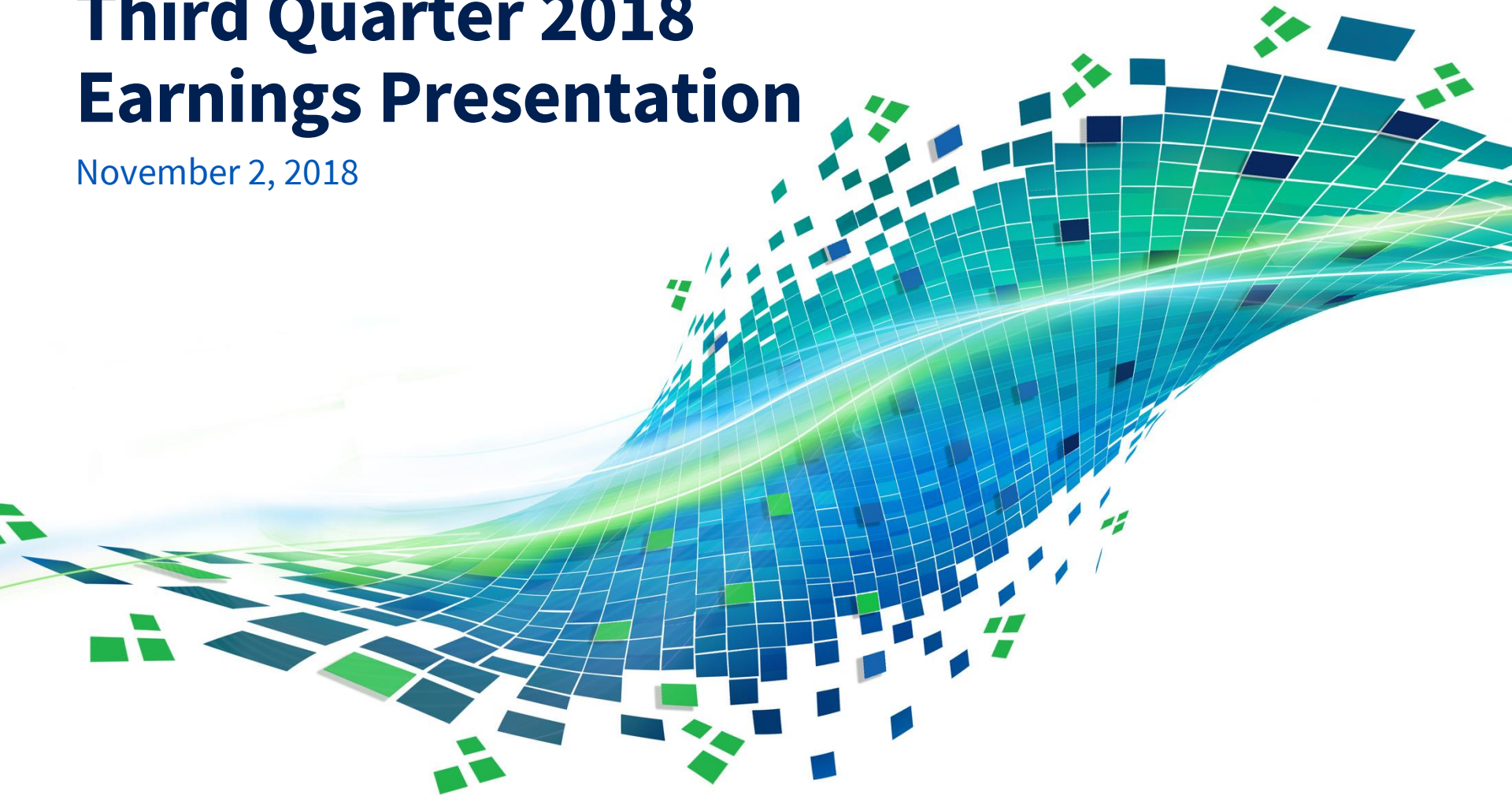
Third Quarter 2018 Earnings Presentation

November 2, 2018



Agenda

Strategic Review	**Edward Tilly** *Chairman and Chief Executive Officer*
Financial Review	**Brian Schell** *Executive Vice President, CFO and Treasurer*
Questions and Answers	**Edward Tilly** **Brian Schell** **Chris Concannon** *President and Chief Operating Officer* **John Deters** *Chief Strategy Officer and Head of Multi-Asset Solutions*

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, 2017 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.

Strategic Review
Edward Tilly
Chairman and CEO

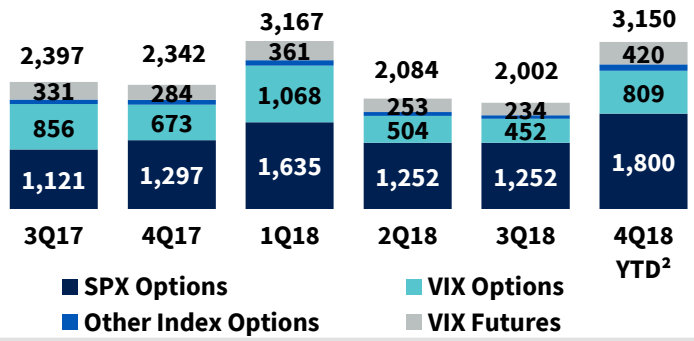
Solid 3Q18 Financial Results

3Q18 EPS of $1.06, up 19% on revenue of $271 million

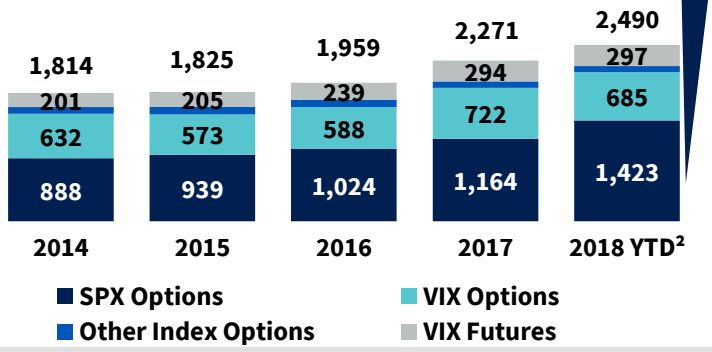
- SPX options ADV increased 12% YOY in 3Q18
- VIX options and futures volume improved month-over-month in 3Q18, then surged in October as volatility increased
- Success in FX market and continued growth in European Equities

SPX options up 25% YTD[1]

Quarterly ADV for Index Options and VIX Futures (in thousands)



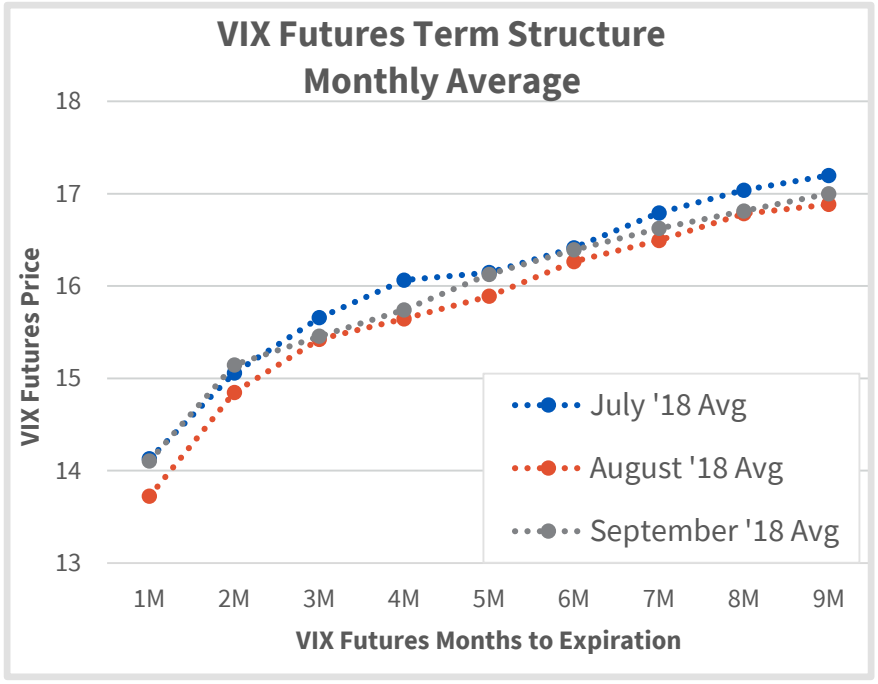
Annual ADV for Index Options and VIX Futures (in thousands)

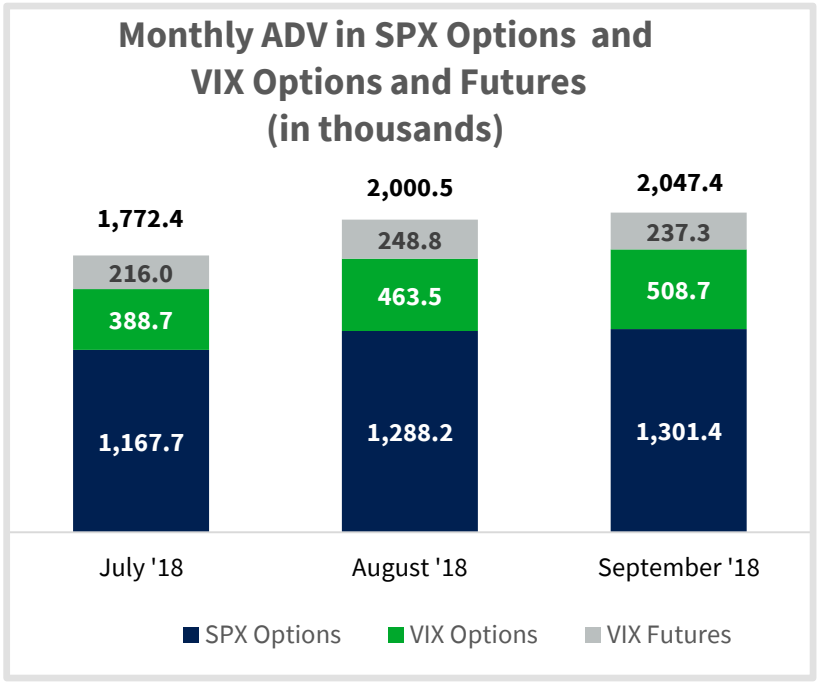


[1]Represents SPX ADV through September 2018 versus same period in 2017
[2]Through October 31, 2018

Together VIX and SPX Form a Powerful Set of Risk Management Tools for Investors Globally

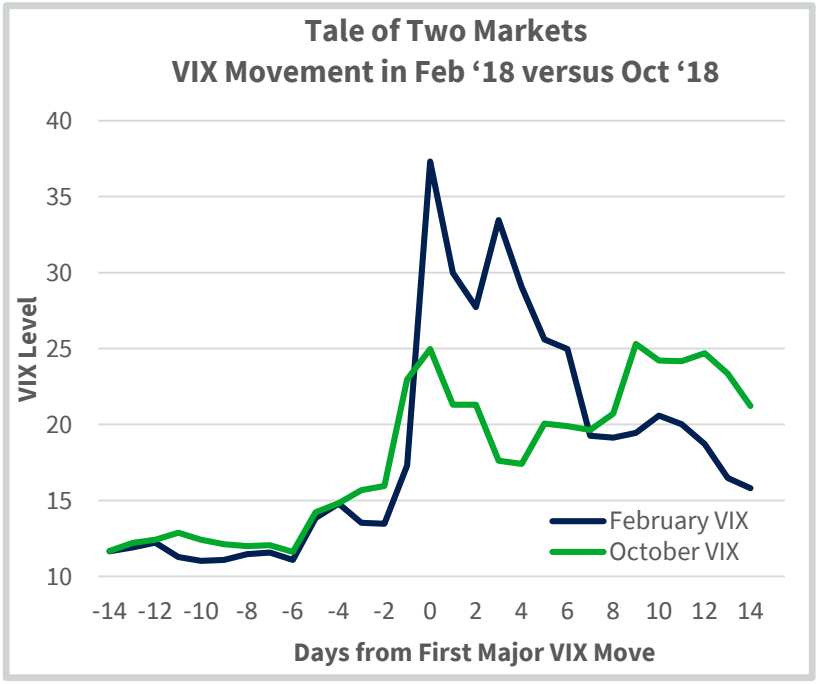
- 3Q18 volatility landscape:
  - VIX futures term structure returned to more familiar upward sloping shape
  - Steady volume increases in SPX options and VIX complex
  - As expected, we saw more trading related to volatility risk premium capture, volatility hedging and large trades in VIX options

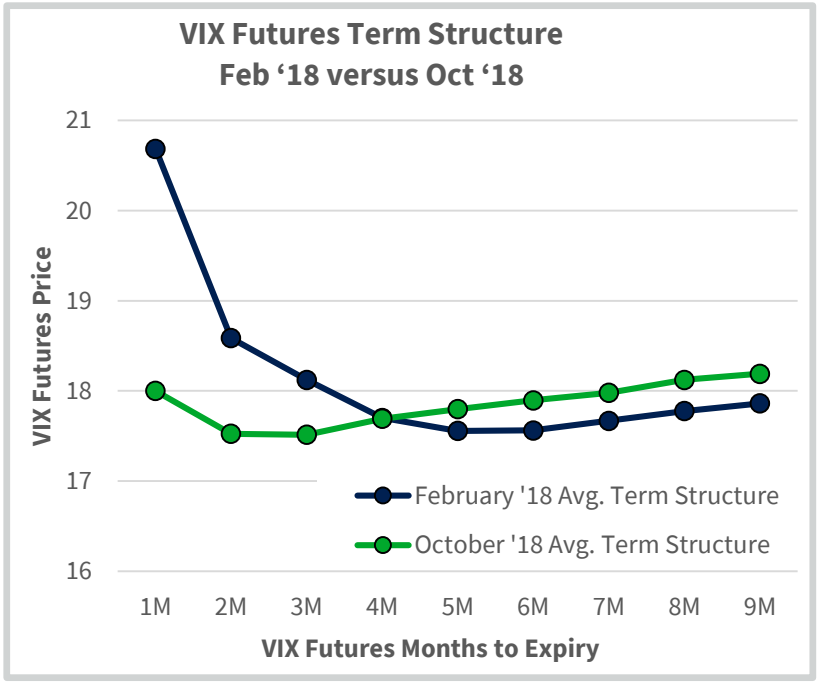




Together VIX and SPX Form a Powerful Set of Risk Management Tools for Investors Globally

- Record-setting volumes accompanied higher volatility in October
- October decline was an orderly re-pricing of risk that occurred over a period of weeks
- Trades suggest customers are monetizing hedges in both SPX and VIX, as well as repositioning their exposures tactically





Remain Focused on Executing Our Strategic Initiatives

- **Our mission: "to power your potential to stay ahead of an evolving market," is brought to life through three commitments:**
  - Relentless product innovation
  - Seamless solutions
  - Leading-edge technology



Product Innovation:
Successful Launch of Cboe Corporate Bond Index Futures

Launched futures based on the iBoxx iShares High Yield Corporate Bond Index on September 10 and Investment Grade on October 8

- New collaboration combines Cboe's product development expertise with IHS Markit's and BlackRock's leadership in the credit index space
- Collaboration presents a channel for building a presence in the credit space
- Offer futures based on the performance of IHS Markit indices calculated from the eligible holdings of both the iBoxx iShares $ High Yield Corporate Bond ETF and the iBoxx iShares $ Investment Grade Corporate Bond ETF

Seamless Trading Solutions: Preparing our Business for a Post-Brexit World

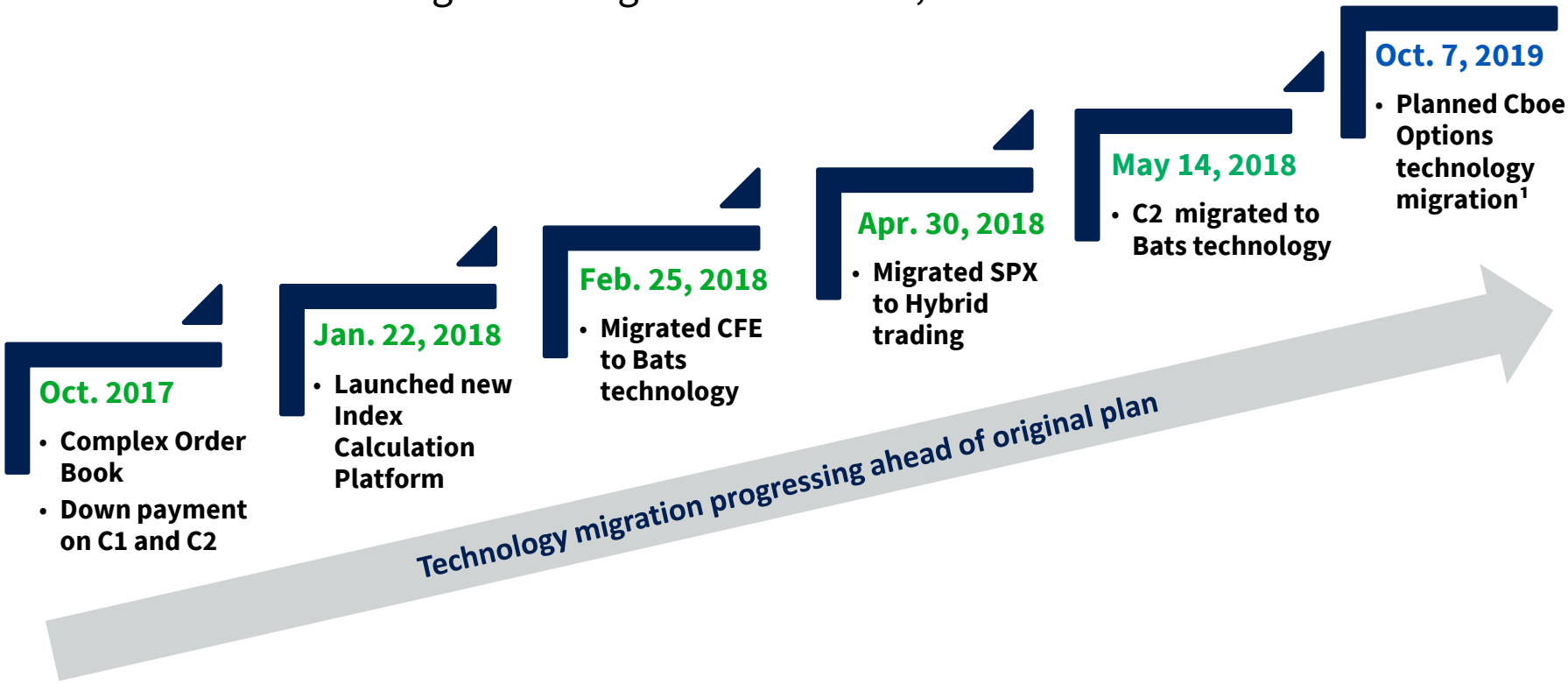
Cboe Europe continues to benefit from strong adoption of trading solutions implemented in response to MiFID II

- Periodic Auctions book is a leading non-continuous platform
- Cboe LIS, our block trading platform, logged another record quarter
- Establishing a European Union (EU) venue in Amsterdam
  - Positions our business well to continue to serve customers across Europe in the absence of an agreed “exit deal” between the UK and the EU
  - Working with the Dutch regulators and preparing to on-board customers to our new venue, pending regulatory approval
  - Plan to continue to operate existing Recognised Investment Exchange in the UK, offering similar services in both UK and EU venue
  - Will continue to monitor Brexit negotiations and alter plans as needed

Leading-edge Technology

Migrating Cboe exchanges onto Bats technology to create a common world-class trading platform across our options, futures and equities markets

- Fully engaged in multi-phased migration of Cboe Options Exchange and on track to reach migration target date of Oct. 7, 2019



[1]The planned migration of the Cboe Options Exchange is subject to regulatory review.

Excited About Opportunities Ahead

Laying the Groundwork for Future Growth

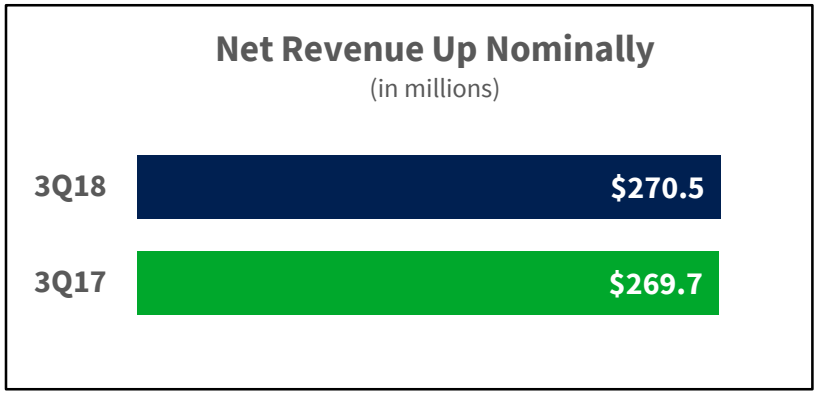
- Launching new products
- Expanding our global reach across asset classes
- Advancing our technology migration
- Achieving our acquisition synergy targets

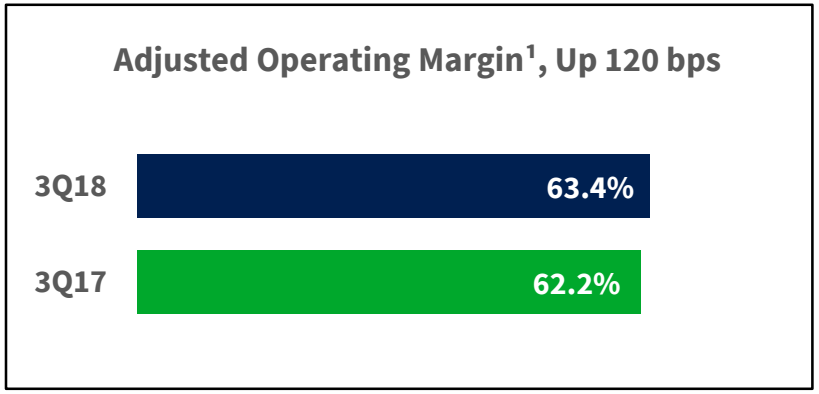


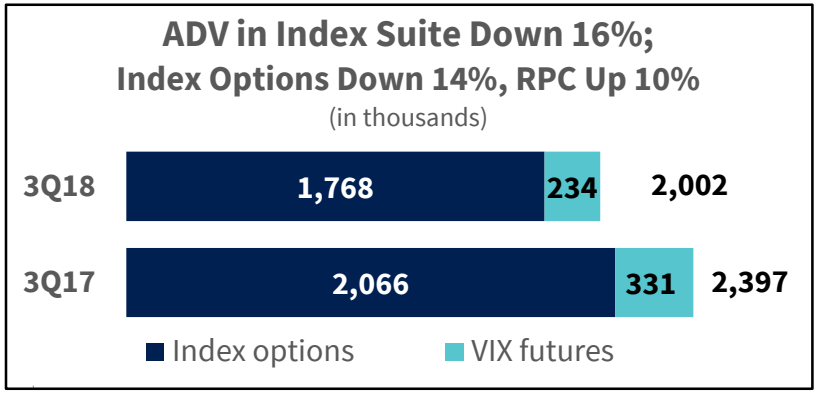
Financial Overview and Guidance
Brian Schell
EVP, CFO and Treasurer

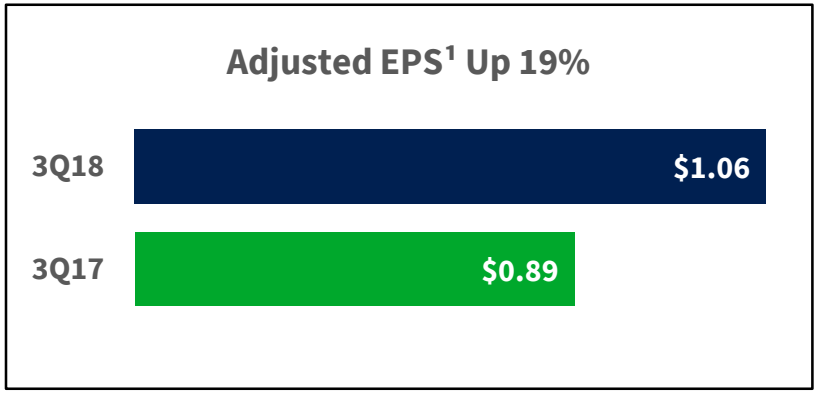
Business Highlights – Key Growth Drivers

- Growth from non-transaction fees
- Expense discipline and realizing expense synergies
- Demonstrated strong earnings growth









[1]See Appendix for "Non-GAAP Information."

Options Net Revenue Up 2%

- Net revenue increase reflects higher net transaction fees[1] for multiply-listed options and access fees
- Net transaction fees[1] down 1%, reflecting:
  - Higher ADV in multiply-listed options offset by decline in index options ADV
  - RPC decline primarily due to lower mix of index options traded
  - Growth in index options RPC reflects higher mix of SPX volume

Options Statistics ($ in millions, except RPC)	**3Q18**	**3Q17**	**Change**
Options Net Revenue	**$133.2**	**$130.7**	**2%**
Key Operating Statistics:			
Total market share	**36.8%**	**41.7%**	**-4.9% pts**
Total ADV (in thousands)	**6,733**	**6,751**	**--**
Index options	1,768	2,066	-14%
Multiply-listed options	4,965	4,685	6%
Total RPC	**$0.244**	**$0.247**	**-1%**
Index options	$0.737	$0.669	10%
Multiply-listed options	$0.068	$0.061	11%

[1]See Appendix for "Non-GAAP Information."

Futures Net Revenue Down 23%

- Revenue decrease reflects lower ADV and RPC
- RPC decrease primarily due to mix shift in volume
- RPC increased 4% compared to 2Q18 RPC of $1.633, reflecting:
  - Higher mix of customer volume
  - Impact of new TPH fee schedule implemented on August 1, 2018

Futures Statistics	3Q18	3Q17	Change
Futures Net Revenue (in millions)	**$30.0**	**$38.9**	**-23%**
Key Operating Statistics:			
Total ADV (in thousands)	**239**	**331**	**-28%**
Total RPC	**$1.704**	**$1.752**	**-3%**

U.S. Equities Net Revenue Up 2%

- Net revenue growth driven by higher net transaction fees[1] and exchange services fees
- Transaction fees driven by higher net revenue capture
- Expect downward pressure on full-year SIP market data revenue

U.S. Equities Statistics	3Q18	3Q17	Change
U.S. Equities Net Revenue (in millions)	**$71.4**	**$70.2**	**2%**
Market data – SIP	**23.0**	**26.0**	**-12%**
Market data – Proprietary	**9.0**	**7.1**	**27%**
Key Operating Statistics:			
Total market share	**17.5%**	**19.2%**	**- 1.7% pts**
Market ADV (shares in billions)	**6.3**	**6.1**	**3%**
ADV (matched shares in billions)	**1.2**	**1.2**	**--**
Net revenue capture (per 100 touched shares)	**$0.026**	**$0.022**	**18%**

[1]See Appendix for "Non-GAAP Information"

European Equities Net Revenue Up 21%

- Net revenue increase primarily due to growth in both net transaction fees[1] and non-transaction revenue
- Net revenue up a strong 22% on local currency basis
- Net transaction fees[1] reflect higher market share and increase in net capture
- Higher net capture resulted from strong Periodic Auctions volume and LIS volume, which have higher relative net captures

European Equities Statistics	3Q18	3Q17	Change
European Equities Net Revenue (in millions)	**$22.3**	**$18.4**	**21%**
Key Operating Statistics:			
Total market share	**23.1%**	**21.1%**	**2.0% pts**
Market ADNV (Euros, in billions)	**€41.4**	**€41.1**	**1%**
Net capture (per matched notional value, in basis points)	**0.195**	**0.168**	**16%**

[1]See Appendix for "Non-GAAP Information"

Global FX Net Revenue Up 20%

- Growth driven by increased volume
- Favorable macro environmental factors, stronger market share and a disciplined pricing schedule contributed to growth

Global FX Statistics	3Q18	3Q17	Change
Global FX Net Revenue (in millions)	**$13.6**	**$11.3**	**20%**
Key Operating Statistics:			
Market share	**14.8%**	**12.9%**	**1.9% pts**
ADNV ($ in billions)	**$34.6**	**$29.0**	**19%**
Net revenue (per one million dollars traded)	**$2.63**	**$2.63**	**--**

Adjusted Operating Expenses Down 3%

3Q18 vs 3Q17:

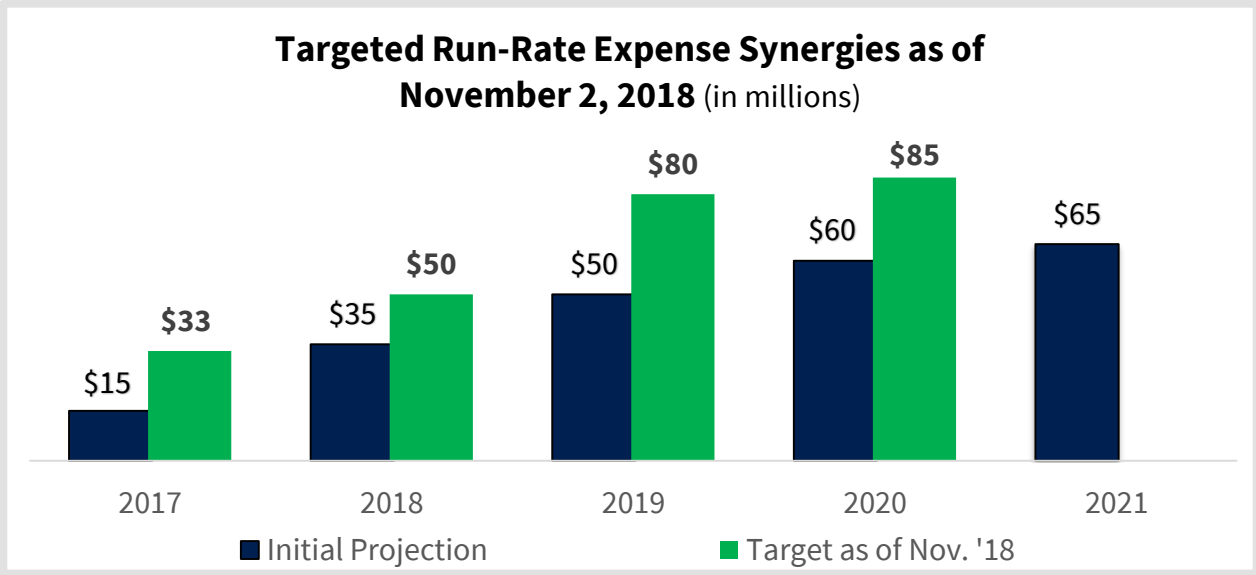
- Key drivers of change in adjusted operating expenses:
  - Depreciation and amortization lower due to accelerated depreciation in prior year and retirement of certain assets
  - Travel and promotional expenses fell due to reduction in advertising

Adjusted Operating Expenses[1] (in millions)	**3Q18**	**3Q17**	**% Chg**
Compensation and benefits	$51.8	$50.4	3%
Depreciation and amortization[1]	10.9	12.8	-15%
Technology support services	10.6	11.4	-7%
Professional fees and outside services	16.6	17.6	-6%
Travel and promotional	2.6	4.5	-42%
Facilities costs	3.3	2.9	14%
Other expenses	3.3	2.3	43%
Total[1]	**$99.1**	**$101.9**	**-3%**

[1]See Appendix for "Non-GAAP Information"

Run-Rate Expense Synergy Target of $50 MM in 2018; $85MM in 2020

- Realized $5.0 million of pre-tax expense synergies in 3Q18; Realized $12.2 million of pre-tax expense synergies YTD through September 30, 2018
- Maintain run-rate expense synergy target of $85 million in 2020



2018 Full-Year Guidance

2018 Full-Year Guidance ($ in millions)	**Guidance as of November 2, 2018[1]**
Adjusted operating expenses[2]	$420 to $428
Depreciation and amortization (excluding amortization of acquired intangible assets)	$43 to $48
Capital expenditures	$35 to $40
Effective tax rate on adjusted earnings[3]	26.5% to 28.5%

[1]See "Non-GAAP Information" in the appendix for reconciliations.

[2]Adjusted operating expenses for 2018 exclude acquisition-related expenses and amortization of acquired intangible assets, which are expected to be $157 million for 2018. Adjustments included in the non-GAAP reconciliation.

[3]The effective tax rate on adjusted earnings is expected to be at the higher end, but within the guidance range, for the fourth quarter.

Focused on Efficient Allocation of Capital to Create Long-Term Shareholder Value

Preserving balance sheet flexibility is a priority

- Invest in the growth of our business
- Return capital through dividends and share repurchases
  - Returned nearly $84 million in dividends and share repurchases in 3Q18

Debt Outstanding ($ in millions)	**Sept. 30, 2018**	**June 30, 2018**	**Mar. 31, 2018**	**Dec. 31, 2017**
3.650% Senior Notes (10Y; Due 2027)	$ 650	$ 650	$ 650	$ 650
1.950% Senior Notes (2Y; Due 2019)	300	300	300	300
Term Loan Facility	275	275	275	300
Total Debt (Gross)	**$ 1,225**	**$ 1,225**	**$ 1,225**	**$ 1,250**
Debt to EBITDA TTM[1]	**1.6x**	**1.6x**	**1.6x**	**1.8x**
Adjusted Cash & Financial Investments[1]	**$138**	**$116**	**$166**	**$120**
Dividends Paid	**$34.7**	**$30.6**	**$30.6**	**$30.6**
Share Repurchases	**$49.1**	**$48.3**	**$43.6**	**--**

[1]See Appendix for "Non-GAAP Information."

Delivering on Sources of Operating Leverage and Key Strategic Initiatives

Growth of Core Proprietary Products	• Focused on growing proprietary products
Diversification and Stabilization of Revenue Stream	• Strong growth in diverse set of revenue streams
Scale of Business Model	• Disciplined expense management • Provided higher operating margins
Synergies Realization	• Continued to realize expense synergies
Capital Allocation	• Returned capital through dividends and buybacks • Focused on maintaining balance sheet flexibility • Leverage ratio of 1.6x

Questions & Answers

Appendix Materials

3Q18 Financial Overview

Adjusted Financial Results[1] ($ in millions, except per share)	3Q18	3Q17	% Chg
Net Revenue[2]	$270.5	$269.7	--
Adjusted Operating Expenses[1]	99.1	101.9	-3%
Adjusted Operating Income[1]	$171.4	$167.8	2%
Adjusted Operating Margin[1]	63.4%	62.2%	120 bps
Adjusted Net Income Allocated to Common Stockholders[1]	$118.3	$100.1	18%
Adjusted Diluted EPS[1]	$ 1.06	$ 0.89	19%
Adjusted EBITDA[1]	$181.4	$180.9	--
Adjusted EBITDA Margin[1]	67.1%	67.1%	--

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

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

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

3Q18 net transaction fees down 3%; non-transaction revenue up 5%

Net Revenue (in millions)	3Q18	3Q17	% Chg
Net transaction fees[1]	$173.9	$179.6	-3%
Access fees	34.3	30.1	14%
Exchange services and other fees	19.3	20.0	-3%
Market data fees	47.6	46.8	2%
Regulatory fees	8.4	7.6	11%
Royalty fees	(20.7)	(22.1)	-6%
Other revenue	7.7	7.7	--
Total	$270.5	$269.7	--

[1]See Appendix for "Non-GAAP Information"

Supplemental Segment Information

3Q18 Supplemental Net Revenue by Segment (in millions)	Options	U.S. Equities	Futures	European Equities	Global FX	Total[1]
Net transaction fees[2]	$103.5	$18.8	$25.7	$14.1	$11.8	$173.9
Access fees	$16.8	$12.1	$2.2	$2.2	$1.0	$34.3
Exchange services and other fees	$8.3	$7.4	$1.6	$1.4	$0.6	$19.3
Market data fees	$10.6	$32.0	$1.7	$3.1	$0.2	$47.6

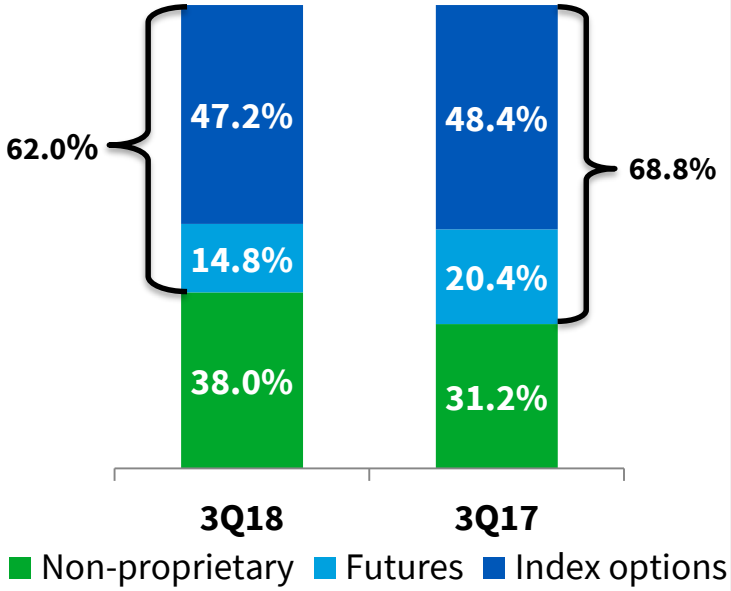
3Q17 Supplemental Net Revenue by Segment (in millions)	Options	U.S. Equities	Futures	European Equities	Global FX	Total[1]
Net transaction fees[2]	$105.0	$17.0	$36.6	$11.1	$9.9	$179.6
Access fees	$14.4	$12.5	$0.4	$2.0	$0.8	$30.1
Exchange services and other fees	$10.0	$5.7	$2.5	$1.3	$0.5	$20.0
Market data fees	$10.0	$33.1	$0.8	$2.8	$0.1	$46.8

[1]Totals may not foot due to rounding
[2]A full reconciliation of our non-GAAP results to our GAAP results is included in the following tables. See "Non-GAAP Information" in the accompanying financial tables.

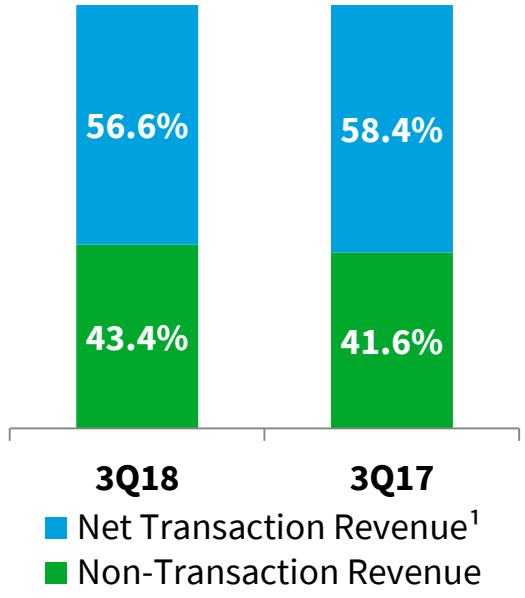
Mix of Net Revenue and Net Transaction Fees

Higher growth in non-transaction revenue in 3Q18 resulted in mix shifts

Mix of Net Transaction Fees[1] as Percentage of Total Net Transactions Fees



Mix of Net Revenue by Transaction and Non-Transaction



[1]See Appendix for "Non-GAAP Information"

Non-GAAP Information

Non-GAAP Information

In addition to disclosing results determined in accordance with GAAP, Cboe Global Markets 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 net transaction fees, adjusted operating expenses, adjusted operating income, adjusted operating margin, adjusted net income allocated to common stockholders and adjusted diluted earnings per share, adjusted tax rate, adjusted cash and financial investments, EBITDA, EBITDA margin, adjusted EBITDA and adjusted EBITDA margin.

Management believes that the non-GAAP financial measures presented in this presentation, including adjusted operating income 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.

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.

The tables below show 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.

Non-GAAP Information

Combined Reconciliations

The non-GAAP unaudited combined financial measures have been prepared by recording combined adjustments to the historical consolidated financial statements of Cboe Global Markets. The combined financial measures for the three months ended March 31, 2017 have been prepared as if the Bats acquisition closed on January 1, 2017.

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. We believe that the non-GAAP financial measures presented provide additional and comparative information to assess trends in our core operations and a means to evaluate period-to-period comparisons.

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.

The tables below show 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.

Reconciliation of Segment Net Revenues

(in millions)	1Q17	2Q17	3Q17	4Q17	2017	1Q18	2Q18	3Q18
Options	$ 128.9	$ 126.7	$ 130.7	$ 130.0	$ 516.3	$ 167.1	$ 136.4	$ 133.2
U.S. Equities	25.5	74.4	70.2	69.0	239.1	79.7	77.6	71.4
Futures	28.8	36.2	38.9	35.6	139.5	42.3	31.4	30.0
European Equities	6.1	18.5	18.4	18.8	61.8	24.6	23.4	22.3
Global FX	4.0	10.9	11.3	12.0	38.2	14.6	14.5	13.6
Corporate	-	0.2	0.2	0.2	0.6	0.2	0.2	-
Total	$ 193.3	$ 266.9	$ 269.7	$ 265.6	$ 995.5	$ 328.5	$ 283.5	$ 270.5
Non-GAAP Adjustments (1)								
Options	$ 6.2	-	-	-	$ 6.2			
U.S. Equities	47.2	-	-	-	47.2			
Futures	-	-	-	-	-			
European Equities	11.8	-	-	-	11.8			
Global FX	6.8	-	-	-	6.8			
Corporate	-	-	-	-	-			
Total	$ 72.0	$ -	$ -	$ -	$ 72.0			
Combined								
Options	$ 135.1	$ 126.7	$ 130.7	$ 130.0	$ 522.5			
U.S. Equities	72.7	74.4	70.2	69.0	286.3			
Futures	28.8	36.2	38.9	35.6	139.5			
European Equities	17.9	18.5	18.4	18.8	73.6			
Global FX	10.8	10.9	11.3	12.0	45.0			
Corporate	-	0.2	0.2	0.2	0.6			
Total	$ 265.3	$ 266.9	$ 269.7	$ 265.6	$ 1,067.5			

(1) Represents historical Bats activity for the period January 1, 2017 through February 28, 2017.

Non-GAAP Information

Reconciliation of Net Transaction Fees by Segment

For the Three Months Ended September 30, 2018 (in millions)	U.S. Options	U.S. Equities	U.S. Futures	European Equities	Global FX	Total
Transaction fees	$ 175.2	$ 176.7	$ 25.7	$ 22.4	$ 11.8	$ 411.8
Liquidity payments	(68.2)	(152.7)	-	(8.3)	-	(229.2)
Routing and clearing	(3.5)	(5.2)	-	-	-	(8.7)
Net transaction fees	$ 103.5	$ 18.8	$ 25.7	$ 14.1	$ 11.8	$ 173.9

For the Three Months Ended September 30, 2017 (in millions)	U.S. Options	U.S. Equities	U.S. Futures	European Equities	Global FX	Total
Transaction fees	$ 172.3	$ 185.5	$ 36.6	$ 19.0	$ 9.9	$ 423.3
Liquidity payments	(64.5)	(161.9)	-	(7.9)	-	(234.3)
Routing and clearing	(2.8)	(6.6)	-	-	-	(9.4)
Net transaction fees	$ 105.0	$ 17.0	$ 36.6	$ 11.1	$ 9.9	$ 179.6

Non-GAAP Information

Reconciliation of Net Income Allocated to Common Stockholders, Diluted EPS								
(in millions, except per share amounts)	**1Q17**	**2Q17**	**3Q17**	**4Q17**	**2017***	**1Q18**	**2Q18**	**3Q18**
Net income allocated to common stockholders	$ 15.1	$ 67.3	$ 59.7	$ 254.6	$ 396.7	$ 117.3	$ 82.4	$ 85.0
Compensation and benefits (1)	9.1	-	-	-	9.1	-	-	-
Acquisition-related expenses (2)	65.2	4.7	5.5	9.0	84.4	8.8	8.6	5.9
Amortization of acquired intangible assets (3)	14.4	42.6	42.6	43.0	142.6	42.1	39.7	39.4
Change in contingent consideration	0.2	0.5	0.4	(0.1)	1.0	-	-	-
Total Non-GAAP operating expense adjustments	88.9	47.8	48.5	51.9	237.1	50.9	48.3	45.3
Interest and other borrowing costs (4)	4.3	0.9	-	-	5.2	-	-	-
Provision for uncollectable convertible notes receivable	-	-	3.8	-	3.8	-	-	-
Change in redemption value of noncontrolling interest	0.3	0.3	0.2	0.3	1.1	0.3	0.3	0.3
Total Non-GAAP adjustments - pretax	93.5	49.0	52.5	52.2	247.2	51.2	48.6	45.6
Income tax expense related to the items above	(36.0)	(18.0)	(19.1)	(19.2)	(92.3)	(13.0)	(12.6)	(12.1)
Re-measurement of deferred tax assets and liabilities as a result of corporate rate increase in Illinois	-	-	7.4	-	7.4	-	-	-
Effect of tax reform law	-	-	-	(191.5)	(191.5)	-	-	-
Net income allocated to participating securities - effect on	(0.4)	(0.3)	(0.4)	1.6	0.5	(0.3)	(0.2)	(0.2)
Adjusted net income allocated to common stockholders	$ 72.2	$ 98.0	$ 100.1	$ 97.7	$ 368.0	$ 155.2	$ 118.2	$ 118.3
Reconciliation of Diluted EPS to Non-GAAP								
Diluted earnings per common share	$ 0.16	$ 0.62	$ 0.53	$ 2.26	$ 3.69	$1.04	$0.73	$0.76
Per share impact of non-GAAP adjustments noted above	0.62	(0.02)	0.36	(1.39)	(0.27)	0.34	0.32	0.30
Adjusted diluted earnings per common share	$ 0.78	$ 0.60	$ 0.89	$ 0.87	$ 3.42	$1.38	$1.05	$1.06
Reconciliation of Operating Margin to Non-GAAP								
Revenue less cost of revenue	$ 193.3	$ 266.9	$ 269.7	$ 265.6	$ 995.5	$ 328.5	$ 283.5	$270.5
Non-GAAP adjustments noted above	-	-	-	-	-	-	-	-
Adjusted revenue less cost of revenue	$ 193.3	$ 266.9	$ 269.7	$ 265.6	$ 995.5	$ 328.5	$ 283.5	$ 270.5
Operating expenses	$ 167.3	$ 149.1	$ 150.4	$ 156.9	$ 623.7	$ 160.8	$ 154.4	$ 144.4
Non-GAAP expense adjustments noted above	(88.9)	(47.8)	(48.5)	(51.9)	(237.1)	(50.9)	(48.3)	(45.3)
Adjusted operating expenses	$ 78.4	$ 101.3	$ 101.9	$ 105.0	$ 386.6	$ 109.9	$ 106.1	$ 99.1
Operating income	$ 26.1	$ 117.8	$ 119.3	$ 108.7	$ 371.9	$ 167.7	$ 129.1	$ 126.1
Non-GAAP expense adjustments noted above	88.9	47.8	48.5	51.9	237.1	50.9	48.3	45.3
Adjusted operating income	$ 115.0	$ 165.6	$ 167.8	$ 160.6	$ 609.0	$ 218.6	$ 177.4	$ 171.4
Adjusted operating margin (5)	59.5%	62.0%	62.2%	60.5%	61.2%	66.5%	62.6%	63.4%
Reconciliation of Income Tax Rate to Non-GAAP								
Income before income taxes	$ 18.3	$ 106.1	$ 105.9	$ 104.1	$ 334.4	$ 159.4	$ 119.8	$ 116.3
Non-GAAP adjustments noted above	93.5	49.0	52.5	52.2	247.2	51.2	48.6	45.6
Adjusted income before income taxes	$ 111.8	$ 155.1	$ 158.4	$ 156.3	$ 581.6	$ 210.6	$ 168.4	$ 161.9
Income tax (benefit) expense	$ (3.1)	$ 38.1	$ 45.6	$ (153.0)	$ (66.2)	$ 41.3	$ 36.8	$ 30.6
Non-GAAP adjustments noted above	36.0	18.0	11.7	210.7	276.4	13.0	12.6	12.1
Adjusted income tax (benefit) expense	$ 32.9	$ 56.1	$ 57.3	$ 57.7	$ 210.2	$ 54.3	$ 49.4	$ 42.7
Adjusted income tax rate	29.4%	36.2%	36.2%	36.9%	36.1%	25.9%	29.4%	26.4%

(*) Includes Bats beginning March 1, 2017.
(1) For the three months ended March 31, 2017, this amount includes $9.1 million for accelerated stock-based compensation expense.
(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) Adjusted operating margin represents adjusted operating income divided by adjusted revenue less cost of revenue.

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.

Reconciliation of Net Income Allocated to Common Stockholders to EBITDA and Ajdusted EBITDA

(in millions, except per share amounts)	1Q17*	2Q17	3Q17	4Q17	2017	1Q18	2Q18	3Q18
Net income allocated to common stockholders	$ 15.1	$ 67.3	$ 59.7	$ 254.6	$ 396.7	$ 117.3	$ 82.4	$ 85.0
Interest	7.9	12.5	10.5	10.4	41.3	9.6	9.3	9.6
Income tax provision	3.1	38.1	45.6	(153.0)	(66.2)	41.3	36.8	30.6
Depreciation and amortization	25.1	55.8	55.4	55.9	192.2	54.2	50.4	50.3
EBITDA	$ 51.2	$ 173.7	$ 171.2	$ 167.9	$ 564.0	$ 222.4	$ 178.9	$ 175.5
EBITDA Margin[1]	26.5%	65.1%	63.5%	63.2%	56.7%	67.7%	63.1%	64.9%
Non-GAAP adjustments not included in above line items								
Compensation and benefits (accelerated stock-based compensation)	9.1	-	-	-	9.1	-	-	-
Acquisition-related expenses	65.2	4.7	5.5	9.0	84.4	8.8	8.6	5.9
Provision for uncollectable convertible notes receivable	-	-	3.8	-	3.8	-	-	-
Other	0.2	0.5	0.4	(0.1)	1.0	-	-	-
Adjusted EBITDA	$ 125.7	$ 178.9	$ 180.9	$ 176.8	$ 662.3	$ 231.2	$ 187.5	$ 181.4
Adjusted EBITDA Margin[1]	65.0%	67.0%	67.1%	66.6%	66.5%	70.4%	66.1%	67.1%

Reconciliation of Combined Net Income Allocated to Common Stockholders to EBITDA and Adjusted EBITDA

Combined net income allocated to common stockholders*	$ 73.0
Interest	12.0
Income tax provision	22.0
Depreciation and amortization	55.3
Combined EBITDA	$ 162.3
Combined EBITDA Margin[1]	61.2%
Non-GAAP adjustments not included in above line items	
Compensation and benefits (accelerated stock-based compensation)	$ 9.1
Other	0.6
Adjusted Combined EBITDA	$ 172.0
Adjusted Combined EBITDA Margin[1]	64.8%

*Includes the activity of Bats for January 1 through February 28, 2017.

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

Non-GAAP Information (see next slide for footnotes)

(in millions, except per share amounts)	Three Months Ended March 31, 2017	
Reconciliation of Non-transaction Revenue (1):		
Access fees	$ 17.8	
Exchange services and other fees	15.4	
Market data fees	*22.5*	
Regulatory fees	8.3	
Other revenue	5.8	
Non-GAAP adjustments	44.1	(2)
Combined non-transaction revenue	$ 113.9	
Total non-transaction revenue as a percent of revenues less cost of revenues (3)	*42.9%*	
Reconciliation of Revenues Less Cost of Revenues:		
Revenue less cost of revenues	$ 193.4	
Non-GAAP adjustments	71.9	(5)
Combined revenue less cost of revenues	$ 265.3	
Reconciliation of Operating Expenses to Non-GAAP:		
Operating expenses	$ 167.3	
Non-GAAP adjustments	(8.9)	(6)
Non-GAAP adjustments as detailed below	(52.1)	
Adjusted combined operating expenses	$ 106.3	
Reconciliation of Operating Income to Non-GAAP:		
Operating income	$ 26.1	
Non-GAAP revenue adjustments	80.8	(7)
Non-GAAP expense adjustments as detailed below	52.1	
Adjusted combined operating income	$ 159.0	
Adjusted combined operating margin (4)	*59.9%*	
Reconciliation of Net Income Allocated to Common Stockholders to Non-GAAP:		
Net income allocated to common stockholders	$ 15.2	
Non-GAAP adjustments	57.8	(8)
Non-GAAP expense adjustments as detailed below	32.8	
Adjusted combined net income allocated to common stockholders	$ 105.8	
Adjusted combined diluted EPS	$0.94	
Non-GAAP Operatiang Expense Adjustments to Non-GAAP:		
Compensation and benefits	$ 9.1	
Amortization of acquired intangible assets	42.4	
Other	0.6	
Total non-GAAP operating expense adjustments	$ 52.1	
Income tax expense related to items above	(19.3)	
Total non-GAAP expense adjustments, net of tax	$ 32.8	

Non-GAAP Information - Footnotes for table on prior slide

(1)Total non-transaction revenue represents the sum of access fees, exchange services and other fees, market data fees, regulatory fees (net of Section 31 fees) and other revenue.

(2) Reflects adjustment to include the activity of Bats for January 1, 2017 through February 28, 2017 of $11.9 million of access fees, $5.0 million of exchange services and other fees, $25.7 million of market data fees, $0.5 million of regulatory fees and $1.0 million of other revenue.

(3) The percentage of combined non-transaction revenue represents total combined non-transaction revenue divided by combined revenue less cost of revenue.

(4) Reflects adjustments to include the activity of Bats for January 1, 2017 through February 28, 2017 of $71.9 million of revenue less cost of revenues.

(5) Reflects adjustments to include the activity of Bats for January 1, 2017 through February 28, 2017 of $56.2 million and adjustments to reduce Bats historical amortization of acquired intangibles by $4.5 million and increase amortization of acquired intangibles by $28.0 million for the periods January and February 2017. Also reflects adjustments to reduce acquisition costs by $65.2 million for Cboe historical and reduce professional fees for Bats historical by $23.4 million which are costs associated with the Bats merger.

(6) Reflects adjustments to include the activity of Bats for January 1, 2017 through February 28, 2017 of $15.7 million and adjustments to reduce Bats historical amortization of acquired intangibles by $4.5 million and increase amortization of acquired intangibles by $28.0 million for the periods January and February 2017. Also reflects adjustments to reduce acquisition costs by $65.2 million for Cboe historical and reduce professional fees for Bats historical by $23.4 million which are costs associated with the Bats merger.

(7) Adjusted combined operating margin represents adjusted combined operating income divided by combined revenue less cost of revenue.

(8) Reflects adjustments to include the activity of Bats for January 1, 2017 through February 28, 2017 of ($0.2) million and adjustments to reduce Bats historical amortization of acquired intangibles by $4.5 million and increase amortization of acquired intangibles by $28.0 million for the periods January and February 2017. Also reflects adjustments to reduce acquisition costs by $65.2 million for Cboe historical, reduce professional fees for Bats historical by $23.4 million which are costs associated with the Bats merger and $13.6 million to adjust for the extinguishment of Bats historical debt as well as the income tax impact of the previous adjustments of $20.7 million

Non-GAAP Information

Adjusted Debt to EBITDA - Trailing Twelve Months[1]					
(in millions)	**4Q17**	**1Q18**	**2Q18**	**3Q18**	**LTM**
Net income allocated to common stockholders	$ 254.6	$ 117.3	$ 82.4	$ 85.0	$ 539.3
Interest	10.4	9.6	9.3	9.6	38.9
Income tax provision	(153.0)	41.3	36.8	30.6	(44.3)
Depreciation and amortization	55.9	54.2	50.4	50.3	210.8
EBITDA	$ 167.9	$ 222.4	$ 178.9	$ 175.5	$ 744.7
Non-GAAP adjustments not included in above line items:					
Acquisition-related expenses	9.0	8.8	8.6	5.9	32.3
Other	(0.1)	-	-	-	(0.1)
Adjusted EBITDA	$ 176.8	$ 231.2	$ 187.5	$ 181.4	$ 776.9
Debt at end of period					$ 1,225.0
Debt to EBITDA					**1.6x**

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

Adjusted Cash

Adjusted cash is a non-GAAP measure and represents cash and cash equivalents plus financial investments minus cash collected for Section 31 fees, which will need to be remitted in the near term. We have presented adjusted cash because we consider it an important supplemental measure of our liquidity and believe that it is frequently used by analysts, investors and other interested parties in the evaluation of companies.

Adjusted Cash (in millions)	**As of 3/31/17**	**As of 6/30/17**	**As of 9/30/17**	**As of 12/31/17**	**As of 3/31/18**	**As of 6/30/18**	**As of 9/30/18**
Cash and cash equivalents	$ 153.3	$ 148.6	$ 124.8	$ 143.5	$ 166.3	$ 140.0	$ 88.5
Financial investments	41.3	110.4	2.4	47.3	64.0	131.8	49.2
Cash collected for Section 31 fees	(41.3)	(110.0)	-	(70.6)	(64.0)	(155.8)	-
Adjusted Cash	$ 153.3	$ 149.0	$ 127.2	$ 120.2	$ 166.3	$ 116.0	$ 137.7

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