# 

**EXECUTE SUCCESS<sup>™</sup>** 

### First Quarter 2016 Earnings Presentation

April 29, 2016

### Agenda



**Strategic Review** 

**Financial Review** 

**Questions and Answers** 

Edward Tilly Chief Executive Officer

Alan Dean Executive Vice President, CFO and Treasurer

**Edward Tilly** 

Alan Dean

**Edward Provost** *President and Chief Operating Officer* 

John Deters Chief Strategy Officer and Head of Corporate Initiatives

#### **CBOE HOLDINGS**

### **Forward-Looking Statements**

This presentation may contain forward-looking statements, within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements are those statements that reflect our expectations, assumptions or projections about the future and involve a number of risks and uncertainties. These statements are only predictions based on our current expectations and projections about future events. We undertake no obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise. There are important factors that could cause actual results, level of activity, performance or achievements to differ materially from that expressed or implied by the forward-looking statements, including: the loss of our right to exclusively list and trade certain index options and futures products; economic, political and market conditions; compliance with legal and regulatory obligations, including our obligations under agreements with regulatory agencies; increasing price competition in our industry; decreases in trading volumes or a shift in the mix of products traded on our exchanges; legislative or regulatory changes; increasing competition by foreign and domestic entities; our dependence on third party service providers; our index providers' ability to perform under our agreements; our ability to operate our business without violating the intellectual property rights of others and the costs associated with protecting our intellectual property rights; our ability to accommodate trading volume and transaction traffic, including significant increases, without failure or degradation of performance of our systems; our ability to protect our systems and communication networks from security risks, including cyber-attacks; the accuracy of our estimates and expectations; our ability to maintain access fee revenues; our ability to meet our compliance obligations, including managing potential conflicts between our regulatory responsibilities and our for-profit status; the ability of our compliance and risk management methods to effectively monitor and manage our risks; our ability to attract and retain skilled management and other personnel; and our ability to manage our growth and strategic acquisitions or alliances effectively.

More detailed information about factors that may affect our performance may be found in our filings with the U.S. Securities and Exchange Commission, including in our Annual Report on Form 10-K for the year ended December 31, 2015 and other filings made from time to time with the SEC.



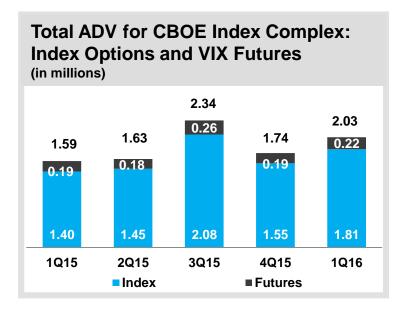
## Strategic Review Edward Tilly CEO



### **Record First-Quarter Results for 1Q16**

### Results fueled by strong trading in proprietary index products

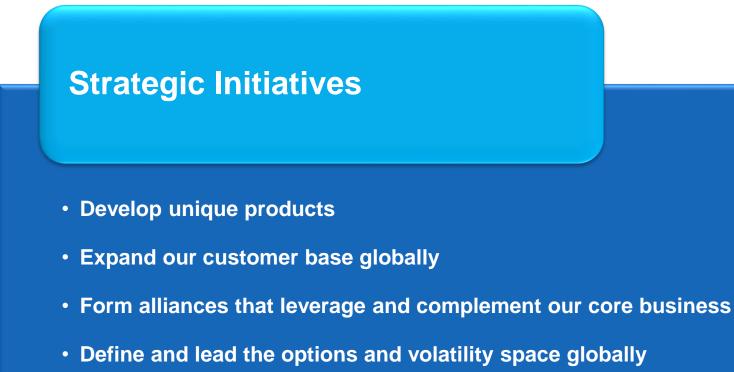
- Third consecutive quarter proprietary index products exceeded 40% of total volume
- IQ16 ADV for index complex, including index options and VIX futures
  - Increased 17% compared to 4Q15
  - Increased 28% compared to 1Q15
- Multiply-listed options traded industrywide increased by 3% in 1Q16 vs 1Q15





### Translating Our Mission and Strategic Initiatives Into Value

Our mission is to be the market leader in providing innovative products that facilitate and enhance trading in a global marketplace

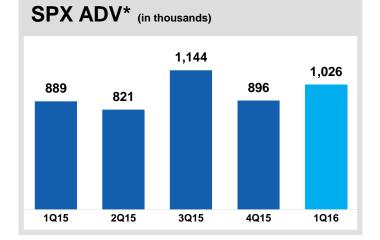


### Further Developing Current Products to Grow Index Product Line

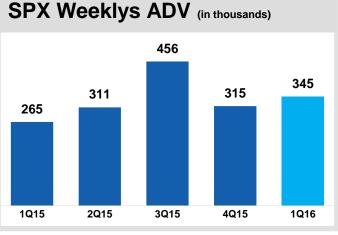
# S&P 500 Index (SPX) options, the most actively traded U.S. index option

- SPX ADV for 1Q16 up 15% vs 1Q15 and 4Q15
  - Driven in part by strong Weeklys trading
- Introduced SPX Weeklys with Wednesday Expirations on Feb. 23
  - Increases opportunities to trade SPX
  - Enables investors to better target expirations
  - Wednesday expirations averaging over 71,000 contracts per day in April<sup>1</sup>, 8% of SPX volume

### Plan to add Monday-expiring Weeklys, following SEC approval



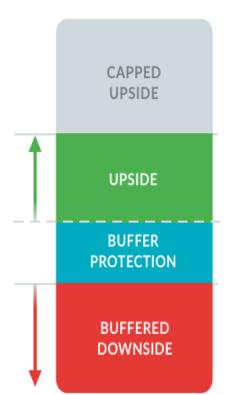
**CBOE HOLD** 



### CBOE Introduced First in Series of Indexes **CBOE HOLD** Designed to Target Investment Outcomes

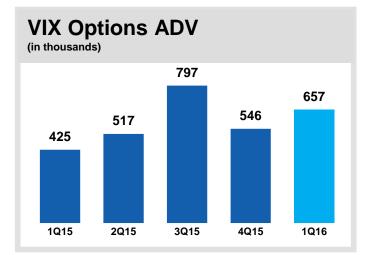
**CBOE S&P 500 Buffer Protect Indexes are designed to target the outcomes of specific investment strategies** 

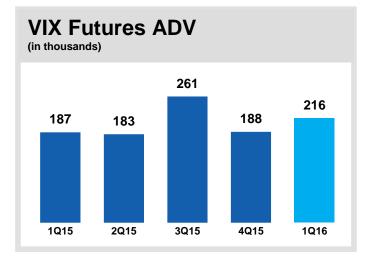
- Buffer Protect Indexes leverage options as risk management tool
- Began providing daily values for indexes April 1
- Vest Financial Group Inc. is the first to license the new indexes
  - Vest plans to use indexes to create products that will trade on several full-service broker-dealer platforms
- Target-outcome investing substantially reduces complexity of options for retail and high networth individuals



### Leveraging VIX Methodology to Create CBOE HOLDI New Products and Grow Index Product Line

- CBOE Volatility Index (VIX Index) is considered the world's barometer of equity market volatility
- VIX options ADV up 55% 1Q16 vs 1Q15 and 20% vs 4Q15
- VIX futures ADV up 16% 1Q16 vs 1Q15 and 15% vs 4Q15
- Began overnight dissemination of VIX Index on April 15
  - Offers market participants the ability to view volatility when news breaks overnight



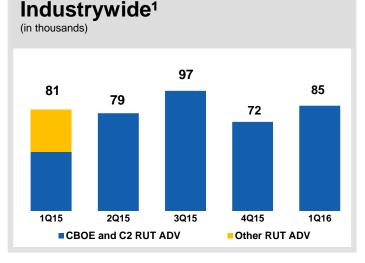


### Leveraging Partnerships With Index Providers to Grow Index Product Line

#### Sole U.S. provider of major FTSE Russell products and MSCI index products RUT Options ADV

- RUT ADV up 5% in 1Q16 vs 1Q15 and up 18% vs 4Q15
- On March 29, launched FTSE 100 and FTSE China 50 mini-indexes
  - Adds to the growing international dimension of our index options franchise





<sup>1</sup>CBOE became sole U.S. provider of Russell 2000 Index (RUT) on April 1, 2015 Source: OCC and CBOE





### **Expanding Our Global Customer Base**

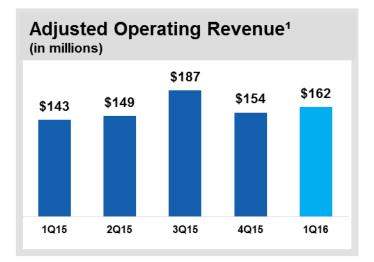
### Expanding outreach and investor education around the world

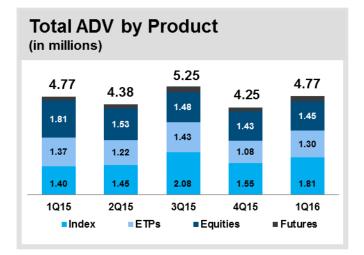
- Planning joint marketing and educational efforts with our index provider partners
- The fifth annual CBOE Risk Management Conference Europe will take place Sept. 26 through 28 in County Wicklow, Ireland
- Broadening global reach of VIX futures trading by establishing connectivity between CFE and Stellar Trading Systems
- In July, CBOE plans to establish its first international business development outpost with the opening of an office in London



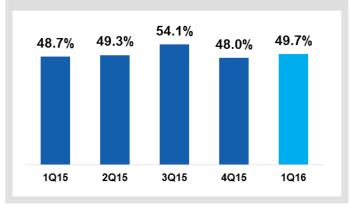


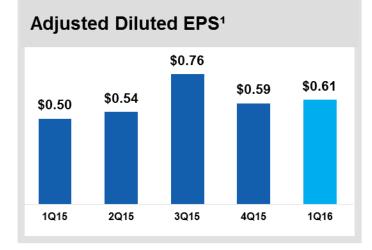
### Strong Trading in Our Proprietary Products CBOE HOLDINGS Continue to Fuel Growth





Adjusted Operating Margin<sup>1</sup>





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



Financial Review Alan Dean *EVP, CFO and Treasurer* 



### **1Q16 Financial Overview**

Adjusted Basis <sup>1</sup> (in millions, except EPS and RPC)	1Q16	1Q15	\$ Change	% Change
Operating Revenues	\$162.3	\$142.8	\$ 19.5	14%
Adjusted Operating Expenses	81.7	73.3	8.4	11%
Adjusted Operating Income	\$ 80.6	\$ 69.5	\$ 11.1	16%
Adjusted Operating Margin %	49.7%	48.7%		100 bps
Adjusted Net Income Allocated to Common Stockholders	\$ 49.9	\$ 42.3	\$ 7.6	18%
Adjusted Diluted EPS	\$ 0.61	\$ 0.50	\$ 0.11	22%
Total ADV	4.77	4.77		
Revenue per Contract (RPC)	\$0.405	\$0.340	\$0.065	19%

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

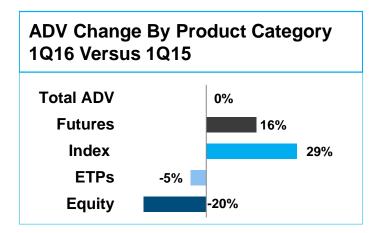


### **Operating Revenues Up 14%**

#### Transaction fees key driver of revenue growth

#### Transaction fees up \$19.3MM

- 19% increase in RPC
  - Favorable shift in product mix
  - Lower volume-related discounts
- Volume relatively unchanged



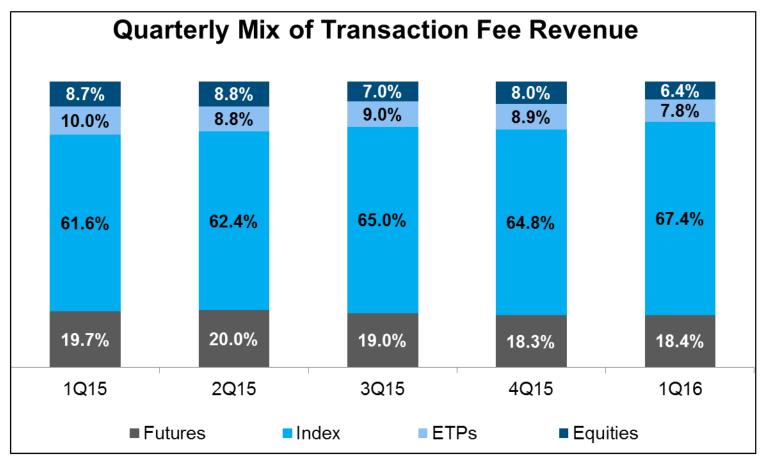
<b>Operating Revenues</b> (in millions)	1Q16	1Q15	% Chg
Transaction fees	\$118.0	\$ 98.7	20%
Access fees	13.2	13.7	-3%
Exchange services and other fees	11.4	9.7	17%
Market data fees	8.0	8.0	
Regulatory fees	9.1	8.4	9%
Other revenue	2.6	4.3	-39%
Total Operating Revenues	\$162.3	\$142.8	14%

### Increase in RPC Primarily Reflects Shift in Mix of Trading Volume

#### Trading volume mix and RPC 1Q16 versus 1Q15 **Futures Futures** 4.5% 3.9% Index Index 29.4% 37.9% Equities Equities 30.4% 1Q15 1Q16 37.9% **ETPs** 28.8% **ETPs** 27.2% 1Q15 RPC \$0.340 1Q16 RPC \$0.405 Equities \$0.077 Equities \$0.085 ETPs ETPs \$0.118 \$0.117 Index Index \$0.712 \$0.720 **Total Options Total Options** \$0.346 \$0.284 **Total Futures Total Futures** \$1.705 \$1.643

### Proprietary Products Account for Growing **CBOE HOLDINGS** Percentage of Transaction Fee Revenue

Index options and futures contracts accounted for 85.8% of transaction fees in 1Q16 versus 81.3% in 1Q15



### **Other Operating Revenue Drivers**

#### Exchange services and other fees up \$1.7MM

 Primarily resulting from the addition of CBOE Livevol

#### > Other revenue down \$1.7MM

 Primarily reflects lower revenue from fines

<b>Operating Revenues</b> (in millions)	1Q16	1Q15	% Chg
Transaction fees	\$ 118.0	\$ 98.7	20%
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Total Operating Revenues	\$162.3	\$142.8	14%

**CBOE HOLDINGS** 

## **Ongoing Focus on Prudent Expense Management**

### Key drivers:

- Royalty fees up \$4.9MM
- Compensation and benefits up \$1.5MM
- Professional fees and outside services up \$1.3MM
- Depreciation and amortization up \$1.2MM

Adjusted Operating Expenses <sup>1</sup> (in millions)	1Q16	1Q15	% Chg
Compensation and benefits	\$26.9	\$25.4	6%
Depreciation and amortization	11.6	10.4	12%
Technology support services	5.4	5.3	2%
Professional fees and outside services	13.3	12.0	11%
Royalty fees	19.1	14.2	35%
Order routing	0.1	0.8	-87%
Travel and promotional	2.5	2.5	
Facilities costs	1.5	1.4	10%
Other expenses	1.3	1.3	
Total Adjusted Operating Expenses	\$81.7	\$73.3	11%

<sup>1</sup>Adjusted to reflect the impact of certain items. See appendix for "Non-GAAP Information." May not foot due to rounding.

#### **CBOE HOLDINGS**

## **Core Operating Expenses Up 6%**

### Key drivers:

#### Compensation and benefits up \$1.5MM

 Primarily due to higher costs for stock-based compensation and annual incentive compensation

#### Professional fees and outside services up \$1.3MM

• Primarily due to higher costs for legal and other professional services

Core Operating Expenses <sup>1</sup> (in millions)	1Q16	1Q15	% Chg
Compensation and benefits	\$26.9	\$25.4	6%
Technology support services	5.4	5.3	2%
Professional fees and outside services	13.3	12.0	11%
Travel and promotional	2.5	2.5	
Facilities costs	1.5	1.4	10%
Other expenses	1.3	1.3	
Total	\$50.9	\$47.9	6%

<sup>1</sup>Adjusted to reflect the impact of certain items. See appendix for "Non-GAAP Information." May not foot due to rounding.



### **2016 Full-Year Guidance**

As of April 29, 2016 (\$ in millions)	2016 Full-Year Guidance
Core operating expenses	\$211 to \$215
Continuing stock-based compensation <sup>1</sup>	\$13.5
Accelerated stock-based compensation <sup>2</sup>	\$1.0
Depreciation and amortization	\$46 to \$48
Capital expenditures	\$47 to \$49
Effective tax rate	38.5% to 39.5%

<sup>1</sup>Stock-based compensation expense is included in compensation and benefits and excludes accelerated stock-based compensation.

<sup>2</sup>This expense is expected to be reported in compensation and benefits and included in the company's non-GAAP reconciliation as an adjusted financial measure.

#### **CBOE HOLDINGS**

### **Volume-Based Expenses**

### Royalty fees up \$4.9MM

- Higher trading volume in licensed products in 1Q16 versus 1Q15
  - Index complex volume up 28%
    - Index options volume up 29%
    - VIX futures volume up 16%

#### Order routing down \$0.7MM

• Lower trading volume in multiply-listed options and favorable clearing fee rebate

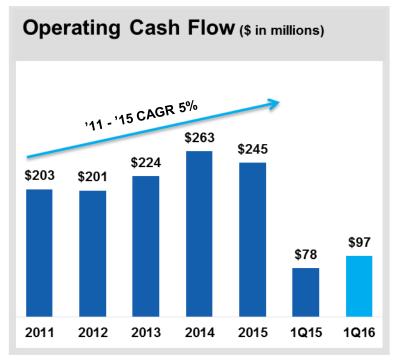
Volume-Based Expenses (in millions)	1Q16	1Q15	% Chg
Royalty fees	\$ 19.1	\$ 14.2	35%
Order routing	0.1	0.8	-87%
Total	\$ 19.2	\$ 15.0	28%



### **Enhancing Shareholder Value**

# Strong cash flow generation and disciplined approach to managing cash

- Cash of \$107 million at March 31, 2016
- Generated \$97 million in operating cash flow in 1Q16
- Capital outlays for 1Q16 include:
  - \$19 million to pay dividends
  - \$47 million to repurchase shares<sup>1</sup>
  - \$9 million in capital expenditures
- \$115.1 million available under share repurchase program at March 31, 2016



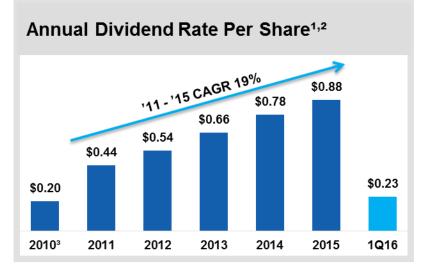
<sup>1</sup>Includes stock purchased under repurchase plan and from employees

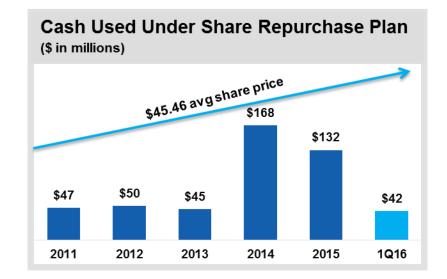


### **Committed to Returning Capital to Shareholders**

#### Capital allocation philosophy unchanged

- Reinvest in our business to fund growth
- Sustainable dividends and steady growth
- Opportunistic share repurchases





#### <sup>1</sup>Excludes special dividends

<sup>2</sup>Starting in 2016, dividend declarations may not align with quarterly earnings announcements due to the timing of Board actions <sup>3</sup>Dividends paid for last two quarters of the year, post IPO



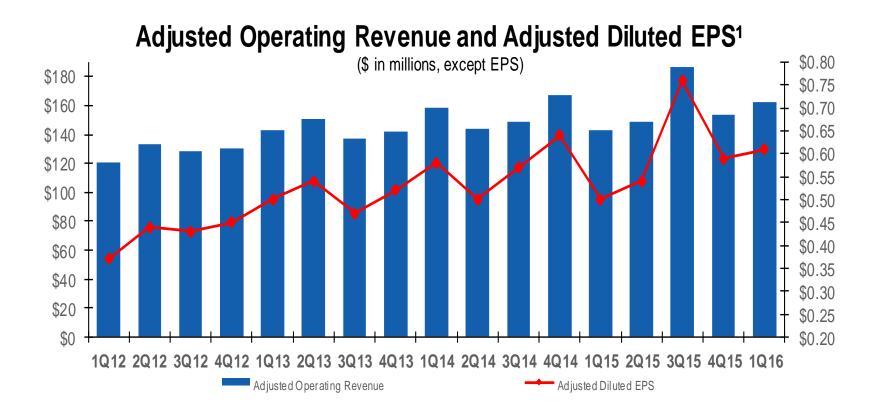
## Questions & Answers



# > Appendix Materials



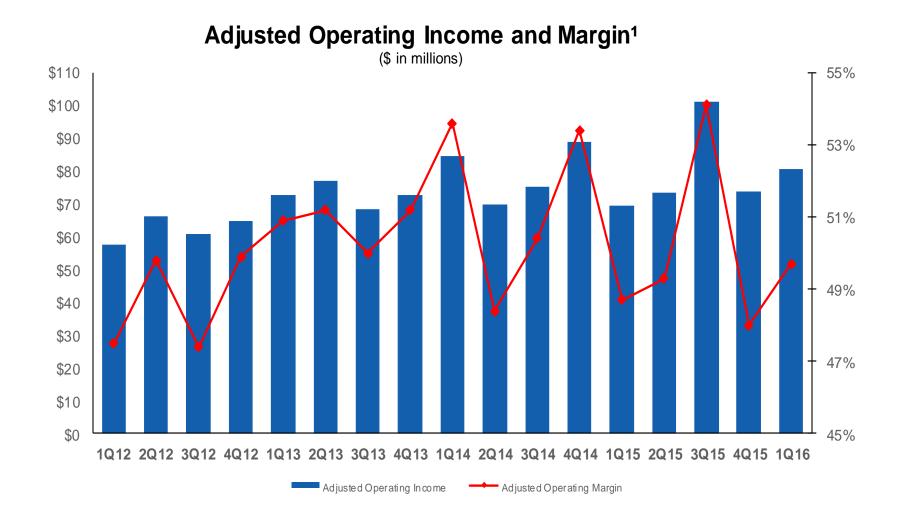
### **Optimistic About Long-Term Growth Prospects**



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



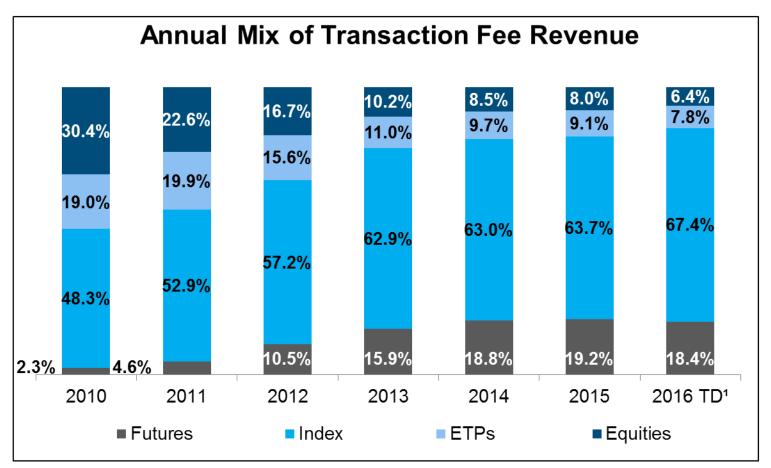
### Well Positioned to Gain Additional Leverage



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

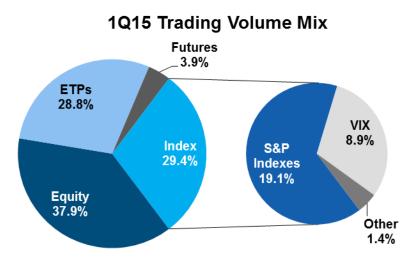
### Proprietary Products Account for Growing **CBOE HOLDINGS** Percentage of Transaction Fee Revenue

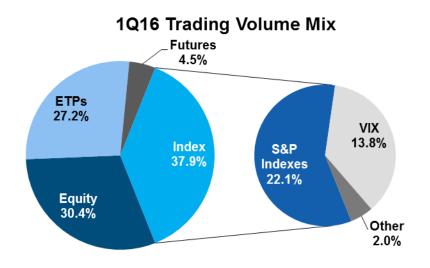
Index options and futures contracts account for 85.8% of transaction fees in 1Q16, up from 50.6% in 2010

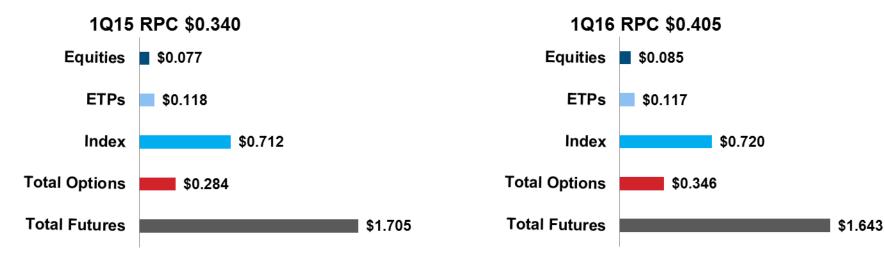


<sup>1</sup>Through March 31, 2016

### Increase in RPC Primarily Reflects Favorable Shift in Mix of Products Traded

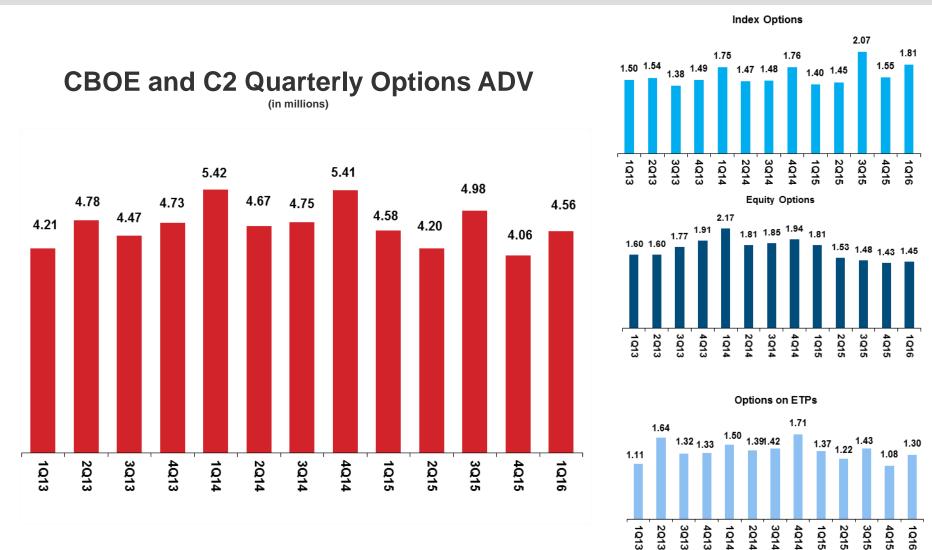








### **Quarterly Options ADV**



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### **CBOE Holdings Rolling 3-Month RPC**

2016	Jan	Feb	Mar	Apr	Мау	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Equities	\$0.095	\$0.092	\$0.085									
Indexes	0.738	0.733	0.720									
Exchange-traded products	0.138	0.131	0.117									
Total options RPC	0.351	0.351	0.346									
Futures	1.636	1.623	1.643									
Total RPC	\$0.412	\$0.413	\$0.405									

2015	Jan	Feb	Mar	Apr	Мау	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
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
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
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
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
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
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
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
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
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 Expenses<sup>1</sup>**

#### (\$ in thousands)

	1Q 2016	% rev	4Q 2015	% rev	3Q 2015	% rev	2Q 2015	% rev	1Q 2015	% rev
Total Operating Expenses	\$82,849	51%	\$80,052	52%	\$85,925	43%	\$75,355	51%	\$73,286	51%
Less:										
Depreciation and amortization	11,851	7%	12,202	8%	12,394	7%	11,275	8%	10,402	7%
Acquisition related costs	368	-	-	-	-	-	-	-	-	-
Accelerated stock-based depreciations	200	-	-	-	-	-	-	-	-	-
Statutory software lease taxes related to prior year	298	-	-	-	-	-	-	-	-	-
Volume-based expenses:										
Royalty fees	19,114	12%	17,830	12%	21,840	10%	16,755	11%	14,150	10%
Order routing	104	-	299	-	581	-	627	0%	787	1%
Core Operating Expenses (non-GAAP) <sup>1</sup> :	\$50,914	31%	\$49,721	32%	\$51,110	27%	\$46,698	31%	\$47,947	34%
Less: Continuing stock-based compensation	3,163	2%	3,194	2%	3,185	2%	3,147	2%	2,655	2%
Core Operating Expenses excluding continuing stock-										[
based compensation (non-GAAP) <sup>1</sup> :	\$47,751	29%	\$46,527	30%	\$47,925	25%	\$43,551	29%	\$45,292	32%
Core Operating Expense Detail:										
Compensation and benefits	\$26,906	17%	\$26,768	17%	\$29,583	14%	\$24,136	16%	\$25,439	18%
Technology support services	5,380		5,182				4,813			
Profession fees and outside services	13,263		12,897		12,619		12,594		11,950	
Travel and promotional expenses	2,515		2,548		1,407	1%	2,526			2%
Facilities costs	1,528	1%	1,446	1%	874	-	1,293	1%	1,384	1%
Other expenses	1,322	1%	880	1%	1,285	0%	1,336		1,348	1%
Total	\$50,914	31%	\$49,721	32%	\$51,110	27%	\$46,698	31%	\$47,947	34%
Number of full-time employees at quarter end	561		564		553		532		528	

<sup>1</sup>Please see our disclaimer regarding non-GAAP financial measures.

May not foot due to rounding

### **Annual Core Operating Expenses<sup>1</sup>**

#### (\$ in thousands)

	2015	% rev	2014	% rev	2013	% rev	2012	% rev	2011	% rev
Total On mating Frances			-							
Total Operating Expenses	\$314,617	50%	\$303,424	51%	\$286,236	50%	\$268,241	52%	\$266,512	52%
Less:										
Depreciation and amortization	46,274	7%	39,913	7%	34,488	6%	31,485		34,094	7%
Accelerated stock-based compensation	-	-	2,530	-	3,996	1%	343	-	453	-
Severance	-	-	1,863	-	-	-	-	-	3,709	1%
Estimated liability/expense related to SEC investigation	-	-	-	-	1,000	-	5,000	1%	-	-
Volume-based expenses:										
Royalty fees	70,574	11%	66,110	11%	56,576	10%	46,135	9%	47,822	9%
Order routing	2,293	0%	4,080	0%	4,355	1%	6,275	1%	14,239	3%
Core Operating Expenses (non-GAAP) <sup>1</sup> :	\$195,476	31%	\$188,928	32%	\$185,821	32%	\$179,003	35%	\$166,195	33%
Less: Continuing stock-based compensation	12,181	2%	13,047	2%	16,828	3%	12,005	2%	12,166	2%
Core Operating Expenses excluding continuing stock-										
based compensation (non-GAAP) <sup>1</sup> :	\$183,295	29%	\$175,881	30%	\$168,993	30%	\$166,998	33%	\$154,029	30%
Core Operating Expense Detail:										
Compensation and benefits	\$105,925	17%	\$117,341	17%	\$114,087	20%	\$103,853	20%	\$100,292	20%
Technology support services	20,662	3%	19,189	3%	17,898	3%	19,603	4%	17,933	4%
Professional fees and outside services	50,060	8%	31,976	8%	34,473	6%	36,300	7%	27,310	5%
Travel and promotion expenses	8,982	1%	9,046	1%	9,806	2%	10,006	2%	9,812	2%
Facilities costs	4,998	1%	5,721	1%	5,053	1%	5,066	1%	5,400	1%
Other expenses	4,849	1%	5,655	1%	4,504	1%	4,175	1%	5,448	1%
Total	\$195,476	31%	\$188,928	32%	\$185,821	32%	\$179,003	35%	\$166,195	33%
Number of Full Time Employees at year end	564		520		650		605		596	

<sup>1</sup>Please see our disclaimer regarding non-GAAP financial measures.

May not foot due to rounding

### GAAP to Non-GAAP Reconciliation For 2010 and 2011

GAAP to Non-GAAP Reconciliation

(in thousands, except per share amounts)

		3Q10		4Q10		1Q11		2Q11		3Q11		4Q11	FY2010		FY2011	
Reconciliation of GAAP Net Income Allocated to Common Stockholder to N	on-G/	AP														
GAAP net income allocated to common stockholders	\$	20,020	\$	30,687	\$	32,089	\$	32,609	\$	40,597	\$	31,287	\$ 98,166	\$	136,582	
Less: Recognition of prior-period revenue				(4,406)									(4,406)			
Add: Accelerated stock-based compensation		10,965		2,004		340		113					12,968		453	
Add: Severance expense pursuant to an executive employment agreement												3,709			3,709	
Add: Impairment change				1,620		460							1,620		460	
Income tax benefit/(expense) related to the items above		(4,461)		291		(337)		(46)				(1,478)	(4,034)	(4,034) (		
Add: Income tax provision adjustment										4,223		(322)			3,901	
Net income allocated to participating securities - effect on reconciling items	(144)		11	11		(11)			(75)		(32)	(76)	(109)			
Adjusted net income allocated to common stockholders	\$	26,380	\$	30,207	\$	32,540	\$	32,674	\$	44,745	\$	33,164	\$ 104,238	\$	143,134	
Reconciliation of GAAP Diluted EPS to Non-GAAP																
GAAP diluted earnings per common share	\$	0.20	\$	0.31	\$	0.36	\$	0.36	\$	0.45	\$	0.35	\$ 1.03	\$	1.52	
Per share impact of items above		0.06								0.05		0.02	0.06		0.07	
Non-GAAP diluted earnings per common share	\$	0.26	\$	0.31	\$	0.36	\$	0.36	\$	0.50	\$	0.37	\$ 1.09	\$	1.59	
Reconciliation of GAAP Operating Margin to Non-GAAP																
GAAP operating revenue	\$	106,015	\$	117,391	\$	124,042	\$	120,290	\$	143,604	\$	120,208	\$ 437,104	\$	508,144	
Non-GAAP adjustments noted above				(4,406)									(4,406)			
Adjusted operating revenue	\$	106,015	\$	112,985	\$	124,042	\$	120,290	\$	143,604	\$	120,208	\$ 432,698		508,144	
GAAP operating income	\$	34,933	\$	51,854	\$	57,535	\$	56,452	\$	74,966	\$	52,679	\$ 167,341	\$	241,632	
Non-GAAP adjustments noted above		10,965		(2,402)	•	340		113		-		3,709	8,562		4,162	
Adjusted operating income	\$	45,898	\$	49,452	\$	57,875	\$	56,565	\$	74,966	\$	56,388	\$ 175,903	\$	245,794	
Adjusted operating margin		43.3%		43.8%		46.7%		47.0%		52.2%	-	46.9%	40.7%		48.4%	

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

### 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 N	on-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
<u>Reconciliation of GAAP Diluted EPS to Non-GAAP</u> GAAP diluted earnings per common share Per share impact of items above	\$	0.37	\$	0.44	\$	0.52 (0.09)		0.45	\$ 1.78 (0.09)	\$ 0.48 0.02	\$	0.52 0.02	\$	0.47	\$	0.52	\$	1.99 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
<u>Reconciliation of GAAP Operating Margin to Non-GAAP</u> GAAP operating revenue Non-GAAP adjustments noted above <b>Adjusted operating revenue</b> GAAP operating income Non-GAAP adjustments noted above <b>Adjusted operating income</b>	\$ \$ \$	121,392 <b>121,392</b> 57,415 194 <b>57,609</b>	\$ \$ \$	,	\$ \$	128,319 128,319 60,861 60,861		130,077 130,077 59,752 5,149 64,901	512,338 512,338 244,097 5,343 249,440	 142,705 142,705 69,430 3,180 72,610	<b>\$</b>	,	<b>\$</b>	136,743 136,743 68,427 68,427	<b>\$</b>	141,830 141,830 72,599 72,599	\$ \$ \$ \$	572,050 572,050 285,814 4,996 290,810
Adjusted operating margin		47.5%		49.8%		47.4%	)	49.9%	48.7%	 50.9%	)	51.2%	)	50.0%		51.2%	,	50.8%

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

### GAAP to Non-GAAP Reconciliation For 2014 and 2015

**CBOE HOLDINGS** 

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 Nc	n-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: Sevance 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		620
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	\$	198,854
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	Ψ	0.02		0.00	Ψ	0.0.	Ψ	0.06	Ψ	0.07	÷	0.00	Ψ	0.0 .	Ψ	(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		. ,		2.40
Reconciliation of GAAP Operating Margin to Non-GAAP GAAP operating revenue	¢	157 005	¢	142.042	¢	148.010	¢	166 497	¢	047 005	¢	442,820	¢	449 705	¢	197.025	¢	455.046	¢	004 E 4E
	\$	157,885	\$	143,942	\$	148,910	\$	166,487	\$	617,225	Ф	142,839	\$	148,725	\$	187,035	\$		\$	634,545
Non-GAAP adjustments noted above		157.005				. 10.040	<u> </u>	100 407		0.17 00F			*			107.005		(1,995)	<u> </u>	(1,995)
Adjusted operating revenue	\$	- /		143,942		148,910			- ·	,		,		,		,	-	153,951	-	632,550
GAAP operating income	\$	- ,	\$	69,716	\$	75,084	\$	,	\$		\$	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		,		,	\$	69,553		73,370	-	101,110		- ,	· ·	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
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May not foot due to rounding and/or change in shares outstanding																				

### GAAP to Non-GAAP Reconciliation For 2016

**CBOE HOLDINGS** 

GAAP to Non-GAAP Reconciliation

(in thousands, except per share amounts)

		1Q16	2Q16	3Q16	4Q16	FY2016
Reconciliation of GAAP Net Income Allocated to Common Stockholder to N	lon-G	AAP				
GAAP net income allocated to common stockholders	\$	49,198				
Add: Accelerated stock-based compensation		200				
Add: Acquisition related costs		368				
Add: Amortization of intangible assets		261				
Add: Statutory software lease tax related to prior periods		296				
Add: Impairment charge		-				
ncome tax expense related to the items above		(378)				
Net income allocated to participating securities - effect on reconciling items		(3)				
Adjusted net income allocated to common stockholders	\$	49,942				
Reconciliation of GAAP Diluted EPS to Non-GAAP						
GAAP diluted earnings per common share	\$	0.60				
Per share impact of items above		0.01				
Non-GAAP diluted earnings per common share	\$	0.61				
Reconciliation of GAAP Operating Margin to Non-GAAP						
GAAP operating revenue	\$	162,330				
Non-GAAP adjustments noted above		-				
Adjusted operating revenue	\$	162,330				
GAAP operating income	\$	79,481				
Non-GAAP adjustments noted above		1,125				
Adjusted operating income	\$	80,606				
Adjusted operating margin		49.7%				
GAAP operating expenses	\$	82,849				
Non-GAAP adjustments noted above	•	(1,125)				
Adjusted operating expenses	\$	81,724				

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### **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 presentation include core operating expenses, adjusted operating revenue, adjusted operating expenses, adjusted operating income, adjusted operating margin, adjusted effective tax rate, adjusted net income allocated to common stockholders, adjusted diluted earnings per share and free cash flow.
- Management believes that the non-GAAP financial measures in this presentation, including adjusted net income allocated to common stockholders and core operating expenses, 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, including adjusted diluted EPS, 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) volume-based expenses, (ii) depreciation and amortization expense, (iii) accelerated stock-based compensation expense and (iv) other unusual or one-time expenses.



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