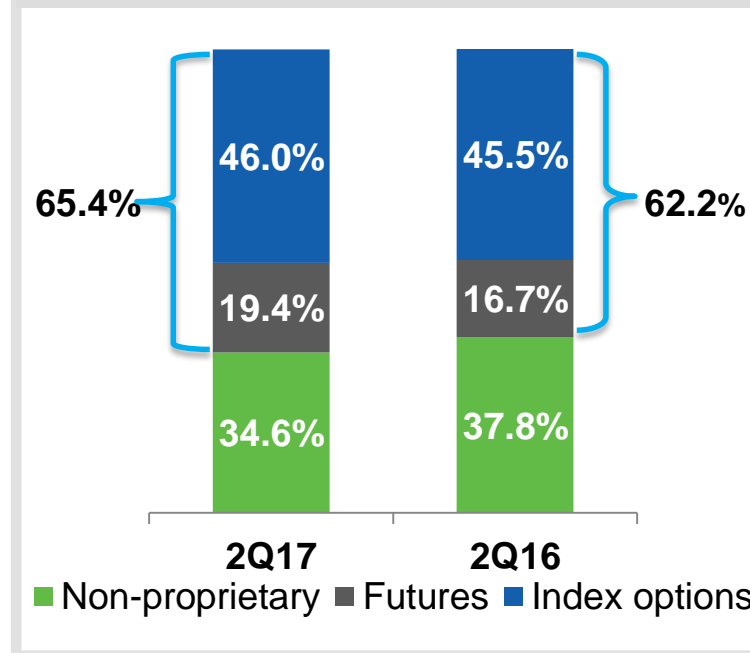
Proprietary Products Drove 5% Organic Revenue Growth for Legacy CBOE

- Proprietary Products account for majority of total net combined transaction fees and organic growth

Legacy CBOE Organic Revenue¹
Year-Over-Year Growth Rate



Mix of Proprietary Products to Total Net Combined Transaction Fees



¹See Appendix for "Non-GAAP Information."

U.S. Equities Combined Net Revenue up 3%

Low volatility and difficult comparison to 2Q16

- Increase in non-transaction revenue offset decline in net transaction fees
- Bats maintained position as second-largest U.S. equities market operator in 2Q17

U.S. Equities Combined Statistics	2Q17	2Q16	Change
U.S. Equities Net Revenue (in millions)	\$74.4	\$72.2	3%
U.S. Equities Key Operating Statistics:			
Total market share	19.2%	20.4%	-1.2% pts
Market ADV (shares in billions)	6.9	7.3	-5%
ADV (matched shares in billions)	1.3	1.5	-13%
Net revenue capture (per 100 touched shares)	\$.023	\$.022	5%

European Equities Combined Net Revenue Up 3%

Net transaction fees up 9% in local currency; down 2% in dollars

- 3% increase in net revenue despite stronger dollar relative to the pound sterling
- In local currency, net revenue grew 16%

European Equities Combined Statistics	2Q17	2Q16	Change
European Equities Net Revenue (in millions)	\$18.5	\$18.0	3%
European Equities Key Operating Statistics:			
Total market share	21.3%	22.9%	-1.6% pts
Market ADV (Euros, in billions)	€48.6	€46.6	4%
Net capture (in basis points)	0.162	0.152	7%

Global FX Combined Net Revenue Up 21%

Hotspot market share of 12.9% matched high reached in 1Q17

- **Net revenue growth reflects increases in net transaction fees and non-transaction fees**
 - Higher non-transaction fees reflecting fees implemented in 3Q16

Global FX Combined Statistics	2Q17	2Q16	Change
Global FX Net Revenue (in millions)	\$10.9	\$9.0	21%
Global FX Key Operating Statistics:			
Market share	12.9%	11.5%	1.4% pts
Average Daily Notional Value (\$ in billions)	\$27.9	\$25.9	8%
Net revenue (per one million shares traded)	\$2.65	\$2.61	2%

Adjusted Combined Operating Expenses

Key Variances:

- **Professional fees and outside services down \$2.9MM**
 - Primarily reflects realization of synergies
- **Depreciation and amortization down \$2.3MM**
 - Mainly due to the roll-off of fully-depreciated assets
- **Synergies realized in 2Q17 of \$7.1MM pre-tax**
 - 1Q17 of \$2.4MM pre-tax

Adjusted Combined Operating Expenses ¹ (in millions)	2Q17	2Q16	% Chg
Compensation and benefits ¹	\$ 50.0	\$ 50.6	-1%
Depreciation and amortization ¹	13.2	15.5	-15%
Technology support services ¹	12.0	11.6	3%
Professional fees and outside services ¹	16.9	19.8	-15%
Travel and promotional	4.2	4.1	2%
Facilities costs	2.7	2.4	13%
Other expenses	2.3	3.0	-23%
Total	\$101.3	\$107.0	-5%

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

2017 Full-Year Guidance

As of August 4, 2017 (\$ in millions)	Updated 2017 Adjusted Combined Full- Year Guidance	Previous 2017 Adjusted Combined Full- Year Guidance	2016 Adjusted Combined Comparison
Adjusted operating expenses ²	\$415 to \$423 (expect to be at low end of range)	\$415 to \$423	\$417 ¹
Depreciation and amortization (excluding amortization of acquired intangible assets)	\$52 to \$54	\$52 to \$54	\$56
Capital expenditures	\$55 to \$60	\$55 to \$60	\$53
Effective tax rate ³	35.5% to 37.5%	35% to 37%	

¹See “Non-GAAP Information” in the appendix for reconciliation.

²Adjusted operating expenses exclude:

- acquisition-related expenses of \$69.9 million, which represents expenses recognized through June 30, 2017
- accelerated stock-based compensation of \$9.1 million - recognized in 1Q17
- amortization of acquired intangible assets of \$169 million

The company plans to include these adjustments in its non-GAAP reconciliation.

³Based on adjusted combined earnings for the full-year 2017.

Capital Allocation

Maintain a strong balance with the flexibility to:

- Invest in the growth our business
- Pay down debt
 - Reduced term loan by \$375 million in June through refinancing and principal pay down
- Take an opportunistic approach towards share repurchases
- Return capital through dividends
 - Increased 3Q17 dividend by 8% to \$0.27 per share
- Access capital markets
 - Issued two year 1.950% senior notes in June with the net proceeds reducing floating rate term loan balance

Debt Outstanding (\$MM)	June 30, 2017	March 31, 2017
3.650% Senior Notes (10Y)	\$ 650	\$ 650
1.950% Senior Notes (2Y)	300	---
Term Loan Facility	475	850
Total Debt (Gross)	\$ 1,425	\$ 1,500
Debt to EBITDA TTM	2.1x	2.4x
Adjusted Cash & Financial Investments	\$149	\$154

Delivering on Sources of Operating Leverage and Key Strategic Initiatives

Growth of Core Proprietary Products

- **Achieved strong organic growth, driven by proprietary products**

Diversification and Stabilization of Revenue Stream

- **Non-transaction revenue offset decreases in net transaction revenue**

Scale of Business Model

- **Solid expense controls**
- **Higher profitability margins**

Synergies Realization

- **Continued to realize cost synergies**

Capital Allocation

- **Increased dividend by 8%**
- **Reduced debt by \$75 million in 2Q17**

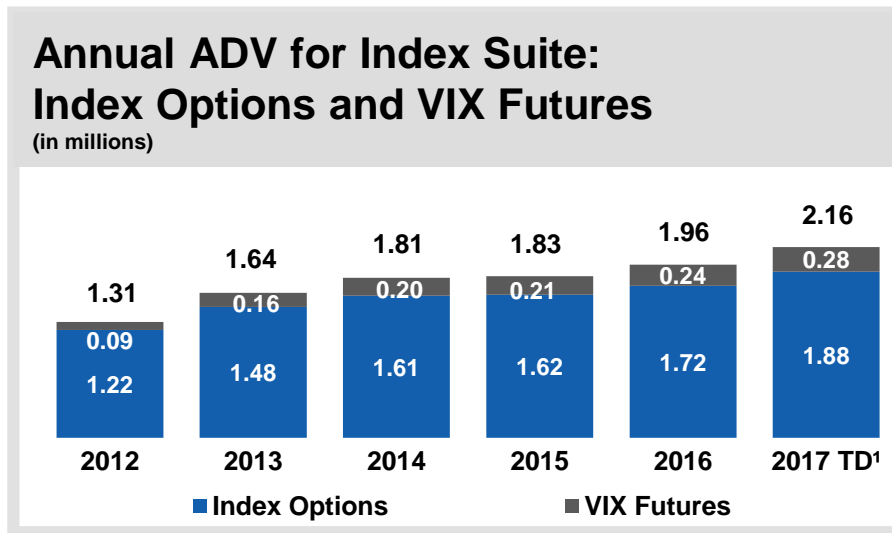
 **Questions & Answers**

➤ Appendix Materials

Growing Proprietary Index Suite

Index suite ADV up 9% through July 2017 versus same period last year

- VIX futures posted record quarterly ADV in 2Q17
- SPX options posted record quarterly ADV in 1Q17



¹2017 TD through July 31, 2017

Growing Index Product Line

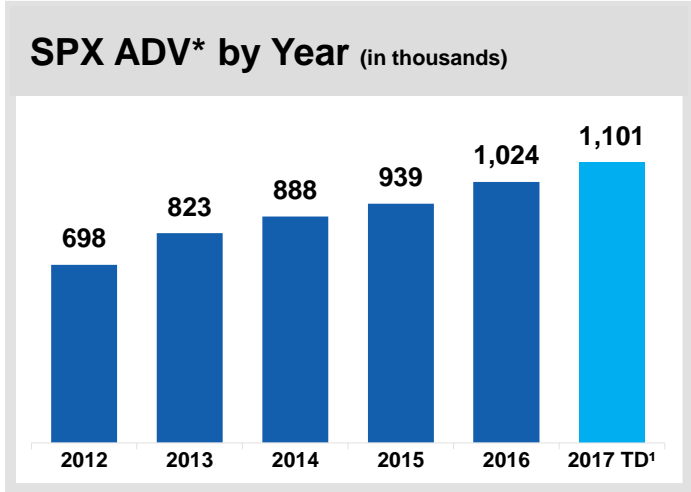
S&P 500 Index (SPX) options, the most actively traded U.S. index options

- **SPX ADV up 9% in 2017 TD¹**

 - SPX achieved record quarterly ADV in 1Q17
 - 2016 was fourth consecutive year of record volume

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

 - Increases opportunities to trade SPX



*Includes SPX Weeklys

¹2017 TD through July 31, 2017

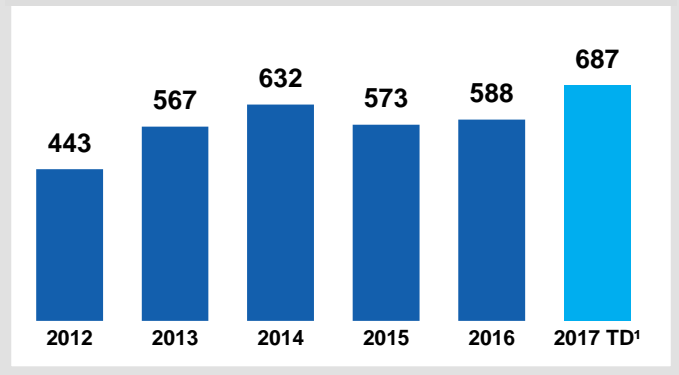
Volatility Index (VIX) Products

CBOE VIX options and futures anchor volatility products

- **VIX index options ADV up 11% 2017 TD¹ versus prior year**
- **VIX futures ADV up 20% 2017 TD¹ versus prior year**
 - VIX futures posted record ADV in 2Q17
 - 2016 was 12th consecutive year of record volume
- **Began overnight dissemination of VIX Index in 2016**
 - Allows overseas investors to reference VIX during their regular trading hours

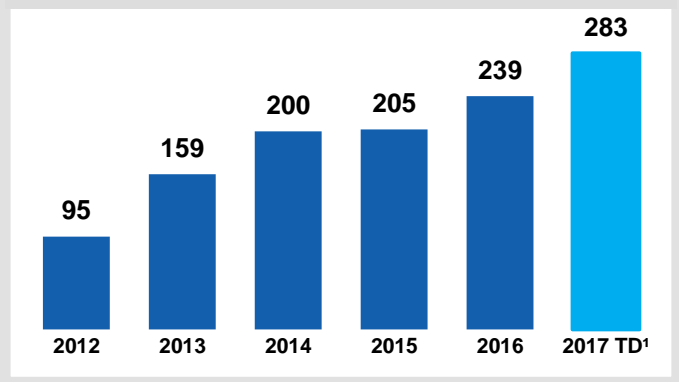
VIX Options ADV

(in thousands)



VIX Futures ADV

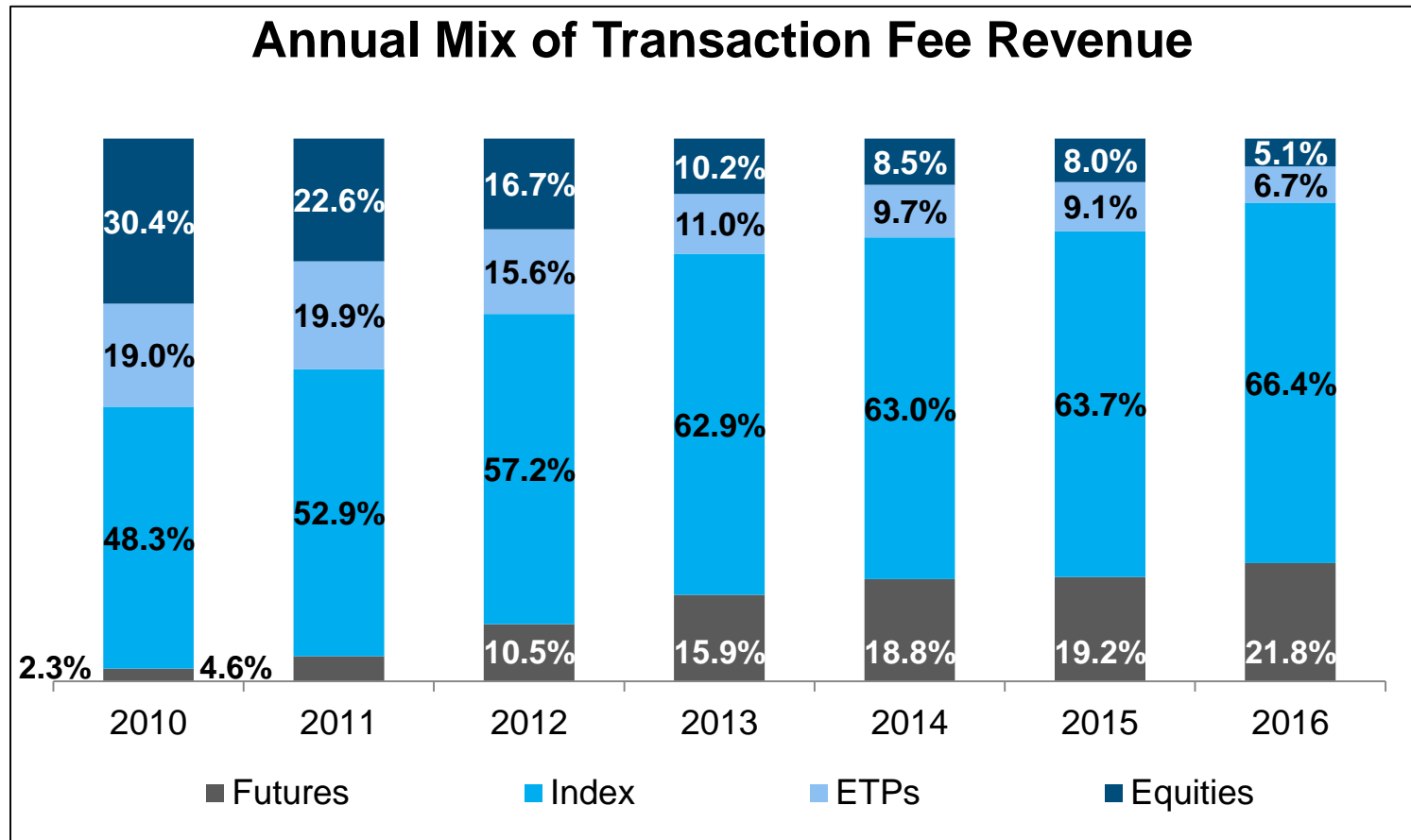
(in thousands)



¹2017 TD through July 31, 2017

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



Supplemental Segment Information

2Q17 Supplemental Net Revenue by Segment (in millions)	Options	U.S. Equities	Futures	European Equities	Global FX	Total ¹
Net transaction fees	\$99.7	\$20.2	\$34.0	\$11.7	\$9.6	\$175.2
Access fees	\$13.9	\$12.7	\$0.5	\$1.8	\$0.8	\$29.7
Exchange services and other fees	\$10.1	\$5.9	\$2.2	\$1.2	\$0.5	\$19.9
Market data fees	\$10.5	\$33.9	\$0.8	\$2.8	---	\$48.0

2Q16 Supplemental Combined Net Revenue by Segment (in millions)	Options	U.S. Equities	Futures	European Equities	Global FX	Total ^{1,2}
Net transaction fees	\$96.0	\$22.2	\$27.8	\$11.9	\$8.8	\$166.6
Access fees	\$15.1	\$13.1	\$0.2	\$1.6	---	\$29.9
Exchange services and other fees	\$9.4	\$4.3	\$2.0	\$1.4	---	\$17.1
Market data fees	\$9.8	\$31.5	\$0.8	\$2.6	---	\$44.8

¹Totals may not foot due to rounding

²A full reconciliation of our non-GAAP and combined results to our GAAP results is included in the following tables. See "Non-GAAP Information" in the accompanying financial tables.

Non-GAAP Information

In addition to disclosing results determined in accordance with GAAP, CBOE Holdings has disclosed certain non-GAAP measures of operating performance. These measures are not in accordance with, or a substitute for, GAAP, and may be different from or inconsistent with non-GAAP financial measures used by other companies. The non-GAAP measures provided in this press release include adjusted operating expenses, adjusted operating income, organic net revenue, adjusted operating margin, adjusted net income allocated to common stockholders and adjusted diluted earnings per share, EBITDA, EBITDA margin, adjusted EBITDA and adjusted EBITDA margin. The non-GAAP measures provided in this presentation also include combined Company financial measures that are discussed in further detail below under the sub-section "Combined Reconciliation."

Management believes that the non-GAAP financial measures presented in this presentation, including adjusted net revenue, organic net revenue and adjusted operating expenses, provide additional 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.

Organic net revenue: Is a non-GAAP financial measure that excludes or has otherwise been adjusted for the impact of our acquisition of Bats. Management believes the organic net revenue (non-GAAP) growth measure provides users with supplemental information regarding the Company's ongoing revenue performance and trends by presenting revenue growth excluding the impact of the Bats acquisition.

Amortization expense of acquired intangible assets: We amortize intangible assets acquired in connection with various acquisitions. Amortization of intangible assets is inconsistent in amount and frequency and is significantly affected by the timing and size of our acquisitions. As such, if intangible asset amortization is included in performance measures, it is more difficult to assess the day-to-day operating performance of the businesses, the relative operating performance of the businesses between periods and the earnings power of the Company. Therefore, we believe performance measures excluding intangible asset amortization expense provide investors with an additional basis for comparison across accounting periods.

Acquisition-related expenses: From time to time, we have pursued small bolt-on acquisitions and in 2017 completed a larger transformative acquisition, which have resulted in expenses which would not otherwise have been incurred in the normal course of the Company's business operations. These expenses include integration costs, as well as legal, due diligence and other third party transaction costs. The frequency and the amount of such expenses vary significantly based on the size, timing and complexity of the transaction. Accordingly, we exclude these costs for purposes of calculating non-GAAP measures which provide an additional analysis of CBOE's ongoing operating performance or comparisons in CBOE's performance between periods.

Other significant items: We have excluded certain other charges that are the result of other non-comparable events to measure operating performance. For 2017, other significant items primarily included interest and other borrowing costs incurred prior to the close of the Bats transaction and accelerated stock-based compensation that was incurred due to a change in the vesting schedule for equity award grants.

Non-GAAP Information

Reconciliation of Supplemental Combined Net Revenue by Segment for Options			
Three months ended June 30, 2016			
(in millions)			
	CBOE Historical	Bats Historical	Combined
Net transaction fees	\$90.3	\$5.7	\$96.0
Access fees	\$13.0	\$2.1	\$15.1
Exchange services and other fees	\$9.4	---	\$9.4
Market data fees	\$7.4	\$2.4	\$9.8

Note: There are no reconciliations applicable for the other segments.

Non-GAAP Information

Table 1							
Second Quarter GAAP Actual and Non-GAAP Adjusted Results							
(\$ in millions except per share)	2Q17	2Q16	Change	2Q17	2Q16	Change	
	GAAP	GAAP		Adjusted ¹	Adjusted ¹		
Total Revenue Less Cost of Revenue	\$ 266.9	\$ 144.1	85%	\$ 266.9	\$ 144.1	85%	
Total Operating Expenses	\$ 149.1	\$ 66.1	126%	\$ 101.3	\$ 64.5	57%	
Operating Income	\$ 117.8	\$ 78.0	51%	\$ 165.6	\$ 79.6	108%	
Operating Margin %	44.1 %	54.1 %	NM	62.0 %	55.2 %	680 bps	
Net Income Allocated to Common Stockholders	\$ 67.3	\$ 50.7	33%	\$ 98.0	\$ 48.7	101%	
Diluted EPS	\$ 0.60	\$ 0.62	-3%	\$ 0.87	\$ 0.60	45%	
EBITDA	\$ 173.7	\$ 95.9	81%	\$ 178.9	\$ 91.6	95%	
EBITDA Margin %	65.1 %	66.6 %	-150 bps	67.0 %	63.6 %	340 bps	

Table 2							
Second Quarter Non-GAAP Combined Actual Results and Adjusted (\$ in millions except per share)							
	2Q17	2Q16	Change	2Q17	2Q16	Change	
	GAAP	Combined ¹		Adjusted ¹	Adjusted ¹		
Total Net Revenue Less Cost of Revenue	\$ 266.9	\$ 254.0	5%	\$ 266.9	\$ 254.0	5%	
Total Operating Expenses	\$ 149.1	\$ 153.1	-3%	\$ 101.3	\$ 107.0	-5%	
Operating Income	\$ 117.8	\$ 100.9	17%	\$ 165.6	\$ 147.0	13%	
Operating Margin %	44.1 %	39.7 %	440 bps	62.0 %	57.9 %	410 bps	
Net Income Allocated to Common Stockholders	\$ 67.3	\$ 59.4	13%	\$ 98.0	\$ 84.7	16%	
Diluted EPS	\$ 0.60	\$ 0.53	13%	\$ 0.87	\$ 0.75	16%	
EBITDA	\$ 173.7	\$ 165.1	5%	\$ 178.9	\$ 163.3	10%	
EBITDA Margin %	65.1 %	65.0 %	10 bps	67.0 %	64.3 %	270 bps	

¹A full reconciliation of our non-GAAP and combined results to our GAAP results is included in the following tables. See "Non-GAAP Information" in the accompanying financial tables.

Non-GAAP Information

Table 3					
Revenue Less Cost of Revenue by Business Segment (in millions)	2Q17	2Q16	Change	2Q16	Change
	GAAP	GAAP		Adjusted Combined	
Options	\$ 126.7	\$ 113.9	11%	\$ 124.6	2%
U.S. Equities	74.4	-	NM	72.2	3%
Futures	36.2	30.2	20%	30.2	20%
European Equities	18.5	-	NM	18.0	3%
Global FX	10.9	-	NM	9.0	21%
Corporate	0.2	-	NM	-	NM
Total	\$ 266.9	\$ 144.1	85%	\$ 254.0	5%

Table 4 (in millions)	Three Months Ended June 30,	
	2017	2016
Reconciliation of Revenue Less Cost of Revenue to Organic Net Revenue		
Revenue less cost of revenue (net revenue)	\$ 266.9	\$ 144.1
Recent acquisitions:		
Bats revenue less cost of revenue (for the three months ended June 30, 2017)	(114.9)	-
Organic net revenue	\$ 152.0	\$ 144.1

NM = Not meaningful

Non-GAAP Information (see footnotes on slide 45)

Reconciliation of GAAP and non-GAAP Information

The information below shows the reconciliation of each financial measure from GAAP to non-GAAP. The non-GAAP financial measures exclude the impact of those items detailed below and are referred to as adjusted financial measures.

Table 5 (in millions, except per share amounts)	Three Months Ended June 30,		Six Months Ended June 30,	
	2017	2016	2017	2016
Reconciliation of GAAP Net Income Allocated to Common Stockholders to Non-GAAP (As shown on Table 1)				
GAAP net income allocated to common stockholders	\$ 67.3	\$ 50.7	\$ 82.4	\$ 99.7
Non-GAAP adjustments				
Compensation and benefits (1)	-	0.9	9.1	1.1
Acquisition-related expenses (2)	4.7	0.3	69.9	0.7
Amortization of acquired intangible assets (3)	42.6	0.4	57.0	0.6
Assessment of computer-based lease taxes for prior period use	-	-	-	0.3
Change in contingent consideration	0.5	-	0.7	-
Debt issuance cost	0.9	-	0.9	-
Change in redemption value of non-controlling interests	0.3	0.3	0.6	0.5
Interest and other borrowing costs (4)	-	-	4.3	-
Less: Legal settlement (5)	-	(5.5)	-	(5.5)
Total Non-GAAP adjustments	49.0	(3.6)	142.5	(2.3)
Income tax expense related to the items above	(18.0)	1.6	(54.0)	1.2
Net income allocated to participating securities - effect on reconciling items	(0.3)	-	(0.7)	-
Adjusted net income allocated to common stockholders	\$ 98.0	\$ 48.7	\$ 170.2	\$ 98.6
Reconciliation of GAAP Diluted EPS to Non-GAAP				
GAAP diluted earnings per common share	\$ 0.60	\$ 0.62	\$ 0.81	\$ 1.22
Per share impact of non-GAAP adjustments noted above	0.27	(0.02)	0.85	(0.01)
Adjusted diluted earnings per common share	\$ 0.87	\$ 0.60	\$ 1.66	\$ 1.21
Reconciliation of GAAP Operating Margin to Non-GAAP				
GAAP revenue less cost of revenue	\$ 266.9	\$ 144.1	\$ 460.3	\$ 287.2
Non-GAAP adjustments noted above	-	-	-	-
Adjusted revenue less cost of revenue	\$ 266.9	\$ 144.1	\$ 460.3	\$ 287.2
GAAP operating expenses	\$ 149.1	\$ 66.1	\$ 316.4	\$ 129.7
Non-GAAP adjustments noted above	(47.8)	(1.6)	(137.6)	(2.7)
Adjusted operating expenses	\$ 101.3	\$ 64.5	\$ 178.8	\$ 127.0
GAAP operating income	\$ 117.8	\$ 78.0	\$ 143.9	\$ 157.5
Non-GAAP adjustments noted above	47.8	1.6	137.6	2.7
Adjusted operating income	\$ 165.6	\$ 79.6	\$ 281.5	\$ 160.2
Adjusted operating margin (6)	62.0 %	55.2 %	61.2 %	55.8 %

Non-GAAP Information

EBITDA Reconciliations

EBITDA (earnings before interest, income taxes, depreciation and amortization) is a widely used non-GAAP financial measure of operating performance. EBITDA margin represents EBITDA divided by revenues less cost of revenues (net revenue). It is presented as supplemental information that the company believes is useful to investors to evaluate its results because it excludes certain items that are not directly related to the company's core operating performance. EBITDA is calculated by adding back to net income interest expense, income tax expense, depreciation and amortization. EBITDA should not be considered as substitutes either for net income, as an indicator of the company's operating performance, or for cash flow, as a measure of the company's liquidity. In addition, because EBITDA may not be calculated identically by all companies, the presentation here may not be comparable to other similarly titled measures of other companies.

EBITDA margin represents EBITDA divided by net revenue.

Non-GAAP Information

Table 6 (in millions)	Three months ended June 30,		Six months ended June 30,	
	2017	2016	2017	2016
Reconciliation of Net Income Allocated to Common Stockholders to EBITDA and Adjusted EBITDA (Per Table 1)				
Net income allocated to common stockholders	\$ 67.3	\$ 50.7	\$ 82.4	\$ 99.7
Interest	12.5	-	20.4	-
Income tax provision	38.1	32.9	41.2	64.2
Depreciation and amortization	55.8	12.3	80.9	24.2
EBITDA	\$ 173.7	\$ 95.9	\$ 224.9	\$ 188.1
EBITDA Margin¹	65.1 %	66.6 %	48.9 %	65.5 %
Non-GAAP adjustments not included in above line items				
Compensation and benefits (accelerated stock-based compensation)	-	0.9	9.1	1.1
Acquisition-related expenses	4.7	0.3	69.9	0.6
Less: Legal settlement	-	(5.5)	-	(5.5)
Other	0.5	-	0.7	0.3
Adjusted EBITDA	\$ 178.9	\$ 91.6	\$ 304.6	\$ 184.6
Adjusted EBITDA Margin¹	67.0 %	63.6 %	66.2 %	64.3 %
Reconciliation of Combined Net Income Allocated to Common Stockholders to EBITDA and Adjusted EBITDA (Per Table 2)				
(in millions)	Three months ended June 30,		Six months ended June 30,	
	2017 ²	2016	2017	2016
Combined revenues less cost of revenues		\$ 254.0	\$ 532.2	\$ 509.2
Combined net income allocated to common stockholders		\$ 59.4	\$ 157.3	\$ 116.4
Interest		10.7	24.5	21.6
Income tax provision		37.1	47.7	75.6
Depreciation and amortization		57.9	111.1	115.3
Combined EBITDA		\$ 165.1	\$ 340.6	\$ 328.9
Combined EBITDA Margin¹		65.0 %	64.0 %	64.6 %
Non-GAAP adjustments not included in above line items				
Compensation and benefits (accelerated stock-based compensation)		0.9	9.1	1.1
Acquisition-related expenses		0.7	-	0.8
Less Legal settlement		(5.5)	-	(5.5)
Other		2.1	1.3	4.5
Adjusted Combined EBITDA		\$ 163.3	\$ 351.0	\$ 329.8
Adjusted Combined EBITDA Margin¹		64.3 %	66.0 %	64.8 %

(1) EBITDA margin represents the respective EBITDA divided by the respective net revenue as shown in the non-GAAP reconciliations provided.

(2) Combined results for the three months ended June 30, 2017 are the same as the actual results as the company was operating as a combined entity for the entire quarter.

Non-GAAP Information

The following non-GAAP unaudited combined financial measures have been prepared by recording combined adjustments to the historical consolidated financial statements of CBOE Holdings. The combined financial measures for the three months ended June 30, 2016 have been prepared as if the Bats acquisition closed on January 1, 2016.

Due to the transformative nature of the Bats acquisition, the company believes that providing a discussion of its results and operations on a non-GAAP combined basis provides management and investors an additional perspective on the company's financial and operational performance and trends.

These combined financial measures are not necessarily indicative of the financial position or results of operations that would have occurred had the transactions been effected on the assumed dates. Additionally, future results may vary significantly from the results reflected in the combined financial measures.

Non-GAAP Information (see footnotes on slide 45)

Three months ended June 30, 2016 - Table 7						
(in millions, except per share amounts)	CBOE Historical	Bats Historical¹	Combined Adjustments	Combined Per Table 2	Non-GAAP Adjustments	Adjusted Combined Per Table 2
Revenues	\$ 173.1	\$ 465.9		\$ 639.0		\$ 639.0
Cost of revenues	29.0	356.0		385.0		385.0
Net revenue:						
Net transaction fees	117.9	48.7		166.6		166.6
Access fees	13.2	16.7		29.9		29.9
Exchange services and other fees	11.4	5.7		17.1		17.1
Market data fees	8.2	36.6		44.8		44.8
Regulatory fees	9.2	0.5		9.7		9.7
Royalty fees	(19.3)	-		(19.3)		(19.3)
Other	3.5	1.7		5.2		5.2
Revenues less cost of revenues	\$ 144.1	\$ 109.9		\$ 254.0		\$ 254.0
Operating expenses:						
Compensation and benefits	28.5	23.0		51.5	(0.9) (3)	50.6
Depreciation and amortization	12.3	10.4	35.2 (1)	57.9	(42.4) (3)	15.5
Technology support services	5.7	5.9		11.6		11.6
Professional fees and outside services	14.7	7.1		21.8	(2.0) (3)	19.8
Travel and promotional expenses	2.5	1.6		4.1		4.1
Facilities costs	1.4	1.0		2.4		2.4
Change in contingent consideration	-	0.8		0.8	(0.8) (3)	-
Other expenses	1.0	2.0		3.0		3.0
Total operating expenses	\$ 66.1	\$ 51.8	\$ 35.2	\$ 153.1	\$ (46.1)	\$ 107.0
Operating income	78.0	58.1	(35.2)	100.9	46.1	147.0
Operating margin (4)	54.1 %	52.9 %		39.7 %		57.9 %
Non-operating (expense)/income	5.8	(27.9)	17.9 (2)	(4.2)	(5.5)	(9.7)
Income (loss) before income tax provision	83.8	30.2	(17.3)	96.7	40.6	137.3
Income tax provision	32.9	12.3	(8.1)	37.1	15.5	52.6
Net income allocated to common stockholders	\$ 50.7	\$ 17.9	\$ (9.2)	\$ 59.4	\$ 25.3	\$ 84.7
Diluted EPS				\$ 0.53	\$ 0.22	\$ 0.75
Total non-transaction revenue	\$ 45.5	\$ 61.2	\$ -	\$ 106.7	\$ -	\$ 106.7
Total non-transaction revenue as a percent of revenues less cost of revenues (5)	31.6 %	55.7 %		42.0 %		42.0 %

Non-GAAP Information

Table 5 Footnotes:

- (1) For the second quarter of 2016, this amount includes \$0.3 million for accelerated stock-based compensation expenses and \$0.6 million in additional bonus accrual resulting from legal settlement income. For the six months ended June 30, 2017, this amount includes accelerated stock-based compensation expense. For the six months ended June 30, 2016, this amount includes \$0.5 million for accelerated stock-based compensation expenses and \$0.6 million in additional bonus accrual resulting from legal settlement income.
- (2) This amount includes professional fees and outside services, severance, and other costs related to the company's acquisition of Bats.
- (3) This amount represents the amortization of acquired intangible assets for Bats.
- (4) This amount represents interest and other borrowing costs incurred prior to the close of the Bats acquisition.
- (5) Settlement received for attorney fees and expenses relating to a litigation matter, reported in investment and other income.
- (6) Adjusted operating margin represents adjusted operating income divided by adjusted revenue less cost of revenue.

Table 7 Footnotes:

¹Bats historical activity for 2016 reflects activity for the period beginning April 1, 2016 through June 30, 2016.

- (1) Reflects adjustments to reduce Bats historical amortization of acquired intangibles by \$6.8 million and increase amortization of acquired intangibles by \$42.0 million.
- (2) Reflects net other income of \$17.9 million resulting from interest expense on CBOE debt less Bats historical interest expense and less \$17.6 million of a loss on extinguishment of debt due to a legacy Bats refinancing in June 2016.
- (3) Reflects adjustment of amortization of purchased intangibles totaling \$42.4 million and other items totaling \$3.7 million.
- (4) Operating margin represents operating income divided by revenue less cost of revenue.
- (5) The percentage of non-transaction revenue represents the sum of access fees, exchange services and other fees, market data fees, regulatory fees and other divided by revenue less cost of revenue.

Non-GAAP Information

Adjusted Combined Debt to EBITDA - Trailing Twelve Months (TTM) - Table 8 ¹						
(\$ in millions)	3Q16	4Q16	1Q17	2Q17	LTM Ended 6/30/17	
Combined net income allocated to common stockholders	\$ 52.6	\$ 60.3	\$ 73.0	\$ 67.3	\$ 253.2	
Interest	11.1	12.1	12.0	12.5	47.7	
Income tax provision	36.4	35.3	22.0	38.1	131.8	
Depreciation and amortization	55.8	55.7	55.3	55.8	222.6	
Combined EBITDA	\$ 155.9	\$ 163.4	\$ 162.3	\$ 173.7	\$ 655.3	
Non-GAAP adjustments not included in above line items:						
Acquisition-related expenses	-	-	-	4.7	4.7	
Other	(2.2)	-	9.7	0.5	8.0	
Adjusted combined EBITDA	\$ 153.7	\$ 163.4	\$ 172.0	\$ 178.9	\$ 668.0	
Debt at end of period					\$ 1,425.0	
Debt to EBITDA					2.1x	

¹A full reconciliation of our non-GAAP and combined results to our GAAP results are available in this section.

Non-GAAP Information

Three months ended September 30, 2016 - Table 9								
(in millions, except per share amounts)	CBOE Historical	Bats Historical	Combined Adjustments	Footnote Reference	Combined	Non-GAAP Adjustments	Foot-note	Adjusted Combined
Revenues	\$168.7	\$441.6			\$610.3			\$610.3
Cost of revenues	32.5	332.8			365.3			365.3
Net revenue:								
Net transaction fees	111.4	46.2			157.6			\$157.6
Access fees	13.0	17.5			30.5			30.5
Exchange services and other fees	11.4	6.0			17.4			17.4
Market data fees	8.3	36.4			44.7			44.7
Regulatory fees	9.1	0.5			9.6			9.6
Royalty fees	(19.4)	-			-19.4			-19.4
Other	2.4	2.2			4.6			4.6
Revenues less cost of revenues	\$136.2	\$108.8			245.0			\$245.0
Operating expenses:								
Compensation and benefits	\$28.3	\$23.6			\$51.9			\$51.9
Depreciation and amortization	10.2	10.4	\$35.2	(1)	55.8	(42.4)	(4)	13.4
Technology support services	5.6	5.7			11.3			11.3
Professional fees and outside services	12.7	9.4	(\$3.4)	(2)	18.7	(0.5)	(4)	18.2
Travel and promotional expenses	2.6	1.3			3.9			3.9
Facilities costs	1.3	1.2			2.5			2.5
Acquisition related costs	8.6	0.0	(\$8.6)	(2)	0			-
Change in contingent consideration	-	0.5			0.5	(0.5)	(4)	-
Other expenses	1.1	1.1			2.2			2.2
Total operating expenses	\$70.4	\$53.2	\$23.2		\$146.8	(43.4)		\$103.4
Operating income	\$65.8	\$55.6	(\$23.2)		\$98.2	43.4		\$141.60
Non-operating (expense)/income	1.6	(7.1)	(3.5)	(3)	(9.0)	(1.2)		(10.2)
Income (loss) before income tax provision	67.4	48.5	(\$26.7)		89.2	42.2		\$131.4
Income tax provision	26.9	20.0	(\$10.5)		\$36.4	15.0		\$51.4
Net income allocated to participating securities	(0.2)	0.0			(\$0.2)	0.3		0.1
Net income allocated to common stockholders	\$40.3	\$28.5	(\$16.2)		\$52.6	\$27.5		\$80.1
Diluted EPS	\$0.50	\$0.29			\$0.49			\$0.72

- (1) Reflects adjustments to reduce Bats historical amortization of acquired intangibles by \$6.8 million and increase amortization of acquired intangibles by \$42.0 million.
(2) Reflects acquisition-related expenses relating to the acquisition of Bats.
(3) Reflects net other loss of \$3.5 million resulting from interest expense on CBOE debt less Bats historical interest expense.
(4) Reflects adjustment of amortization of purchased intangibles and other items totaling \$1.0 million

Non-GAAP Information

Three months ended December 31, 2016 - Table 10								
(in millions, except per share amounts)	CBOE Historical	Bats Historical¹	Combined Adjustments	Footnote Reference	Combined	Non-GAAP Adjustments	Foot- note	Adjusted Combined
Revenues	\$190.8	\$315.6			\$506.4			\$506.4
Cost of revenues	47.8	344.7			392.5			392.5
Net revenue:								
Net transaction fees	115.2	45.3			160.5			\$160.5
Access fees	13.0	16.6			29.6			29.6
Exchange services and other fees	12.1	5.8			17.9			17.9
Market data fees	8.7	35.5			44.2			44.2
Regulatory fees	9.1	0.6			9.7			9.7
Royalty fees	(20.2)	-			-20.2			-20.2
Other	5.1	1.8			6.9			6.9
Revenues less cost of revenues	\$143.0	\$105.6			\$248.6			\$248.6
Operating expenses:								
Compensation and benefits	\$29.3	\$23.3			\$52.6	(0.2)	(4)	52.4
Depreciation and amortization	10.0	10.4	\$35.3	(1)	55.7	(42.4)	(4)	13.3
Technology support services	5.5	5.7			11.2			11.2
Professional fees and outside services	12.9	7.1	(\$2.1)	(2)	17.9	(0.4)	(4)	17.5
Travel and promotional expenses	3.4	1.2			4.6			4.6
Facilities costs	1.5	1.0			2.5			2.5
Acquisition related costs	4.2	-	(\$4.2)	(2)	-			-
Change in contingent consideration	-	0.8			0.8	(0.8)	(4)	-
Other expenses	1.3	1.8			3.1			3.1
Total operating expenses	\$68.1	\$51.3	\$29.0		\$148.4	(43.8)		\$104.6
Operating income	\$74.9	\$54.3	(\$29.0)		\$100.2	43.8		\$144.0
Non-operating (expense)/income	0.6	(5.6)	1.2	(3)	(3.8)	(1.4)		(5.2)
Income (loss) before income tax provision	75.5	48.7	(\$27.8)		96.4	42.4		\$138.8
Income tax provision	29.8	16.4	(\$10.9)		\$35.3	16.7		\$52.0
Net income allocated to participating securities	(0.8)				(\$0.8)	0.0		(0.8)
Net income allocated to common stockholders	\$44.9	\$32.3	(\$16.9)		\$60.3	\$26.2		\$86.5
Diluted EPS	\$0.55	\$0.34			\$0.52			\$0.78

(1) Reflects adjustments to reduce Bats historical amortization of acquired intangibles by \$6.7 million and increase amortization of acquired intangibles by \$42.0 million.

(2) Reflects acquisition-related expenses relating to the acquisition of Bats.

(3) Reflects net other income of \$1.2 million resulting from interest expense on CBOE debt less CBOE bridge loan interest expense and Bats historical interest expense.

(4) Reflects adjustment of amortization of purchased intangibles and other items totaling \$1.4 million.

Non-GAAP Information

Adjusted Combined Operating Expenses for the Year Ended December 31, 2016 - Table 11

(in millions)	CBOE Historical	Bats Historical ¹	Adjustments	Footnote Reference	Combined	Non-GAAP Adjustments	Foot- note	Adjusted Combined for Year-Ended December 31, 2016
Operating expenses:								
Compensation and benefits	\$ 113.1	\$ 92.0			\$ 205.1	\$ (1.4)	(3)	\$ 203.7
Depreciation and amortization	44.3	41.7	140.0	(1)	226.0	(169.6)	(3)	56.4
Technology support services	22.5	23.1			45.6	(0.3)	(3)	45.3
Professional fees and outside services	53.4	30.5	(5.4)	(2)	78.5	(2.7)	(3)	75.8
Travel and promotional expenses	11.0	5.3			16.3	(0.7)	(3)	15.6
Facilities costs	5.7	4.1			9.8			9.8
Acquisition related costs	12.9	—	(12.9)	(2)	—	—		—
Change in contingent consideration	—	3.0			3.0	(3.0)	(3)	—
Other expenses	4.3	6.2			10.5	(0.5)	(3)	10.0
Total operating expenses	\$ 267.2	\$ 205.9	\$ 121.7		\$ 594.8	\$ (178.2)		\$ 416.6

¹Bats Historical activity for 2016 reflects activity for the period beginning January 1, 2016 through December 31, 2016.

(1) Reflects adjustments to reduce Bats historical amortization of acquired intangibles by \$28.0 million and increase amortization of acquired intangibles by \$168.0 million.

(2) Reflects adjustments to reduce acquisition costs by \$12.9 million for CBOE Historical and reduce professional fees for Bats historical by \$5.4 million which are costs associated with the CBOE merger.

(3) Reflects adjustment of amortization of purchased intangibles totaling \$169.6 million and other items totaling \$26.9 million.

 CBOE Holdings, Inc.
400 South LaSalle Street
Chicago, Illinois 60605
www.cboe.com