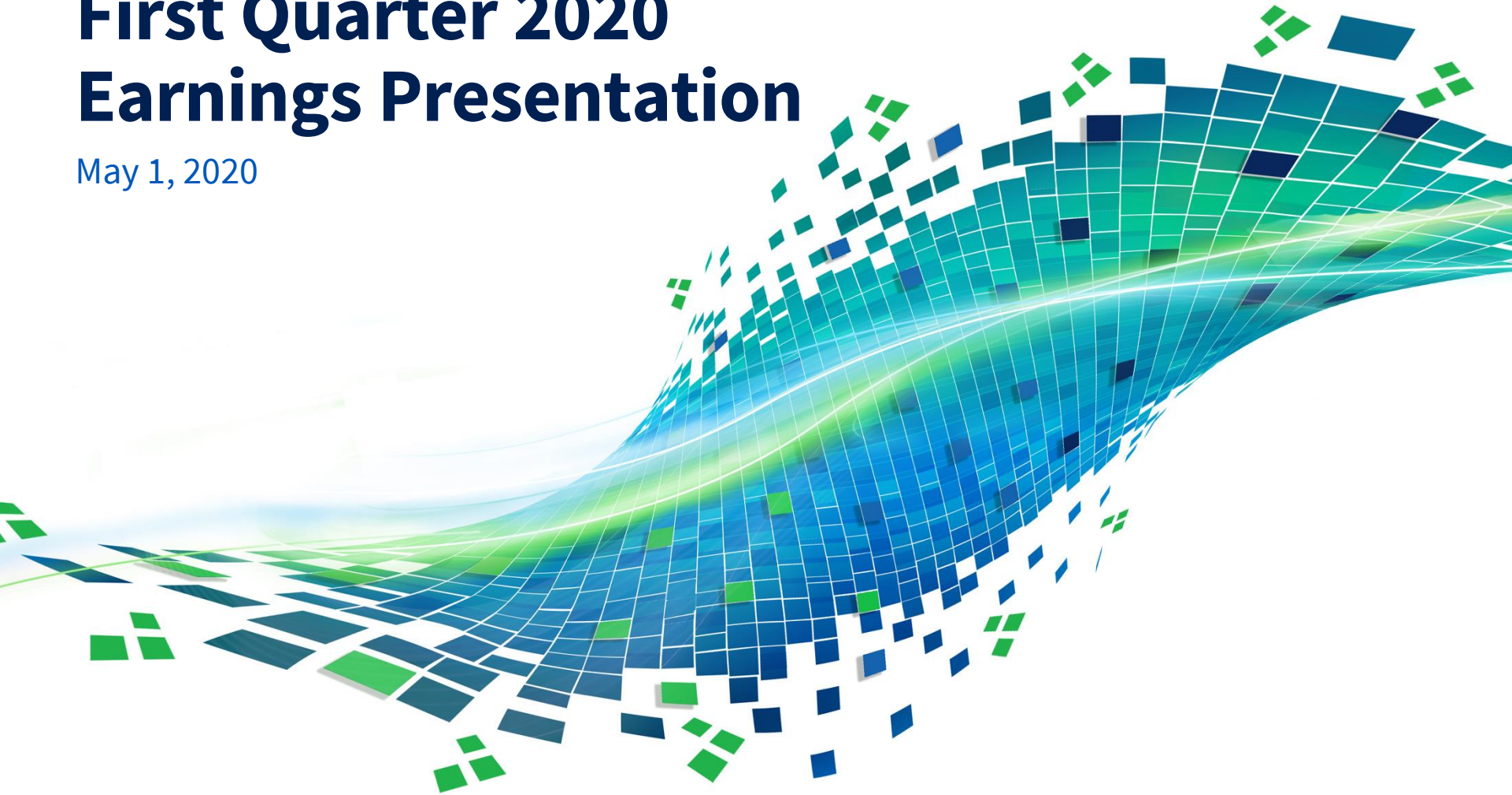


First Quarter 2020 Earnings Presentation

May 1, 2020



Strategic Review

Edward Tilly

Chairman, President and Chief Executive Officer

Financial Review

Brian Schell

Executive Vice President, CFO and Treasurer

Questions and Answers

Edward Tilly

Brian Schell

Chris Isaacson

Executive Vice President and Chief Operating Officer

John Deters

Executive Vice President and Chief Strategy Officer

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 impact of the novel coronavirus (“COVID-19”) pandemic, including changes to trading behavior broadly in the market as well as due to the temporary suspension of open outcry trading in response to COVID-19; 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; our ability to protect our systems and communication networks from security risks, cybersecurity risks, insider threats and unauthorized disclosure of confidential information; increasing competition by foreign and domestic entities; our dependence on and exposure to risk from third parties; fluctuations to currency exchange rates; 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; our ability to accommodate trading volume and transaction traffic, including significant increases, without failure or degradation of performance of our systems; misconduct by those who use our markets or our products; 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; restrictions imposed by our debt obligations; our ability to maintain an investment grade credit rating; impairment of our goodwill, long-lived assets, investments or intangible assets; 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, 2019 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.

This presentation includes market share, financials and industry data that we obtained from industry publications and surveys, reports of governmental agencies, third-parties and internal company surveys. Industry publications and surveys generally state that the information they contain has been obtained from sources believed to be reliable, but we cannot assure you that this information is accurate or complete. We have not independently verified any of the data and financials from third-party sources nor have we ascertained the underlying economic assumptions relied upon therein. Statements as to our market position are based on the most currently available market data. While we are not aware of any misstatements regarding industry data and financials presented herein, our estimates involve risks and uncertainties and are subject to change based on various factors.

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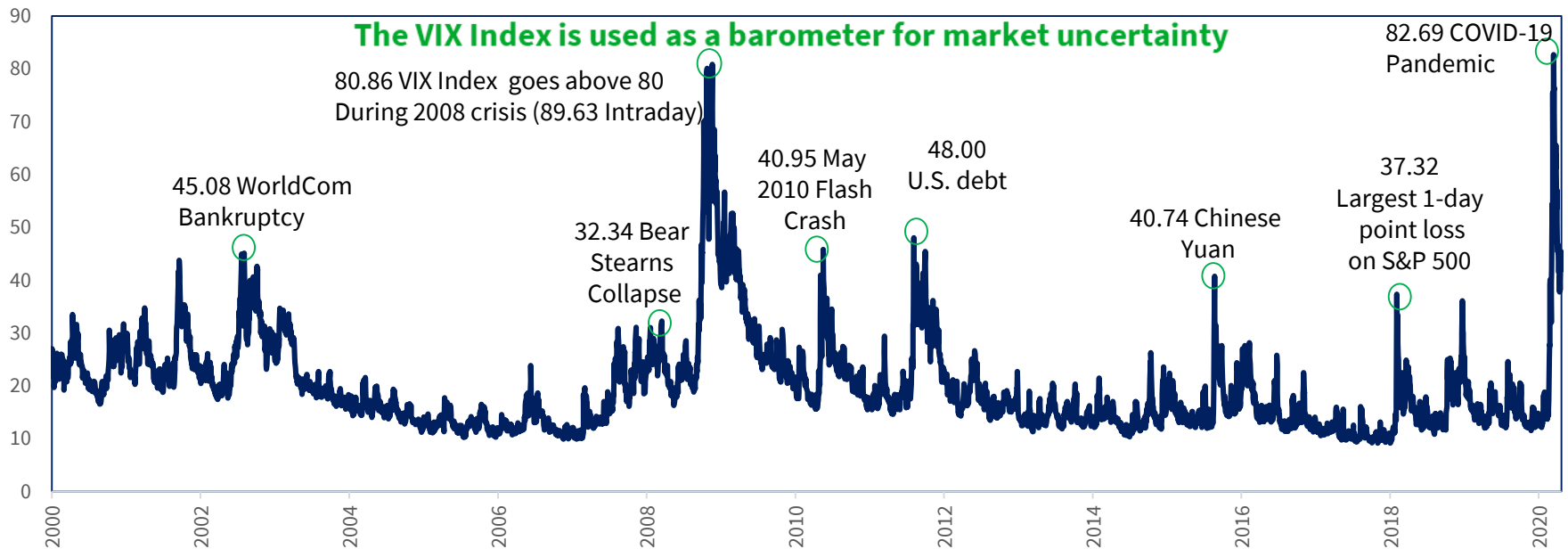


Strategic Review
Edward Tilly
Chairman, President and CEO

Spread of COVID-19 Fueled Market Uncertainty and Business Changes

First priority was to mitigate risk of exposure to our associates and trading floor community

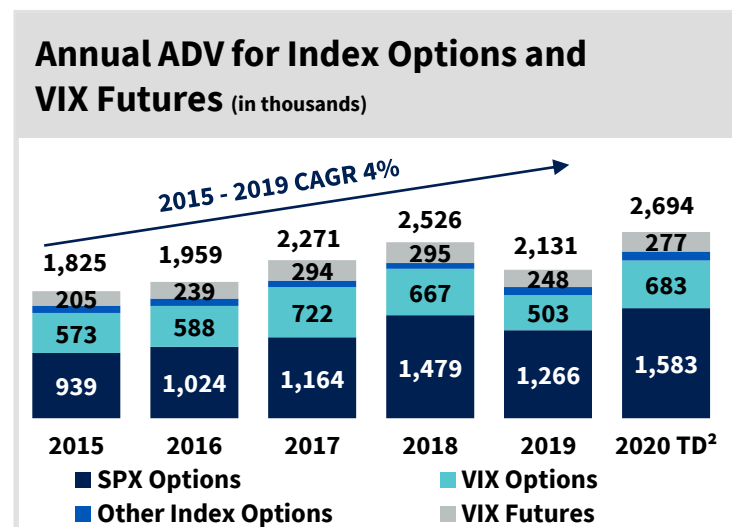
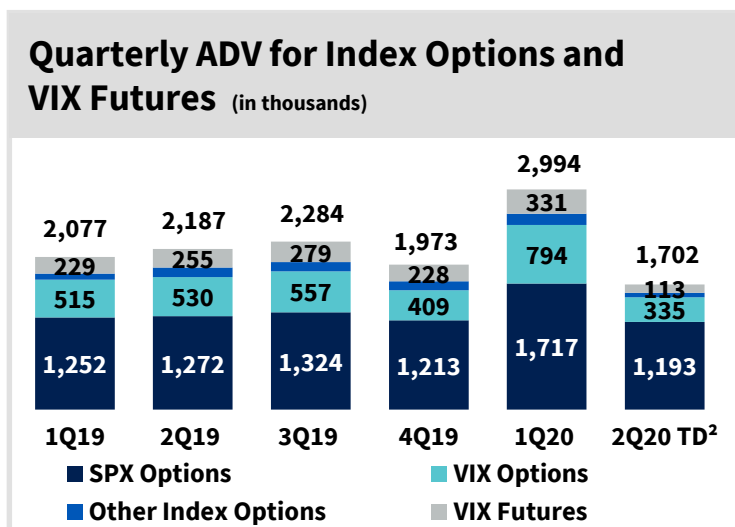
- ❖ Began transitioning to work from home ahead of government mandates
- ❖ March 16th temporarily closed trading floor and transitioned C1 to all-electronic trading
- ❖ Worked with floor traders and regulators to close gaps through technology for a seamless transition
- ❖ Will continue to evolve our electronic functionality



Cboe's Proprietary Products Utilized to Navigate Market Turbulence

Record quarterly financial results driven by higher revenue across business segments

- ❖ Record quarterly adjusted diluted EPS¹ of \$1.65 on net revenue of \$358 million
- ❖ Index options ADV up 43% and VIX futures ADV up 44% year-over-year
- ❖ Higher trading volumes in 1Q20 across our proprietary products have given way to lower proprietary volumes in April
- ❖ Continue to see growth in other products in our diversified product line



¹See appendix for "Non-GAAP Information."

²Through April 29, 2020

First Quarter 2020 Marked by Record Levels of Market Volatility

Expect to see new permutations of volatility as this crisis evolves

- ❖ During times of extreme market stress, investors normally de-risk until the event is more clearly defined
- ❖ Investors typically re-engage when better able to assess risk
- ❖ Expect investors to continue to deploy - and redeploy - our unique product set to manage risk as the crisis evolves

Date	Event	S&P % Chg	Days	Max VIX Index Close
Mid 2012	Greek Default Concerns	-9.9%	60	26.66
Mid 2013	Cyprus Bailout	-5.8%	34	20.49
Late 2014	Ebola	-7.4%	27	26.25
Mid 2015	Troika/Greece	-12.4%	96	40.74
2015/2016	Yuan Deval/Global Growth Fears	-13.3%	100	28.14
Early 2018	Inflationary Catalysts	-10.2%	13	37.34
Late 2018	Powell “a long way from neutral”	-19.8%	95	36.07
Mid 2019	US/China Trade War	-6.8%	34	24.59
Early 2020	COVID-19	-34.0%	33*	82.69
Average NOT Inclusive of Current		-10.7%	57	30.04

Sources: Bloomberg and Cboe

*As of April 21 and still counting

Enhancing all-electronic trading environment with technology solutions

- ❖ Actively redefining how we approach investor education
 - Virtual forums
 - Webinars
- ❖ Utilized Cboe Silexx order and execution management system (OEMS) to facilitate access in an all-electronic trading environment
- ❖ Expedited development work on Silexx to enable floor traders to replicate their work streams in both Flex and listed options

Offer Comprehensive Suite of Data Solutions, Analytics and Indices

Provide market participants tools for better understanding risk and accessing Cboe markets

- ❖ Recent acquisitions of Hanweck and FT Options have been timely
 - Hanweck, real-time risk analytics on global derivatives markets
 - FT Options, portfolio management platform provider
- ❖ Provide tools that draw users to our markets and drive volume as they re-establish their views on the market

Cboe Information Solutions – a broad suite of data solutions, analytics and indices

Offer Unique and Actionable Derived Data Solutions

Deliver Insightful Data & Analytics Through Seamless Channels

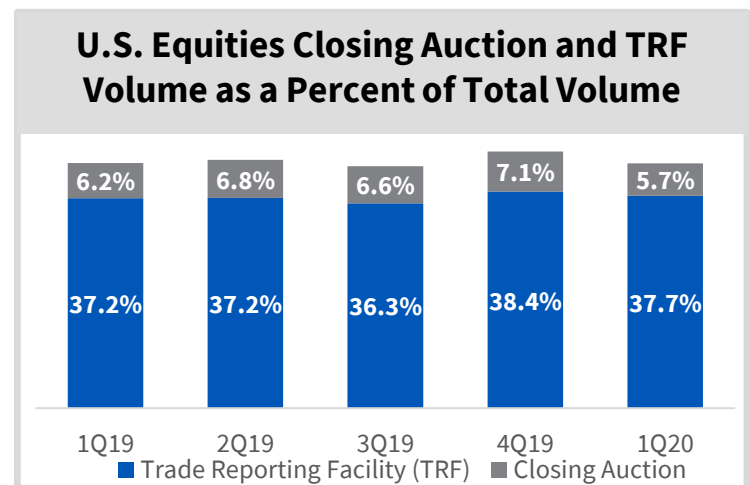
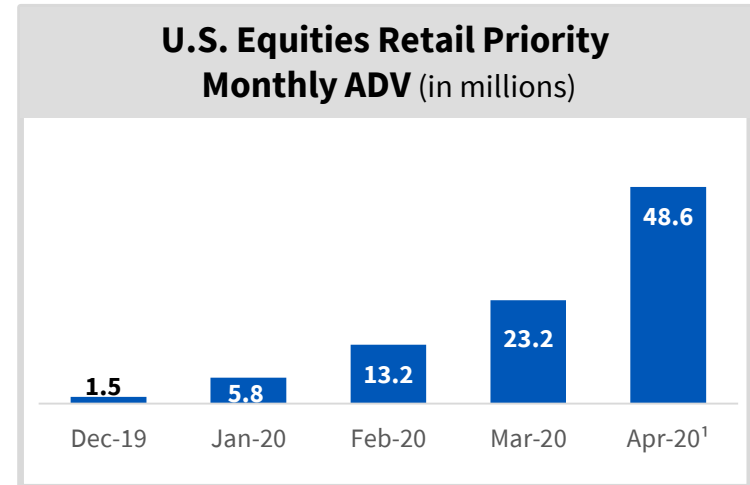
Provide Friction-free Access to Our Global Markets

- Provide high-margin, value-added recurring revenue stream
- Support transaction growth in our suite of proprietary products

Supporting Market Participants Through Innovative Offerings

Seeing positive response to Cboe Retail Priority

- ❖ Strong momentum in response to retail priority to date
- ❖ Launched Cboe Market Close on March 6
 - We look to provide added opportunities for cost efficiencies at market close
 - Market environment in 1Q20 limited customer uptake; remain optimistic based on recent customer outreach
- ❖ Gaining traction in Cboe Closing Cross (3C), our post-close trading service in Europe
- ❖ Cboe BZX first exchange to list actively managed Semi-transparent ETFs



¹Through April 29, 2020

See opportunity in European derivatives market to grow addressable market and win market share

- ❖ Look to provide an alternative market model, enhancing the overall trading ecosystem*:
 - Introduce efficiencies enjoyed by the U.S. market
 - Vibrant lit-book trading environment with deep, liquid market for price discovery
 - Harmonize product design specifications, risk models, tick sizes, etc. while offering capital efficiencies
- ❖ Expect to offer exposure that represents multiple European markets through:
 - European index futures and options
 - Single-name futures and options
 - Potential to explore other products, including ETP futures and options, volatility derivatives and OTC instruments

¹ Expected to close in first half of 2020 and is subject to satisfaction or waiver of conditions precedent

* Subject to regulatory approval

Executing on Our Initiatives for 2020 and Maintaining Orderly Markets

Our goal is to define markets by being the global leader in innovative tradable products and services





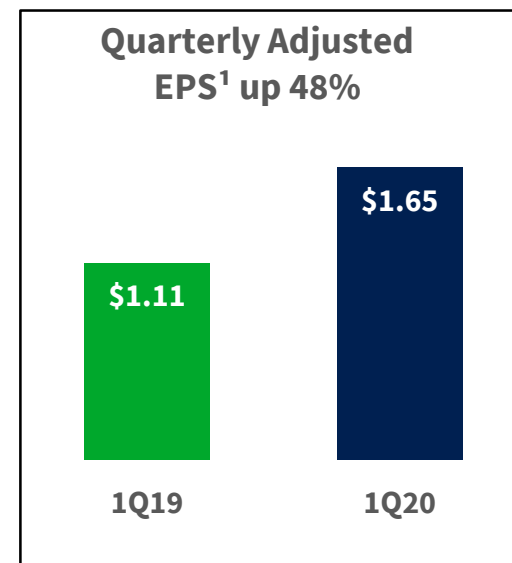
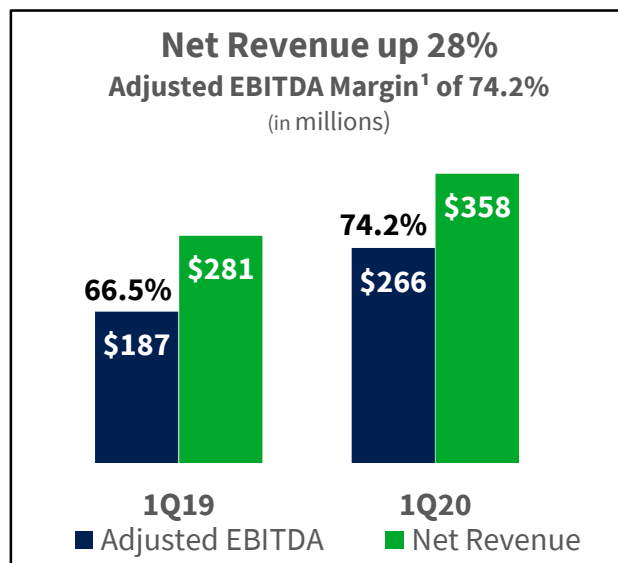
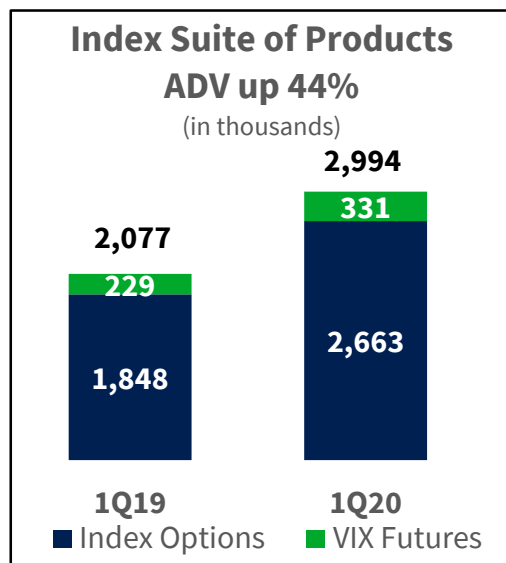
Financial Overview and Guidance

Brian Schell

EVP, CFO and Treasurer

Business Highlights – Key Performance Drivers

- ❖ Higher trading volumes across all business segments, particularly in our proprietary products
- ❖ Net transaction fees¹ up 43%; non-transaction net revenue up 7%
- ❖ Adjusted operating expenses¹ up 5%
- ❖ Operating scale and expense discipline with EBITDA¹ margin of over 74%

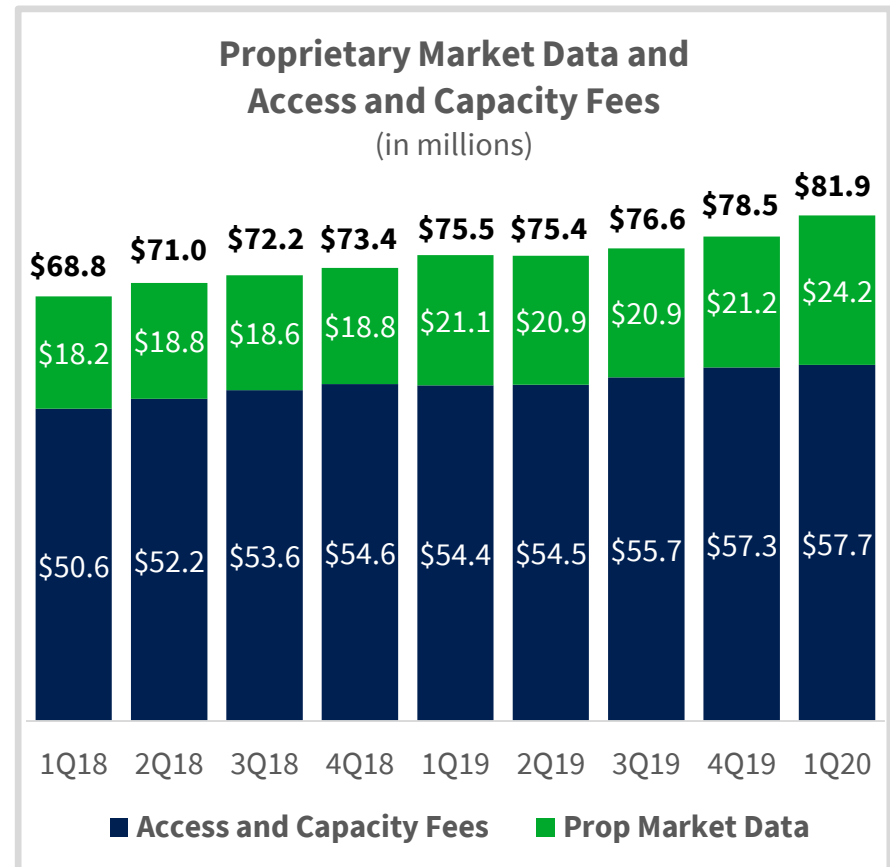


¹See appendix for “Non-GAAP Information.”

Grew Recurring Non-Transaction Revenue Streams

Recurring proprietary non-transaction net revenue up 8% YoY; organic growth of 7%

- ❖ Organic growth excludes \$2.4MM of market data revenue from acquisitions closed on Feb. 3, 2020
- ❖ About 86% of proprietary market data revenue growth in 1Q20 driven by additional subscriptions
- ❖ Nearly 77% of access and capacity fees in 1Q20 were attributable to incremental units
- ❖ New fee schedules addressing temporary floor closure will result in lower non-transaction revenue offset by higher transaction revenue and RPC in index options



Options 1Q20 Net Revenue Up 36%

- ❖ 1Q20 revenue increase primarily driven by higher trading volumes
- ❖ RPC increase in index options due to shift in volume mix and SPX options fee increase; decrease in multi-listed options reflects shift in mix by order type and higher rebates

Options Selected Revenue Data (\$ in millions)	1Q20	1Q19	Chg
Net Revenue	\$188.5	\$138.5	36%
Net transaction fees ¹	\$155.4	\$104.8	48%
Index options	129.0	82.5	56%
Multi-listed options	26.4	22.3	18%
Access and capacity	\$27.2	\$26.0	5%
Market data	\$17.2	\$13.7	26%
Market data – proprietary	9.9	7.0	41%
Market data – industry	7.3	6.7	9%
Options Key Operating Stats (in thousands, except RPC)	1Q20	1Q19	Chg
Total market share	38.3%	36.8%	1.5 pts
Index options	99.2%	99.3%	-0.1 pts
Multi-listed options	31.9%	30.1%	1.8 pts
Total ADV	10,731	7,063	52%
Index options	2,663	1,848	44%
Multi-listed options	8,069	5,215	55%
Total RPC	\$0.234	\$0.240	-3%
Index options	\$0.781	\$0.730	7%
Multi-listed options	\$0.053	\$0.067	-21%

¹See appendix for “Non-GAAP Information.”

Futures 1Q20 Net Revenue Up 36%

- ❖ Revenue increase driven by higher trading volume
- ❖ RPC increase primarily reflects a mix shift

Futures Selected Revenue Data (\$ in millions)	1Q20	1Q19	Chg
Net Revenue	\$40.1	\$29.5	36%
Net transaction fees ¹	\$35.9	\$24.6	46%
Access and capacity	\$4.0	\$3.7	8%
Market data	\$1.6	\$1.7	-6%
Futures Key Operating Stats (in thousands, except RPC)	1Q20	1Q19	Chg
Total ADV	331	231	43%
Total RPC	\$1.750	\$1.739	1%

¹See appendix for “Non-GAAP Information.”

U.S. Equities 1Q20 Net Revenue Up 14%

- ❖ Revenue increase primarily due to higher net transaction fees
- ❖ Trading volumes lifted by market volatility, with higher percentage of volume traded on-exchange

U.S. Equities Selected Revenue Data (\$ in millions)	1Q20	1Q19	Chg
Net Revenue	\$86.6	\$75.8	14%
Net transaction fees ¹	\$31.1	\$22.5	38%
Market data	\$34.0	\$32.8	4%
Market data - SIP ²	24.7	23.7	4%
Market data - proprietary	9.3	9.1	2%
Access and capacity fees	\$20.0	\$19.0	5%
U.S. Equities Key Operating Stats (shares in billions)	1Q20	1Q19	Chg
Total market share	16.7%	16.0%	0.7 pts
Market ADV	11.0	7.5	47%
ADV (matched shares)	1.8	1.2	50%
Net capture (per 100 touched shares)	\$0.026	\$0.029	-10%

¹See appendix for “Non-GAAP Information.”

²Includes \$0.7 million in SIP audit recoveries for 1Q20 and \$2.2 million for 1Q19

European Equities 1Q20 Net Revenue Up 17% on Local Currency Basis



- ❖ On a local currency basis, both net transaction fees and non-transaction revenue increased 17%
- ❖ Increase in net transaction fees driven by higher overall industry volume and net capture, offset somewhat by lower market share

European Equities Selected Revenue Data (\$ in millions)	1Q20	1Q19	Chg (\$)	Chg (£)
Net Revenue	\$26.2	\$22.8	15%	17%
Net transaction fees ¹	\$15.6	\$13.6	15%	17%
Market data	\$3.2	\$3.2	-	4%
Access and capacity fees	\$4.9	\$4.0	23%	23%
Other ²	\$2.5	\$2.0	25%	27%
European Equities Key Operating Stats (shares in billions)	1Q20	1Q19	Chg	
Total market share	17.7%	22.1%	-4.4 pts	
Market ADNV	€ 51.5	€ 41.7	24%	
Net capture (per matched notional value, in bps)	\$0.244	\$0.210	16%	

¹See appendix for “Non-GAAP Information.”

²Includes trade reporting

Global FX 1Q20 Net Revenue Up 22%

- ❖ Revenue increase reflects higher market volume and net capture
- ❖ Record quarterly revenue
- ❖ Higher net capture due to mix shift in volume by customer type

	1Q20	1Q19	Chg
FX Net Revenue (in millions)	\$16.9	\$13.9	22%
FX Key Operating Stats			
Market share ¹	15.7%	15.8%	-0.1 pts
Average Daily Notional Value (\$ in billions)	\$43.3	\$36.5	19%
Net capture (per one million dollars traded)	\$2.69	\$2.61	3%

¹Market share represents Cboe FX volume divided by the total volume of publicly reporting spot FX venues (Cboe FX, EBS, Refinitiv, and FastMatch).

1Q20 Adjusted Operating Expenses Up 5%

- ❖ Increase driven by 11% increase in compensation and benefits, reflecting:
 - \$5 million increase in incentive-based compensation, including higher bonus accrual and variance due to forfeitures of unvested equity awards in 1Q19
 - \$2 million increase due to lower capitalized wages
 - \$2 million decrease due to adjustment of deferred compensation plan assets
- ❖ 2020 guidance for adjusted operating expenses² lowered by \$16 million

Adjusted Operating Expenses¹ (in millions)	1Q20	1Q19	% Chg
Compensation and benefits	\$53.3	\$48.1	11%
Depreciation and amortization ¹	8.0	9.6	-17%
Technology support services	11.9	11.9	--
Professional fees and outside services	14.9	16.2	-8%
Travel and promotional	2.1	2.6	-19%
Facilities costs	4.1	2.1	95%
Other expenses	4.3	3.6	19%
Total¹	\$98.6	\$94.1	5%

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

²Excludes pending acquisition of EuroCCP and related derivatives buildout

Reduced Guidance for 2020 Adjusted Operating Expenses by \$16 Million

Primarily reflects near-term cost reductions due to the COVID-19 pandemic

Adjusted Operating Expenses Bridge from 2019 to 2020			
2020 Guidance Reduced by \$16 million to \$419 to \$427 million¹			
<i>(\$ in millions)</i>			
2019 Adjusted Operating Expenses²	\$ 389	Guidance Range as of May 1, 2020	
Core growth of 4-5% assumed Feb. 7, 2020		\$ 16	\$ 20
Reduction in expense guidance		(16)	(16)
Core growth of 0-1% assumed as of May 1		-	4
Realized synergies projected		(18)	(18)
Growth net of synergies		(18)	(14)
Full year of Brexit readiness costs		3	3
2019 non-recurring items		6	6
Software development expensed vs capitalized		7	8
Real estate overlap		7	8
Incentive compensation		10	11
Acquisition of Hanweck and FT Options		15	16
Total		\$ 30	\$ 38
2020 Guidance		\$ 419	\$ 427

Unchanged

¹Guidance expected to be updated after the close of the company's pending acquisition of EuroCCP.

²Adjusted to reflect the impact of certain items. See Appendix for "Non-GAAP Information."

2020 Full-Year Guidance

2020 Full-Year Guidance ^{1, 2} (\$ in millions)	2020 Guidance as of May 1, 2020	2020 Guidance as of Feb. 7, 2020
Adjusted operating expenses ³	\$419 to \$427	\$435 to \$443
Depreciation and amortization (excluding amortization of acquired intangible assets)	\$34 to \$38	\$34 to \$38
Effective tax rate on adjusted earnings	26.5% to 28.5%	26.5% to 28.5%
Capital expenditures	\$65 to \$70	\$65 to \$70

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

²This guidance does not take into account the company’s planned acquisition of EuroCCP and its investment in launching pan-European trading and clearing. The company plans to update its guidance for 2020 after the deal closes, which is expected in second quarter of 2020.

³Adjusted operating expenses exclude acquisition-related expenses and amortization of acquired intangible assets. The amortization of acquired intangible assets was \$139 million for 2019 and is expected to be \$120 million for 2020. Adjustments included in the non-GAAP reconciliation.

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



Preserving balance sheet flexibility is a priority

- ❖ Returned capital of \$160 million through dividends and share repurchases
- ❖ Leverage ratio declined to 1.0x from 1.2x at December 31, 2019
- ❖ Used cash on hand to fund acquisitions completed during the quarter
- ❖ Conservative near-term cash positioning

Debt Outstanding (\$ in millions)	Mar. 31, 2020	Dec. 30, 2019	Sept. 30, 2019	June 30, 2019	Mar. 31, 2019
3.650% Senior Notes (10Y; Due 2027)	\$650	\$650	\$650	\$650	\$650
1.950% Senior Notes (2Y; Due 2019)	-	-	-	-	300
Term Loan Facility	225	225	225	275	275
Total Debt (Gross)	\$ 875	\$ 875	\$ 875	\$ 925	\$ 1,225
Debt to EBITDA TTM¹	1.0x	1.2x	1.1x	1.2x	1.5x
Adjusted Cash & Financial Investments¹	\$137	\$208	\$151	\$136	\$348
Dividends Paid	\$40.0	\$40.1	\$40.4	\$34.8	\$34.8
Share Repurchases	\$119.5	\$69.5	\$52.4	--	\$35.0

¹See Appendix for "Non-GAAP Information."

Delivering on Sources of Operating Leverage and Key Strategic Initiatives While Defining Markets Globally



Growth of Core Proprietary Products

- Record financial results, driven largely by growth of core proprietary products

Strengthen Recurring Revenue Stream

- Growth in recurring revenue of 8%

Scale of Business Model

- Disciplined expense management

Capital Allocation

- Returned capital through dividends and share repurchases
- Focused on maintaining balance sheet flexibility
- Leverage ratio at 1.0x at March 31, 2020

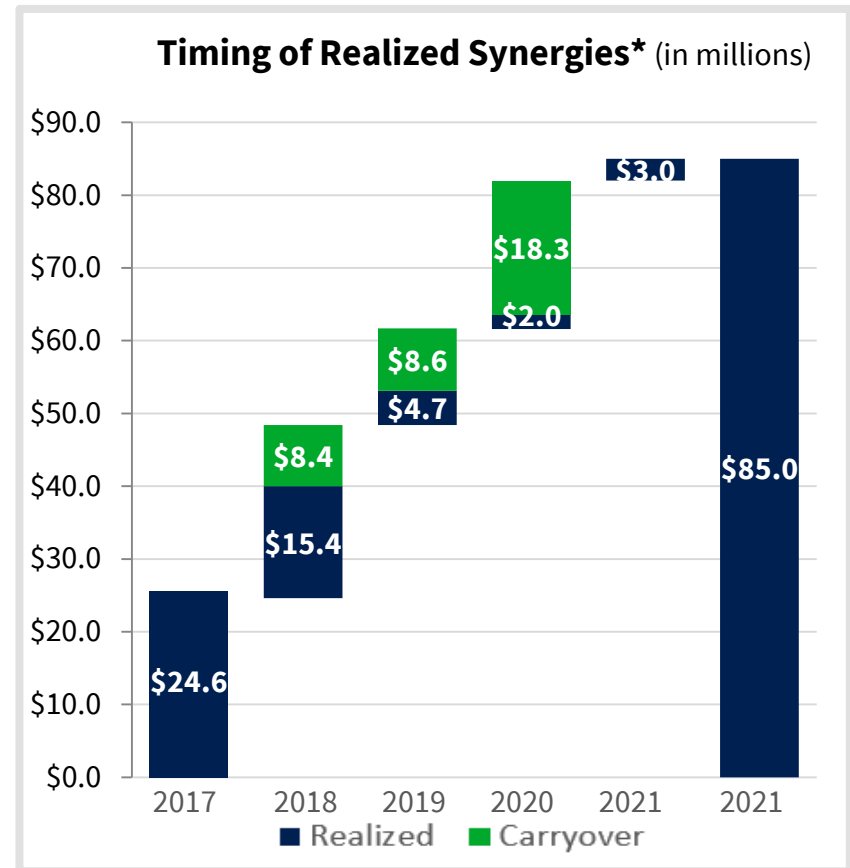
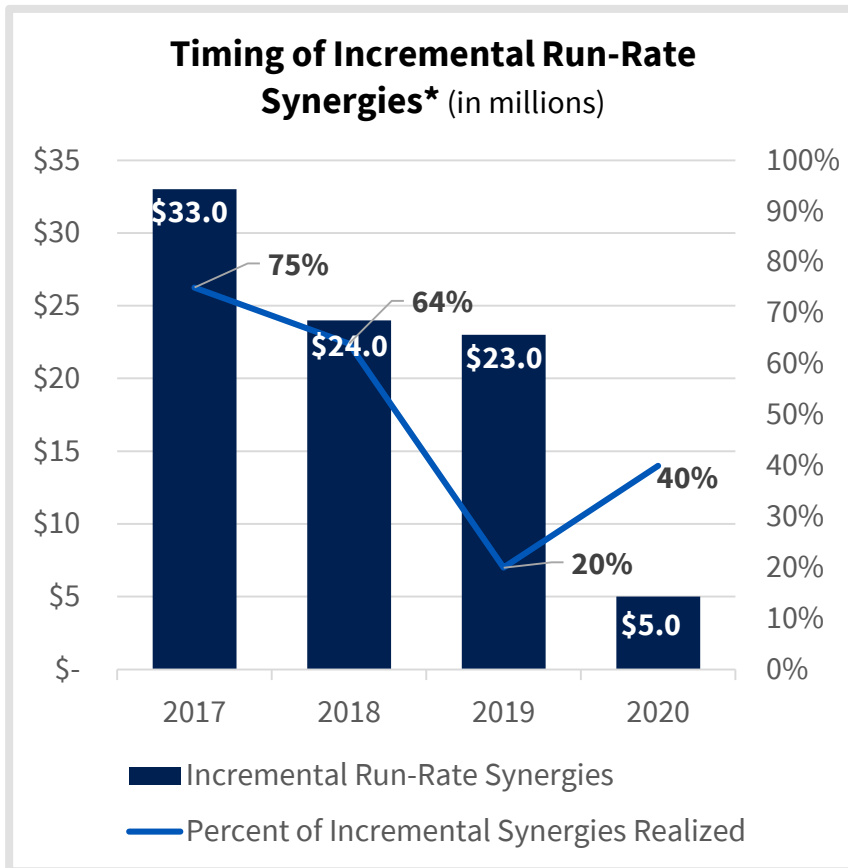
Questions & Answers

Appendix Materials



Realized Versus Run-Rate Synergies

2019 realized synergies lower due to timing of C1 migration in October 2019



*Actual through 2019; reflects target as of February 7, 2020, for 2020.

Targeted Run-Rate Synergies Realization

(in millions)	Targeted Run-Rate Synergies	Increase in Run-Rate Each Year	% of Incremental Run-Rate Synergies Realized/Targeted	Actual/Targeted Realized Synergies	Carryover from Prior Year Run-Rate	Total Synergies Realized/Targeted by Year	Cumulative Synergies Realized/Targeted
2017 Actual	\$33.0	\$33.0	75%	\$24.6	\$0.0	\$24.6	\$24.6
2018 Actual	\$57.0	24.0	64%	15.4	8.4	23.8	\$48.4
2019 Actual	\$80.0	23.0	20%	4.7	8.6	13.3	\$61.7
2020 Target*	\$85.0	5.0	40%	2.0	18.3	20.3	\$82.0
2021 Target*					3.0	3.0	\$85.0
Total		\$85.0		\$46.7	\$38.3	\$85.0	

*Reflects target as of February 7, 2020

First Quarter Financial Overview

Adjusted Financial Results¹ (\$ in millions, except per share)	1Q20	1Q19	% Chg
Net Revenue ²	\$358.3	\$280.5	28%
Adjusted Operating Expenses ¹	98.6	94.1	5%
Adjusted Operating Income ¹	259.7	\$186.4	39%
<i>Adjusted Operating Margin¹</i>	72.5%	66.5%	600 bps
Adjusted Net Income Allocated to Common Stockholders ¹	\$182.3	\$124.5	46%
Adjusted Diluted EPS ¹	\$ 1.65	\$ 1.11	48%
Adjusted EBITDA ¹	\$265.7	\$186.6	42%
<i>Adjusted EBITDA Margin¹</i>	74.2%	66.5%	770 bps

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 for 2019 Impacted by Decline in Trading Volumes; Non-Transaction Revenue



1Q20 net transaction fees up 43%; non-transaction revenue up 7%

Adjusted Combined Net Revenue¹ (in millions)	1Q20	1Q19	% Chg
Net transaction fees	\$253.1	\$177.5	43%
Access and capacity fees	57.7	54.4	6%
Market data fees	56.3	51.6	9%
Regulatory fees	9.3	10.5	-11%
Royalty fees	(27.4)	(21.0)	30%
Other revenue	9.3	7.5	24%
Total¹	\$358.3	\$280.5	28%

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

Supplemental Segment Information

1Q20 Supplemental Net Revenue by Segment (in millions)	Options	U.S. Equities	Futures	European Equities	Global FX	Total¹
Net transaction fees ²	\$155.4	\$31.1	\$35.9	\$15.6	\$15.1	\$253.1
Proprietary net transaction fees included above	\$129.0		\$35.9			\$164.9
Access and capacity fees	\$27.2	\$20.0	\$4.0	\$4.9	\$1.6	\$57.7
Market data fees	\$17.2	\$34.0 ³	\$1.6	\$3.2	\$0.2	\$56.2
Proprietary market data fees included above	\$9.9	\$9.3	\$1.6	\$3.2	\$0.2	\$24.2

1Q19 Supplemental Net Revenue by Segment (in millions)	Options	U.S. Equities	Futures	European Equities	Global FX	Total¹
Net transaction fees ²	\$104.8	\$22.5	\$24.6	\$13.6	\$12.0	\$177.5
Proprietary net transaction fees included above	\$82.5		\$24.6			\$107.1
Access and capacity fees	\$26.0	\$19.0	\$3.7	\$4.0	\$1.7	\$54.4
Market data fees	\$13.7	\$32.9 ³	\$1.7	\$3.2	\$0.1	\$51.6
Proprietary market data fees included above	\$7.0	\$9.1	\$1.7	\$3.2	\$0.1	\$21.1

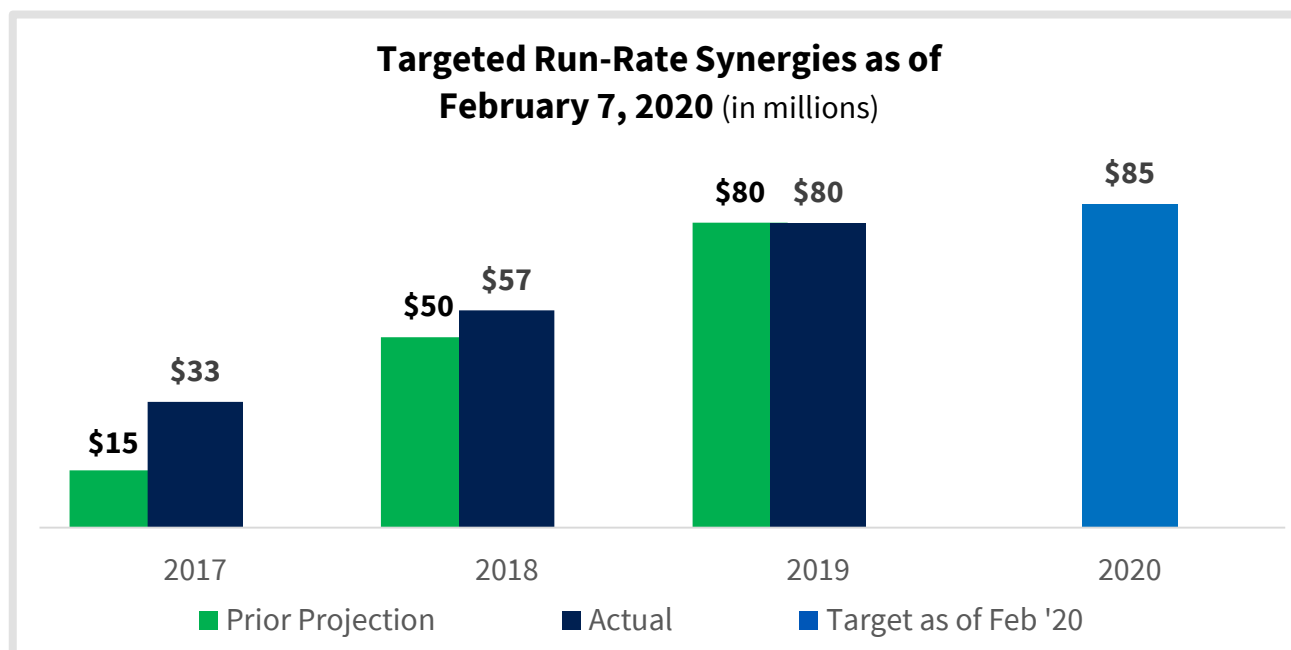
¹Totals may not foot due to rounding.

²A 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.

³Includes SIP audit recoveries of \$0.7 million for 1Q20 and \$2.2 million for 1Q19.

Maintaining Synergy Targets

- ❖ Maintaining 2019 run-rate synergy target of \$80 million and 2020 target of \$85 million
- ❖ Remaining synergies of \$5 million in 2020 will be reflected in a reduction in cost of revenues versus expenses

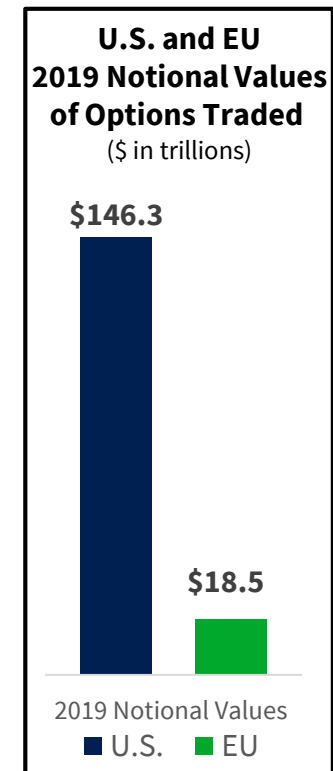
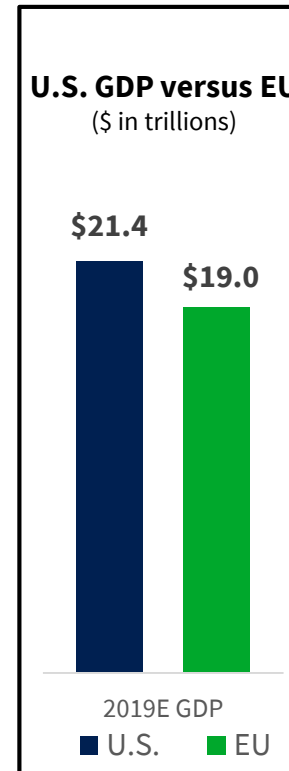


Pending Acquisition of EuroCCP and Buildout of Pan-European Derivatives Trading and Clearing

Investing in long-term growth

Projected EPS	2020 ¹	2021
EuroCCP	(\$0.04) to (\$0.05)	neutral to positive
Buildout of pan-European derivatives trading and clearing ²	(\$0.04) to (\$0.05)	(\$0.08) to (\$0.10)
Total	(\$0.08) to (\$0.10)	(\$0.08) to (\$0.10)

EuroCCP Data (€ in millions)			
EuroCCP Results	2019 ³ Unaudited	2018 ⁴ Actual	Chg
Revenue	€ 23.8	€ 21.2	12%
Expenses	€ 20.0	€ 19.5	3%
Pre-tax earnings	€ 3.8	€ 1.7	124%



¹Assumes deal closes in first half of 2020 and subject to satisfaction or waiver of conditions precedent

²Subject to regulatory approval

³Preliminary and subject to change

⁴EuroCCP 2018 Annual Report

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.

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

Reconciliation of Net Transaction Fees by Segment

For the Three Months Ended March 31 (in millions)	Options		U.S. Equities		Futures		European Equities		Global FX		Total	
	2020	2019	2020	2019	2020	2019	2020	2019	2020	2019	2020	2019
Transaction fees	\$ 284.2	\$ 173.8	\$ 304.0	\$ 198.9	\$ 35.9	\$ 24.6	\$ 22.3	\$ 21.1	\$ 15.1	\$ 12.0	\$ 661.5	\$ 430.4
Liquidity payments	(124.3)	(65.5)	(261.4)	(170.7)	-	-	(6.7)	(7.5)	-	-	(392.4)	(243.7)
Routing and clearing	(4.5)	(3.5)	(11.5)	(5.7)	-	-	-	-	-	-	(16.0)	(9.2)
Net transaction fees	\$ 155.4	\$ 104.8	\$ 31.1	\$ 22.5	\$ 35.9	\$ 24.6	\$ 15.6	\$ 13.6	\$ 15.1	\$ 12.0	\$ 253.1	\$ 177.5

For the Three Months Ended June 30 (in millions)	Options		U.S. Equities		Futures		European Equities		Global FX		Total	
	2020	2019	2020	2019	2020	2019	2020	2019	2020	2019	2020	2019
Transaction fees		\$ 185.9		\$ 182.0		\$ 28.3		\$ 19.5		\$ 11.2		\$ 426.9
Liquidity payments		(73.3)		(156.2)		-		(6.3)		-		(235.8)
Routing and clearing		(3.5)		(5.7)		-		-		-		(9.2)
Net transaction fees		\$ 109.1		\$ 20.1		\$ 28.3		\$ 13.2		\$ 11.2		\$ 181.9

For the Three Months Ended September 30 (in millions)	Options		U.S. Equities		Futures		European Equities		Global FX		Total	
	2020	2019	2020	2019	2020	2019	2020	2019	2020	2019	2020	2019
Transaction fees		\$ 207.1		\$ 199.4		\$ 31.2		\$ 16.9		\$ 11.2		\$ 465.8
Liquidity payments		(86.9)		(177.6)		-		(5.2)		-		(269.7)
Routing and clearing		(3.5)		(5.8)		-		-		-		(9.3)
Net transaction fees		\$ 116.7		\$ 16.0		\$ 31.2		\$ 11.7		\$ 11.2		\$ 186.8

For the Three Months Ended December 31 (in millions)	Options		U.S. Equities		Futures		European Equities		Global FX		Total	
	2020	2019	2020	2019	2020	2019	2020	2019	2020	2019	2020	2019
Transaction fees		\$ 177.2		\$ 164.3		\$ 26.1		\$ 15.6		\$ 11.0		\$ 394.2
Liquidity payments		(69.8)		(141.4)		-		(4.3)		-		(215.5)
Routing and clearing		(2.4)		(5.7)		-		-		-		(8.1)
Net transaction fees		\$ 105.0		\$ 17.2		\$ 26.1		\$ 11.3		\$ 11.0		\$ 170.6

Non-GAAP Information

(in millions, except per share amounts)	1Q19	2Q19	3Q19	4Q19	2019	1Q20
Reconciliation of Net Income Allocated to Common Stockholders to Non-GAAP						
Net income allocated to common stockholders	\$ 94.6	\$ 87.6	\$ 105.5	\$ 86.1	\$ 372.7	\$ 157.0
Acquisition-related expenses (1)	2.3	20.8	16.7	8.7	48.5	0.8
Amortization of acquired intangible assets (2)	37.6	34.1	33.4	33.4	138.5	32.5
Provision for notes receivable (3)	-	-	-	23.4	23.4	-
Total Non-GAAP operating expense adjustments	39.9	54.9	50.1	65.5	210.4	33.3
Change in redemption value of noncontrolling interest	0.2	0.2	0.1	-	0.5	-
Total Non-GAAP adjustments - pretax	40.1	55.1	50.2	65.5	210.9	33.3
Income tax expense related to the items above	(10.0)	(13.2)	(11.0)	(16.5)	(50.7)	(7.6)
Impairment charges attributed to noncontrolling interest	-	(3.6)	-	-	(3.6)	-
Net income allocated to participating securities - effect on reconciling items	(0.2)	(0.2)	(0.1)	(0.2)	(0.7)	(0.4)
Adjusted net income allocated to common stockholders	\$ 124.5	\$ 125.7	\$ 144.6	\$ 134.9	\$ 528.6	\$ 182.3
Reconciliation of Diluted EPS to Non-GAAP						
Diluted earnings per common share	\$ 0.85	\$ 0.78	\$ 0.94	\$ 0.77	\$ 3.34	\$ 1.42
Per share impact of non-GAAP adjustments noted above	0.26	0.35	0.35	0.44	1.39	0.23
Adjusted diluted earnings per common share	\$ 1.11	\$ 1.13	\$ 1.29	\$ 1.21	\$ 4.73	\$ 1.65
Reconciliation of Operating Margin to Non-GAAP						
Revenue less cost of revenue	\$ 280.5	\$ 283.2	\$ 294.0	\$ 280.3	\$ 1,136.9	\$ 358.3
Non-GAAP adjustments noted above	-	-	-	-	-	-
Adjusted revenue less cost of revenue	\$ 280.5	\$ 283.2	\$ 294.0	\$ 280.3	\$ 1,136.9	\$ 358.3
Operating expenses (4)	\$ 134.0	\$ 158.0	\$ 146.6	\$ 161.1	\$ 599.7	\$ 131.9
Non-GAAP expense adjustments noted above	(39.9)	(54.9)	(50.1)	(65.5)	(210.4)	(33.3)
Adjusted operating expenses	\$ 94.1	\$ 103.1	\$ 96.5	\$ 95.6	\$ 389.3	\$ 98.6
Operating income	\$ 146.5	\$ 125.2	\$ 147.4	\$ 119.2	\$ 537.2	\$ 226.4
Non-GAAP expense adjustments noted above	39.9	54.9	50.1	65.5	210.4	33.3
Adjusted operating income	\$ 186.4	\$ 180.1	\$ 197.5	\$ 184.7	\$ 747.6	\$ 259.7
Adjusted operating margin (5)	66.5%	63.6%	67.2%	65.9%	65.8%	72.5%
Reconciliation of Income Tax Rate to Non-GAAP						
Income before income taxes	\$ 127.8	\$ 119.6	\$ 140.9	\$ 114.2	\$ 501.4	\$ 217.5
Non-GAAP adjustments noted above	40.1	55.1	50.2	65.5	210.9	33.3
Adjusted income before income taxes	\$ 167.9	\$ 174.7	\$ 191.1	\$ 179.7	\$ 712.3	\$ 250.8
Income tax (benefit) expense	\$ 32.6	\$ 35.1	\$ 35.0	\$ 27.9	\$ 130.6	\$ 60.1
Non-GAAP adjustments noted above	10.0	13.2	11.0	16.5	50.7	7.6
Adjusted income tax (benefit) expense	\$ 42.6	\$ 48.3	\$ 46.0	\$ 44.4	\$ 181.3	\$ 67.7
Adjusted income tax rate	25.4%	27.7%	24.1%	24.7%	25.5%	27.0%

(1) This amount includes professional fees and outside services, severance, facilities expenses, impairment charges and other costs related to the company's acquisitions.

(2) This amount represents the amortization of acquired intangible assets related to the company's acquisitions.

(3) This amount represents the provision for notes receivable, recorded in other expenses on the consolidated statements of income, associated with the funding for the development of the consolidated audit trail ("CAT").

(4) The company sponsors deferred compensation plans held in a rabbi trust. The expenses related to the deferred compensation plans are included in "Compensation and benefits" (\$1.2 million and \$5.0 million in expense in the three months and year ended December 31, 2019, respectively), and are directly offset by deferred compensation income, expenses and dividends included within "Other income (expense)" (\$1.2 million and \$5.0 million in income, expense and dividends in the three months and year ended December 31, 2019, respectively), on the consolidated statements of income. The deferred compensation plans' expenses are not adjusted out of "adjusted operating expenses" and do not have an impact on "Income before income taxes."

(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) and Adjusted EBITDA are widely used non-GAAP financial measures 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. Adjusted EBITDA is calculated by adding back to EBITDA acquisition-related expenses and impairment charges attributed to noncontrolling interest. EBITDA and Adjusted 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 and Adjusted EBITDA may not be calculated identically by all companies, the presentation here may not be comparable to other similarly titled measures of other companies. Adjusted EBITDA margin represents Adjusted EBITDA divided by net revenue.

Reconciliation of Net Income Allocated to Common Stockholders to EBITDA and Adjusted EBITDA						
(in millions, except per share amounts)	1Q19	2Q19	3Q19	4Q19	2019	1Q20
Net income allocated to common stockholders	\$ 94.6	\$ 87.6	\$ 105.5	\$ 86.1	\$ 372.7	\$ 157.0
Interest expense	9.9	10.0	8.2	7.8	35.9	7.3
Income tax provision	32.6	35.1	35.0	27.9	130.6	60.1
Depreciation and amortization	47.2	43.7	42.9	42.8	176.6	40.5
EBITDA	\$ 184.3	\$ 176.4	\$ 191.6	\$ 164.6	\$ 715.8	\$ 264.9
EBITDA Margin	65.7%	62.3%	65.2%	58.7%	63.0%	73.9%
Non-GAAP adjustments not included in above line items						
Acquisition-related expenses	2.3	20.8	16.7	8.7	\$ 48.5	0.8
Impairment charges attributed to noncontrolling interest	-	(3.6)	-	-	(3.6)	-
Provision for notes receivable	-	-	-	23.4	23.4	-
Adjusted EBITDA	\$ 186.6	\$ 193.6	\$ 208.3	\$ 196.7	\$ 784.1	\$ 265.7
Adjusted EBITDA Margin	66.5%	68.4%	70.9%	70.2%	69.0%	74.2%

Non-GAAP Information

Adjusted Debt to EBITDA - Trailing Twelve Months¹						
(in millions)	2Q19	3Q19	4Q19	1Q20	LTM	
Net income allocated to common stockholders	\$ 87.6	\$ 105.5	\$ 86.1	\$ 157.0	\$ 436.2	
Interest expense, net	10.0	8.2	7.8	7.3	33.3	
Income tax provision	35.1	35.0	27.9	60.1	158.1	
Depreciation and amortization	43.7	42.9	42.8	40.5	169.9	
EBITDA	\$ 176.4	\$ 191.6	\$ 164.6	\$ 264.9	\$ 797.5	
Non-GAAP adjustments not included in above line items:						
Acquisition-related expenses	20.8	16.7	8.7	0.8	47.0	
Impairment charges attributed to noncontrolling interest	(3.6)				(3.6)	
Provision for notes receivable			23.4	-	23.4	
Adjusted EBITDA	\$ 193.6	\$ 208.3	\$ 196.7	\$ 265.7	\$ 864.3	
Debt at end of period					\$ 875.0	
Debt to EBITDA					1.0x	

¹A full reconciliation of our non-GAAP 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 deferred compensation plan assets and 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 3/31/19	As of 6/30/19	As of 9/30/19	As of 12/31/19	As of 3/31/20
Cash and cash equivalents	\$ 346.2	\$ 161.3	\$ 150.0	\$ 229.3	\$ 165.2
Financial investments	30.2	82.9	21.4	71.0	43.6
Less deferred compensation plan assets	-	(20.3)	(20.9)	(23.4)	(18.4)
Less cash collected for Section 31 fees	(28.6)	(88.0)	-	(69.0)	(53.1)
Adjusted Cash	\$ 347.8	\$ 135.9	\$ 150.5	\$ 207.9	\$ 137.3



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